Managed Care

Effect of an Academic Detailing Intervention on the Utilization Rate of Cyclooxygenase-2 Inhibitors in the Elderly

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BACKGROUND: Osteoarthritis is prevalent in the elderly. Nova Scotia general practitioners (GPs) identified the need for an academic detailing (AD) intervention aimed at optimizing the management of osteoarthritis. AD was provided by Dalhousie University Continuing Medical Education in a face-to-face encounter employing evidence-based information. GP participation was voluntary.

OBJECTIVE: To evaluate the effect of a GP-targeted osteoarthritis AD intervention on a reduction in the prescribing of cyclooxygenase-2 (COX-2) inhibitors, as well as examine the intervention effect on the utilization rates of gastroprotective agents and medical services.

METHODS: A retrospective cohort study design employing administrative data was used. Differences in utilization rates between intervention and control groups were evaluated using generalized estimating equations analysis for longitudinal data over four 90-day postintervention periods. Confounding was addressed using propensity scores to adjust for between-group bias on the measured covariates.

RESULTS: The between-group difference for change in COX-2 utilization rates was 0.76 defined daily doses/patient (p = 0.040; 95% CI 0.037 to 1.48) for the 3-month period following the intervention, with lower COX-2 utilization in the AD intervention group than in the control group. The intervention group showed a significant decrease in the within-group utilization rate between the pre- and postintervention periods (z = –2.34; p = 0.019). The between-group difference for change in GP office visit rates was 0.40 visits/patient (p = 0.028; 95% CI 0.046 to 0.79) with the intervention group, showing higher visit rates compared with the control group.

CONCLUSIONS: The osteoarthritis AD intervention was associated with a significant decrease (23%) in COX-2 utilization rates in the 3-month period immediately following the intervention. The only secondary outcome to show a significant between-group effect was the GP office visit rate, which was higher for the intervention group in the second 3-month postintervention period.

KEY WORDS: academic detailing, cyclooxygenase-2 inhibitors, pharmacoepidemiology, prescribing behavior.

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Academic detailing (AD) is an educational method whereby a healthcare professional, with specialized training in interactive learning techniques, visits physicians in their practice setting. AD is intended to influence or change the physician's behavior through presentation of evidence-based information on a specific topic in a face-to-face encounter. AD interventions in Nova Scotia are developed and delivered by the Continuing Medical Education (CME) Division of the Faculty of Medicine at Dalhousie University.

Multifaceted AD interventions, similar to the osteoarthritis AD intervention, have had a moderate positive effect on measured outcomes.[1-3] Outcomes from AD interventions typically include changes in the utilization of medications or improvements in patients' clinical status. In a review article studying the effects of AD on prescribing behavior, Thomson O'Brien et al.[1] found relative effects on prescribing ranging from 1% to 45% improvement in 7 of 9 studies. Grimshaw et al.[2] found relative improvements ranging from 1.7% to 24% in 6 studies. Only 1 study was common to both review articles. The ability of AD to achieve the intended outcomes on physician prescribing behavior was reiterated in a summary of systematic reviews related to CME. Bloom[3] concluded that interactive continuing education techniques (including AD) are the most effective at simultaneously changing physician care patterns and patient outcomes.

AD programs are currently delivered by CME providers in 5 Canadian provinces: British Columbia, Alberta, Saskatchewan, Manitoba, and Nova Scotia.[4] These groups

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form the Canadian Academic Detailing Collaboration (CADC).[5,6] The goal of the CADC is to prepare AD topics more accurately and efficiently and to disseminate evidence more effectively.[6]

In June 2002, the Dalhousie University CME Division began its second AD intervention with general practitioners (GPs) in Nova Scotia, which was aimed at optimizing the care of osteoarthritis within the elderly population (persons >65 y of age).[4] The contents of the AD intervention on osteoarthritis are posted on the Dalhousie University CME Web site.[4] The AD program is an ongoing initiative funded by the Nova Scotia Department of Health and managed by the Drug Evaluation Alliance of Nova Scotia.[7]

