ABSTRACT

OBJECTIVES: Osteoarthritis (OA) is a highly prevalent condition seen across primary care services. Whilst evidence-based guidelines have encouraged the prescription of medications including analgesics for this population, there remains uncertainty as to which types of individuals actually take prescribed or over-the-counter medications. The purpose of this study was to determine whether there is a difference in characteristics between people who are taking medicines for OA compared to those who are not.

METHODS: A cross-sectional analysis of the English Longitudinal Study of Ageing (ELSA) cohort was undertaken. Individuals who reported hip and/or knee OA pain were included. Data on medication-taking was self-reported and collected as part of the ELSA data collection programme. Logistic regression analyses were undertaken to determine the relationship between potential predictors (demographic, pathology specific, psychological, social and functional) and whether individuals took medications for their OA symptoms.

RESULTS: 654 participants reported OA; 543 medicine-takers and 111 non-takers. Individuals who had access to a car (Odd Ratio (OR): 56.2; 95% Confidence Intervals (CI): 3.35 to 941.36), those with a greater duration of hip pain (OR: 5.79; 95% CI: 1.40 to 24.0) and those who achieved 10 chair raises at speed (OR: 1.08; 95% CI: 1.03 to 1.14) are more likely to take OA medicines.

CONCLUSIONS: This study identified predictors to medication-taking in individuals with hip and/or knee OA. Strategies are now warranted to better support these individuals, to improve health and wellbeing for this long-term, disabling condition.

Keywords: Degenerative; Hip; Knee; Osteoarthritis; Anaglesics; Pain Relief

Word Count: 3139

INTRODUCTION

Osteoarthritis (OA) is a disabling chronic musculoskeletal condition associated with high disability-adjusted life years and low quality of life for those with poor symptom control (GBD 2015 DALYs and HALE Collaborators, 2015). It is a highly prevalent condition seen across primary care services, constituting an increasing proportion of the case loads of general practitioners, physiotherapists, community pharmacists and other health professionals (Lancey et al, 2014; Ferreira de Meneses, 2016). Current evidence-based management advocated across international guidelines include weight-management, education, exercise and medication in the form of analgesics and non-steroidal anti-inflammatory drugs (NSAIDS) (National Clinical Guideline Centre, 2017; Zhang et al, 2007). Whilst these have demonstrated moderate to good effect sizes for those who follow this advice, patient experiences surrounding the effectiveness, particularly of paracetamol, have been shown to influence the extent to which pain relief is used (Lee et al, 2017). Furthermore, Wang et al (2005) highlighted the importance which some medications, such as strontium ranelate, may offer in respect to symptom improvement and joint structure changes with a slowing of disease progression (Rodrigues et al, 2018). Accordingly, encouraging the management of OA symptoms with medicines, particularly in the early stages of the disease, could have longer-term beneficial consequences (Han et al, 2017).

Previous research has suggested that increasing age, gender, social circumstance, education and socioeconomic status may be associated with medication-taking for people with musculoskeletal pain (Mody et al, 2008; Pokela et al, 2010; Fisher et al, 2012). Pain severity and mobility limitation have also been identified as important factors for those with chronic pain (Mody et al, 2008; Pokela et al, 2010; Fisher et al, 2012). However, due to limited sample sizes and variation in how musculoskeletal pain is categorised, there remains confusion as to who is most likely to take medication for this condition. It also remains unclear whether medication-taking for OA medications differs to that of other chronic diseases which this population may also have and to what extent taking medicines for other conditions influences taking medicines for OA. As such, it is important to ascertain if those already taking medicines for these conditions are more likely to take medicines for OA as this could significantly impact on both their health and well-being (Fisher et al, 2012).

Based on these uncertainties, the purpose of this analysis was to determine whether there is a difference in characteristics between people who are taking medicines for OA compared to those who are not. We also compared medication-taking for OA to other long-term conditions such as diabetes, hypertension or thrombotic diseases.

METHODS

Cohort

Data were gathered from the English Longitudinal Study of Ageing (ELSA), a prospective, population-based cohort study consisting of 11,391 individuals born on or before 29th February 1952 (Steptoe et al, 2013). It is a nationally-representative cohort which commenced in 2002 and has been followed every two years since (Steptoe et al, 2013). Ethical approval was provided by the London Multi-Centre Research Ethics Service (MREC/01/2/91). Anonymised unlinked data for this study were obtained from the UK Data Service.

Participants

Participants were eligible if they reported hip and/or knee OA with a visual analogue scale (VAS) pain score of one or above from a 0 to 10 pain scale. A threshold of VAS pain score of one was adopted to ensure that included participants presented with symptomatic arthritis. Whilst it is acknowledged that this may be considered low, the mean and standard deviation (SD) values indicate that the cohort had substantially greater pain scores than the one-point threshold (hip: 6.9; SD: 1.9/knee: 5.0; SD: 2.9). Included respondents were also required to report whether they were or were not taking medications for OA symptoms.

Data Collection

Data were gathered from Wave 4 of the ELSA cohort (2008-2009). The sample was drawn from participants in the Health Survey for England (HSE) 1998, 1999 and 2001 survey with Wave 4 including

a refreshment sample from HSE 2006 (Steptoe et al, 2013). The HSE is an annual cross-sectional survey that is designed to monitor the health of the general population. The total sample of 11,050 from Wave 4 included 8643 who attended a nurse visit to collect biomarkers and more detailed measures of function. Data from this analysis consisted of participants who attended the nurse clinic with wider demographic information gathered from the face-to-face follow-up interviews.

For this analysis, all potentially eligible participants presenting data for analysis, were included. This consisted of a cohort of 654 participants.