The osteoarthritis topic was chosen as an AD intervention based on the extent to which osteoarthritis affects the elderly population[8,9] and on feedback from GPs on a survey conducted by Dalhousie University CME. The AD intervention on osteoarthritis employed 3 detailers (2 pharmacists, 1 nurse) trained in techniques associated with successful AD programs.[10,11] AD training involves the use of interactive adult education techniques to increase involvement of the GP in the knowledge translation process.[10]

A literature review of best practices in the treatment of osteoarthritis was conducted by Dalhousie University and the intervention was structured around 4 key messages or learning objectives: (1) discuss the goals of osteoarthritis therapy, (2) recommend nonpharmacologic treatments when appropriate, (3) advise patients about the safety and efficacy of acetaminophen, and (4) discuss the role of traditional nonsteroidal antiinflammatory drugs (NSAIDs) and cyclooxygenase-2 (COX-2) inhibitors.[4] The osteoarthritis AD intervention content was reviewed by local clinical experts to ensure accuracy and relevance.

The process followed by Dalhousie University CME in the development of the osteoarthritis AD intervention helps to alleviate concerns about independence and objectivity of intervention content expressed by GPs in previous research.[12] Qualitative research conducted with GPs in Nova Scotia who have participated in AD interventions indicates that the physicians use the AD intervention to critically appraise other methods of CME (including visits from pharmaceutical representatives) and that the biggest barrier to participation in AD expressed by GPs who do not participate in AD interventions is the need to participate in this form of CME during clinic hours.[13]

The osteoarthritis AD intervention was delivered from April to November 2002. The analysis timeframe for this study spanned from October 2001 (6 mo before the intervention commenced) to November 2003 (1 y after the intervention concluded).

The primary objective of this research deals with the effectiveness of the osteoarthritis AD intervention as it pertains to the pharmacotherapy of osteoarthritis, in particular, the decreased utilization of COX-2 inhibitors. The osteoarthritis AD intervention contains 2 points that are relevant to this analysis.[4] First, COX-2 inhibitors are as effective but not more effective than traditional NSAIDs for symptomatic treatment of osteoarthritis, and second, the CLASS (Celecoxib Long-Term Arthritis Safety Study)[14] and VIGOR (Vioxx Gastrointestinal Outcomes Research)[15] trials contained the most relevant information at the time of the intervention and were inconclusive in the analysis of the gastroprotective effects of COX-2 inhibitors. These 2 points were chosen for analysis because they were measurable outcomes and any cost savings would be realized by the patients due to the Nova Scotia Pharmacare maximum allowable cost payment policy.[16] That policy sets the maximum cost paid by Nova Scotia Pharmacare for all NSAIDs and COX-2 inhibitors and the program beneficiary is required to pay the difference. The pricing structure was the same for all NSAIDs and COX-2 inhibitors and there was no difference in drug price structure between groups (intervention and control) for the entire length of the study.

Secondary outcomes examined the effect of the intervention on the utilization rates of gastroprotective agents (proton pump inhibitors, histamine$_2$-receptor antagonists, misoprostol), use of other healthcare resources (hospital length of stay due to gastrointestinal causes, GP office visits, gastroenterologist and rheumatologist visits), and deaths that occur as a result of gastrointestinal adverse effects associated with drug therapy with traditional NSAIDs and COX-2 inhibitors.[17] These outcomes were analyzed due to concerns about negative gastrointestinal outcomes resulting from the switching of therapy from COX-2 inhibitors to traditional NSAIDs.

Methods

This study was a retrospective cohort, before-and-after design. Administrative data from the Nova Scotia Medical Services Insurance and the Canadian Institute of Health Information datasets were used, and all data were accessed through the Population Health Research Unit at Dalhousie University.[18] Data were encrypted to Canadian Institute of Health Information standards[19] so that individuals could not be identified. Since the intervention was voluntary, the intervention and control groups were expected to be different. Propensity score (PS) methods were used to abate the between-group bias.[20-26] Approval for the study was granted by the Research Ethics Board at Dalhousie University.

The datasets, including prescription claims, medical services, and vital statistics, were examined for missing data in all necessary fields. Physicians were included if they were registered as a GP with the Nova Scotia College of Physicians and Surgeons for the entire study period, were included on the billing registry with Medical Services In-

surance for the entire study period, had an elderly patient panel greater than or equal to 20 patients over the 6 months preceding the intervention, and had at least 1 prescription claim for a COX-2 inhibitor recorded in the 6-month preintervention period.

Patients were included in the study if they visited an included GP for more than 50% of their total GP visits for the fiscal year ending March 31, 2002, and were 66 years of age or older as of the GP's index date (the date the GP met with the academic detailer).

Once the intervention and control groups were established, it was necessary to apply PS methods to abate between-group confounding on variables that describe the GP or the GP's practice. PS methodology was chosen because it has been found to yield similar estimates to multivariate methods.[27] PSs allow for the combination of many confounders into one covariate for inclusion in the outcomes model, thus simplifying the model and increasing the power of the outcomes models due to the decreased number of covariates.

In this study, the definition of the PS was the conditional probability of participating in the intervention given the GP's personal and practice characteristics.[20,24] Twelve variables were included in the PS analysis: GP personal characteristics (participation in a previous AD intervention on influenza, sex, age, birthplace, location of initial licensure, COX-2 utilization rate at baseline) and practice characteristics (population of community, average income of the county where the practice is located, total number of patients, proportion of patients >65 years of age, proportion of patients diagnosed with osteoarthritis, the average hospital length of stay for patients admitted for gastrointestinal complications).

The PSs were calculated by applying a logistic regression model including the previously listed variables, with the dependent variable representing the participation in the osteoarthritis AD intervention for each GP. The regression model was re-run using the coefficients obtained from the previous step to yield predictive values for the participation in the osteoarthritis AD intervention (ie, the PS). Variables were kept in the model regardless of their significance, since all variables were deemed to have some relevance to the outcome variable.

The PS was included in the outcome model as a covariate. Variables included in the PS calculation and considered relevant for the outcome models were also included in the outcome models.[28] Participation in a previous AD intervention on influenza and baseline COX-2 rates were included in both the PS and outcome models.[20,26]

Measures on primary and secondary outcome variables were calculated over six 90-day study periods. Each GP was assigned an index date representing the date on which the GP received the AD visit. For the control group, the index date was randomly assigned from the range of index dates defined by the intervention group.

Two preintervention periods (from 180 to 91 days and from 90 days to 1 day prior to the GP's index date) and 4 postintervention periods (90-day intervals following the GP's index date) were established to allow for the interpretation of possible utilization trends occurring before intervention and the determination of intervention effects for one year after intervention. The 90-day interval was chosen since it is the maximum allowable days' supply for prescriptions under the Nova Scotia Pharmacare Program.

The primary outcome analysis measures the change in a GP's COX-2 utilization rate from baseline (the rate for the 3-month period immediately preceding the GP's index date). The utilization rate is measured using the World Health Organization's Anatomical Therapeutic Chemical defined daily dosage (ATC/DDD) methodology.[29] ATC/DDDs are drug consumption data that are independent of price and formulation.

Analysis on all outcomes was carried out using PROC GENMOD (SAS 8.2, SAS Institute, Cary, NC)[30] generalized estimating equations methods. The study involved repeated measures of outcome variables over time. PROC GENMOD can accommodate the analysis of correlated data arising from the repeated measures of subjects over time.

Significance is reported at the α level of less than or equal to 0.05. The between-group outcome model included the outcome variable (change in COX-2 rates from baseline) and the independent variables indicating group assignment (osteoarthritis AD participation), time (periods 1–6), the PS, participation in a previous influenza AD intervention, the baseline COX-2 rate, and number of elderly patients in the GP's panel. The model determined the statistical significance of the between-group effect as well as the longitudinal effect of the intervention.

The models for the secondary outcomes were developed using the same variables as the primary outcome model. Each secondary outcome model had the change in COX-2 utilization rate substituted with the appropriate secondary outcome rate. The secondary outcomes were the intervention effect on use of protein pump inhibitor, misoprostol, and histamine$_2$-receptor antagonist; GP office visits per patient; specialist office visits per patient; and death rates per GP due to gastrointestinal complications. Each secondary outcome was measured over the same 6 time periods as the primary outcome.

Results

The data, including prescription claims, medical services, and vital statistics, were complete on all necessary fields. There was, therefore, no loss of any patient encounter records

due to occurrences of missing data. The mean number of patients per GP included in the study was 187.

Tables 1 and 2 contain descriptive statistics describing the 12 PS model variables before and after the PS analysis was carried out and measures of reduction of bias on variables after PS methods were applied.

The pre-PS analysis indicates that 5 variables were not balanced. These variables are of the greatest concern because they pose a possible threat to the internal validity of the study. The goal of the PS method is to balance the groups on measured physician characteristics.[20,26]

The regression on the PS method reduced bias on 4 of the 5 unbalanced variables by 99.25%. The variable for previous AD participation (influenza AD) was not included in the percent bias reduction calculation since the PS method was ineffective at significantly reducing bias on this variable. Instead, the variable for previous AD participation was included as a covariate in the outcomes models according to PS methods.[20,26]

The primary outcome measure, change in COX-2 prescribing from baseline, was calculated for each physician by aggregating all COX-2 prescription claims for

Table 1. Propensity Score Values for Continuous Variables

Variable	AD Participation = No (n = 265) Mean ± SD	AD Participation = Yes (n = 231) Mean ± SD	Pre-PS Analysis F	Pre-PS Analysis p Value	Post-PS Analysis F	Post-PS Analysis p Value	% Bias Reduction[a]
Proportion of pts. with OA diagnosis	0.091 ± 0.107	0.072 ± 0.060	9.919	0.012[b]	2.190	0.139	98.97
GP age (y)	47.3 ± 9.8	45.7 ± 9.2	9.219	0.068	0.900	0.344	
Proportion of practice aged >65 y	0.191 ± 0.116	0.177 ± 0.079	8.959	0.118	0.450	0.503	
Total number of pts.	1,054 ± 439	1,038 ± 419	7.819	0.670	0.330	0.564	
Average income of county ($CDN)	27,689 ± 4,683	25,833 ± 4,488	11.879	0.001[b]	2.830	0.093	99.95
Baseline COX-2 rate (DDDs/pt.)	3.60 ± 2.70	3.98 ± 2.87	5.899	0.136	0.610	0.434	
Average hospital length of stay rate (days/pt.)	0.045 ± 0.145	0.088 ± 0.177	4.419	0.003[b]	0.320	0.570	98.37
Population of community where GP located (n)	183,342 ± 162,415	122,705 ± 155,567	11.619	0.001[b]	4.230	0.040[c]	99.73

AD = academic detailing; COX-2 = cyclooxygenase-2 inhibitor; DDD = defined daily dose; GP = general practitioner; OA = osteoarthritis; PS = propensity score.
[a]Percent bias reduction for variables significantly different in the pre-PS model. Average percent bias reduction = 99.25.
[b]Significant at $\alpha = 0.05$ level.

Table 2. Propensity Score Values for Categorical Variables

Variable	Proportion AD Participation = No	Proportion AD Participation = Yes	Pre-PS Analysis F	Pre-PS Analysis p Value	Pre-PS Analysis OR	Post-PS Analysis F	Post-PS Analysis p Value	Post-PS Analysis OR
GP sex								
female	0.31	0.30	0.03	0.866	0.97	0.22	0.639	1.23
Participation in previous influenza AD								
yes	0.16	0.73	140.15	0.001[a]	0.07	NA[b]	NA[b]	
Location of initial licensure								
Canada	0.12	0.17	3.36	0.067	1.41	2.48	0.115	0.51
Nova Scotia	0.67	0.66						
other	0.21	0.16						
GP birthplace								
Nova Scotia	0.48	0.45	0.11	0.742	0.95	0.03	0.859	0.93
eastern Canada	0.12	0.13						
central Canada	0.07	0.07						
western Canada	0.03	0.04						
other	0.30	0.31						

AD = academic detailing; GP = general practitioner; NA = not available; PS = propensity score.
[a]Significant at $\alpha = 0.05$ level.
[b]Estimates not available (variable included in outcomes models).

all of the elderly patients in a physician's panel and dividing by the number of elderly patients in the panel. The resulting rate, number of COX-2 DDDs per patient per physician, was subtracted from the baseline prescribing rate to yield a measure of change in COX-2 prescribing.

Table 3 depicts the unadjusted means and standard deviations for the intervention and control groups for each of the 6 experimental time periods. A positive value indicates that the prescribing rate has increased from the baseline rate by the amount indicated and a negative value indicates a decrease in the prescribing rate from baseline.

The between-group analysis showed no significant difference between groups over the preintervention period ($z = 0.88$; $p = 0.378$) and no significant sustained effect over the entire postintervention period ($z = 0.85$; $p = 0.398$). Analyses of the intervention effect by postintervention period showed a significant between-group difference of 0.76 DDDs/patient ($z = 2.06$; $p = 0.040$; 95% CI 0.037 to 1.482) in the period immediately following the intervention, with the AD intervention group showing lower COX-2 utilization compared with the control group. Table 4 depicts the between-group intervention effects on the primary and secondary outcome variables and includes between-group differences for the individual time periods where significant between-group differences were observed.

The within-group models were the same as the between-group model except that the AD group variable is replaced by a pre–post variable that measures significant within-group differences in COX-2 rates before and after intervention. The model was run twice, once including only the intervention group and once including only the control group. For the intervention group, the z statistic and p values of –2.34 and 0.019, respectively, indicate that the within-group effect is statistically significant. For the control group, the z statistic and p values of –0.22 and 0.827, respectively, indicate that the within-group effect is not statistically significant.

The only secondary outcome to show a significant intervention effect was the GP office visit rate. No statistically significant differences were observed between groups over the pre- and postintervention periods ($z = 0.37$; $p = 0.708$ and $z = 1.06$; $p = 0.289$, respectively). There was a significant between-group difference in the second postintervention period of 0.40 visits/patient ($p = 0.028$; 95% CI 0.046 to 0.793), with the AD intervention group showing higher GP visit rates than the control group.

Both of the groups showed significant within-group changes with increased GP visits in the postintervention period. For the intervention group, the z statistic and p values were –17.54 and less than 0.001, respectively, and for the control group, the z statistic and p values were –20.21 and less than 0.001, respectively. The significant results for the longitudinal pre–post effect were similar between the control and intervention groups.

Table 3. Unadjusted Means for Change in COX-2 Rates[a]

Period	AD Participation = No Mean ± SD	AD Participation = Yes Mean ± SD
1 (6 to 3 mo preintervention)	0.159 ± 3.429	–0.303 ± 3.071
2 (3 to 0 mo preintervention)	0 ± 0	0 ± 0
3 (0 to 3 mo postintervention)	0.340 ± 3.906	–0.532 ± 3.44
4 (3 to 6 mo postintervention)	0.024 ± 3.670	–0.126 ± 3.736
5 (6 to 9 mo postintervention)	0.527 ± 3.729	–0.001 ± 3.907
6 (9 to 12 mo postintervention)	0.645 ± 3.857	0.128 ± 3.925

AD = academic detailing; COX-2 = cyclooxygenase-2 inhibitor.
[a]Data presented as defined daily dose/pt.

Table 4. Differences for Primary and Secondary Outcome Measures

Outcome	Between-Group Difference[a] z Statistic	Between-Group Difference[a] p Value	Time Period	Between-Group Difference[b,c] Estimate	Between-Group Difference[b,c] p Value	Between-Group Difference[b,c] 95% CI
COX-2 rate (DDD/pt.)	0.85	0.398	first postintervention	0.76	0.040	0.037 to 1.482
PPI rate (DDD/pt.)	–0.27	0.791				
H_2RA rate (DDD/pt.)	0.05	0.962				
Misoprostol rate (DDD/pt.)	–0.87	0.387				
GP office visit rate (visits/pt.)	1.06	0.289	second postintervention	0.40	0.028	0.046 to 0.793
Specialist office visit rate (visits/pt.)	1.44	0.150				
Hospital length of stay (days/pt.)	0.33	0.739				
Death rates (pt. deaths/GP)	0.81	0.420				

COX-2 = cyclooxygenase-2 inhibitor; DDD = defined daily dose; GP = general practitioner; H_2RA = histamine$_2$-receptor antagonist; PPI = proton pump inhibitor.
[a]All postintervention periods.
[b]Individual postintervention period.
[c]Only significant periods ($p \leq 0.05$) reported.

Discussion

The study showed a statistically significant association between the AD intervention on osteoarthritis and the decrease in COX-2 utilization rates in GPs who volunteered for the intervention during the 3-month period immediately following the intervention ($p = 0.040$).

The relative effect of our study on the utilization rate of COX-2 inhibitors over the first 90-day postintervention period is 23%. Thomson O'Brien et al.[1] reported that multifaceted AD interventions (similar to the osteoarthritis AD intervention) have shown a wide range of relative effect sizes. All 9 of the studies reviewed by those investigators contained outcomes related to prescribing behavior. Grimshaw et al.[2] reported that AD interventions of 6 studies had a median effect equal to 15%, and AD interventions involving comparisons of outcome measures showed effect sizes ranging from –1.4% to 13.9% (from 4 studies).

In our study, the within-group effect of the intervention was observed throughout the entire postintervention analysis period ($p = 0.019$); however, the between-group differences were not statistically significant over the 1-year postintervention period ($p = 0.398$).

The lack of sustainability of the between-group intervention effect could be attributed to the omission of a follow-up visit with the GPs.[11] The follow-up visit is included as 1 of the 8 components of a successful AD intervention[11,31]; however, follow-up is costly and, if done face-to-face, it represents an extra visit to a GP that may be considered by the GP to be too intrusive.[12]

Both the intervention and control groups showed increased within-group GP office visit rates. The GP office visit rate between-group difference from 3 to 6 months post intervention had practical significance since it showed higher utilization rates in the intervention group ($p = 0.028$) compared with the control group. On average, the control group recorded 0.42 fewer GP visits/patient than the AD intervention group did. This difference could represent an increased vigilance by the GPs toward their patients with respect to gastrointestinal adverse effects associated with traditional NSAIDs.

The limitations to this study include the inability to randomize control and intervention groups due to the voluntary nature of the study and its retrospective design, inaccuracies associated with administrative data,[32,33] the omission of data (eg, acetaminophen, which is not captured in the Nova Scotia Pharmacare prescription claims; over-the-counter purchase of NSAIDs to treat osteoarthritis; COX-2 prescriptions paid for with cash or other insurance coverage) that could contribute to the outcomes analyses, the use of pharmacy dispensing information as a proxy for actual medication consumption or utilization, a lack of reliable information regarding efforts from the pharmaceutical industry to detail a message different from that of the osteoarthritis AD intervention, a maturation effect due to the aging of the study cohort, and a contamination effect, since there were no restrictions placed on GPs with respect to sharing information gained from the AD intervention with colleagues who did not partake in the intervention.

The osteoarthritis AD intervention was well designed and well delivered; however, it was limited by the lack of a follow-up visit with GPs by the detailers.[11] In an attempt to strengthen the assertion of a causal relationship, the study design included an intervention and control group and several pre- and postintervention time periods. The concerns regarding confounding due to the voluntary nature of the intervention were addressed through the use of PS methods.

Conclusions

The osteoarthritis AD intervention was successful in significantly decreasing COX-2 utilization for 3 months after intervention while, at the same time, increases in measures of patient morbidity and mortality due to gastrointestinal complications were not observed. AD is a complex and expensive method of CME. Since there are a number of jurisdictions in Canada using AD methods for CME delivery, comparative studies aimed at optimizing AD effect could be carried out by varying the methods of presentation of the same intervention content and messages to identify intervention components that are associated with the greatest changes in physician behavior.

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El Efecto de una Intervención Académica Detallada sobre la Frecuencia de Utilización de los Inhibidores de la Ciclo-Oxigenasa-2 en las Personas Mayores

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EXTRACTO

TRASFONDO: La osteoartritis (OA) es prevalente en las personas mayores. Los médicos de medicina general (GP) de Nueva Escocia identificaron la necesidad de una intervención académica detallada (AD) dirigida a optimizar el manejo de OA. La intervención AD fue provista por el programa de educación médica continua de la Universidad de Dalhousie en un encuentro cara a cara utilizando información basada en evidencia. La participación de los GP fue voluntaria.

OBJETIVOS: El objetivo principal fue el evaluar el efecto de una intervención AD relativa a OA dirigida a GPs sobre una reducción en la prescripción de inhibidores de la ciclo-oxigenasa-2 (COX-2). Los objetivos secundarios fueron el examinar el efecto de la intervención sobre la frecuencia de utilización de agentes gastro-protectores y servicios médicos.

MÉTODO: Se utilizó un diseño de estudio de cohorte retrospectivo utilizando información administrativa. Diferencias en la frecuencia de utilización entre los grupos de intervención y control fueron evaluadas usando un análisis generalizado de estimado de ecuaciones para información longitudinal durante el transcurso de 4 períodos de 90 días después de la intervención. La confusión fue tratada usando valores de propensión para hacer ajustes por el sesgo entre los grupos sobre las co-variables medidas.

RESULTADOS: La diferencia entre los grupos para el cambio en las frecuencias de utilización de COX-2 fue 0.76 dosis diarias definidas/paciente ($p = 0.040$; 95% CI 0.037 y 1.48) para el período de 3 meses después de la intervención, con una más baja utilización de COX-2 en el grupo de intervención AD que en el grupo control. El grupo de intervención demostró una disminución significativa en la frecuencia de utilización entre el grupo durante los períodos antes y después de la intervención ($z = –2.34$; $p = 0.019$). La diferencia entre grupos para cambios en la frecuencia de visitas a las oficinas de los GPs fue 0.40 visitas/paciente ($p = 0.028$; 95% CI 0.046 y 0.79), con el grupo de intervención presentando mayores frecuencias de visitas que el grupo control.

CONCLUSIONES: La intervención AD relativa a OA estuvo asociada con una disminución significativa (23%) en las frecuencias de uso de COX-2 durante el período de 3 meses inmediatamente después de la intervención. El resultado secundario de demostrar un efecto significativo entre grupos fue la frecuencia de visitas a la oficina del GP, que fue mayor para el grupo de intervención en el período de los segundos 3 meses después de la intervención.

Traducido por Brenda R Morand

L'Effet d'une Méthode d'Education Médicale Novatrice sur l'Utilisation des Inhibiteurs de la Cyclo-Oxygénase en Gériatrie

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RÉSUMÉ

OBJECTIF: La Faculté de Médecine de l'Université Dalhousie de la province de la Nouvelle-Écosse au Canada a développé une méthode novatrice d'éducation médicale continue par laquelle un professionnel de la santé ayant reçu une formation spécialisée en techniques d'apprentissage visite ses collègues médecins. Le but de ces échanges scientifiques est d'influencer et de changer les comportements de prescription médicale par le biais de présentations de données probantes sur un sujet spécifique. L'objectif premier de cette étude était d'évaluer l'effet d'une intervention ciblée auprès d'omnipraticiens quant à l'utilisation des inhibiteurs de la cyclo-oxygénase (COX-2) dans le traitement de l'arthrose. Les objectifs secondaires de l'étude étaient d'examiner l'effet de ces interventions sur les taux de prescription d'agents cytoprotecteurs et sur l'utilisation des services de santé.

MÉTHODOLOGIE: Le devis expérimental choisi a été celui d'une étude rétrospective de cohorte utilisant des données de banques administratives. Les différences entre les taux d'utilisation entre le groupe contrôle et le groupe intervention ont été évaluées à l'aide de calculs spécialisés pour des données longitudinales sur 4 périodes de 90 jours suivant les interventions. Des analyses de propension ont été utilisées pour ajuster les biais des co-variables mesurées entre les groupes.

RÉSULTATS: La différence entre les 2 groupes du changement des taux d'utilisation des COX-2 était de 0.76 d'une dose quotidienne définie par patient ($p = 0.04$; IC 95% 0.037 à 1.48) pour la période de 3 mois suivant l'intervention. Une utilisation moindre des COX-2 a été notée dans le groupe intervention comparativement au groupe contrôle. Le groupe intervention a démontré une plus petite différence dans les taux d'utilisation entre les périodes pré- et post-intervention ($z = –2.34$; $p = 0.019$). La différence entre les 2 groupes pour les taux de visites médicales était de 0.4 visite par patient ($p = 0.028$; IC 95% 0.046 à 0.79), un plus grand taux de visite étant noté chez le groupe intervention.

CONCLUSIONS: Cette méthode d'éducation médicale continue novatrice a été associée avec une diminution du taux d'utilisation de 23% des COX-2 durant la période de 3 mois suivant l'intervention. Un effet significatif sur le taux de visites médicales durant la seconde période d'observation a aussi été notée.

Traduit par Sylvie Robert