Dependent Variables

Medication-taking was self-reported and categorised in a binary code of yes/no. Medication-taking was asked towards OA medication, in addition to anticoagulation, diabetes and hypertension medications which were collected as part of the routine data collection processes for the wider ELSA study.

Covariates

Data on covariates were identified from the ELSA Wave 4 data as having a plausible relationship to explain medication taking for this population from a biological, psychological or social stand-point. Accordingly the data included in the analysis were: participant age, gender, weight, ethnic classification (white/non-white), whether participants were in paid work or not and the National Statistics-Socio-Economic Classification scheme (NS-SEC) category (Shankar et al, 2011). We also extracted data on self-reported general health and whether participants had access to a car. It was therefore hypothesised that these data may provide some explanation to medication-taking from perspectives such as disease-specific, impairment or activity related, from social or economic factors in addition to representing health psychological factors across this national cohort (Steptoe et al, 2013).

Pain measurements extracted included: VAS hip and knee pain score, duration of hip and/or knee pain and location of OA categorised as either isolated hip, isolated knee or hip and knee.

Physical activity participation was determined through the self-reported ELSA physical activity questionnaire (ELSA-PAQ)(Hamer et al, 2009). Participants were asked how often they engaged in vigorous, moderate or mild physical activity (Garfield et al, 2016; Demakakos et al, 2010). This method has been used to determine the level of physical activity participation undertaken by older people (Garfield et al, 2016; Demakakos et al, 2010), and has demonstrated excellent convergent validity within this population (Hamer et al, 2009).

Cognitive function was determined using the ELSA index of executive function. This is based on two brief tests of executive function: verbal fluency and letter cancellation.

Verbal fluency: this evaluates self-initiated activity, organisation and abstraction/mental flexibility. For this task, participants were given one minute to name as many animals as possible. The number of animals named was recorded)

Letter cancelation: this assesses attention, visual searching and mental speed. Participants were provided with a page of random letters arranged in rows and columns and asked to cross out as many target letters ('P' and 'W') within one minute (Steptoe et al, 2013).

These have demonstrated reliability and validity in assessing executive function (Henry & Crawford, 2004; Lezak, 1995; Tombaugh et al, 1999; Uttl and Pilkenton-Taylor, 2001).

Objectively assessed physical performance measurements were collected during the nurse assessment visit. These included: gait speed using an eight feet (2.4 m) walking test performed at normal walking pace, dominant handgrip strength, and timed chair raises (five and 10 repetitions) completed.

Functional impairment in activities of daily living (ADL) and instrumental ADLs was assessed by participant's response to whether they found difficulty in performing 18 personal and extended activities of daily living (Steptoe et al, 2013). These are itemised in **Table 1**.

Data Analysis

Demographic characteristics were presented using mean, standard deviation and frequency values. The frequency and prevalence with 95% confidence intervals (CI) of responses for taking OA medications, anticoagulation, diabetes and hypertension medication was determined.

Data distribution was assessed using the Shapiro-Wilks test. This indicated normality for each analysis undertaken. The primary analysis was an assessment for a potential association between candidate covariates comparing taking and not taking OA medications was determined using a Chi-squared test (for categorical variable) and Student T-Test (for continuous variables). Using these results, candidate variables which demonstrated a significance at $P \leq 0.10$ were included in a binary logistic regression analysis. This was used to determine the association between characteristics for participants who took and did not take medications for hip and/or knee OA. Data were presented as odd ratio (OR), 95% confidence intervals (CI) and p-values. For the final logistic regression model, $p<0.05$ denoted statistical significance. Finally, a secondary analysis through a Chi-squared test was undertaken to determine whether there was a difference in medication-taking for OA compared to medication-taking for diabetes, hypertension or thrombotic complications. All analyses were performed in Stata version 14.0 (StatCorp, Texas, USA).

RESULTS

Cohort

Of the 11,050 participants included in the Wave 4 ELSA dataset, data were missing on OA medication-taking for 10,396 participants. From the remaining 654 participants, all of whom had OA, 543 (83.0%; 95% CI: 0.80 to 0.86) reported taking medicines for OA, whilst 111 (17.0%; 95% CI: 0.14 to 20.0) reported not taking medicines.

Characteristics of Cohort

Table 1 summarises the cohort characteristics for those who were taking or not taking medicines for hip and/or knee OA. As this illustrates, there was a difference between the groups in respect to demographic characteristics. Those who took OA medicines more frequently had access to a car (87.3% versus 28.0%; p<0.001), higher mean fluency executive function (5.33 points versus 2.69 points; p<0.001), were younger (66.5 years versus 68.7 years; p=0.04), reported poorer self-reported health (fair to poor: 72.5% versus 54.9%; p=0.093) and were of a higher socioeconomic group (managerial or intermediate occupations: 32.2% versus 27.9%; p=0.142), although some of these differences were not significant.

There was a difference in the location of OA with those who were taking medicines presenting with a greater proportion of multi-joint OA (hip and knee: 47.3% versus 33.3%; p=0.003), with higher hip VAS pain scores (6.97 versus 6.37; p=0.009) and lower knee VAS pain scores (4.82 versus 5.59; p=0.013). Those who took medicines also reported a greater duration of hip pain (≥12 months: 54.3 versus 45.0; p=0.037).

Those who took medicines for OA were more likely to perceive OA medication as effective (24.3% versus 35.9%; p<0.001). Those who took medicines presented with shorter time to complete 10 chair raises (24.9 second versus 28.2 second; p=0.015). There was no difference between the groups for self-reported activity of daily living impairment, duration of knee pain, physical activity participation, whether they were in paid work or not, ethnicity, gender or weight (**Table 1**).

Logistic Regression Analysis

Age, access to a car, NS-SEC socioeconomic group category, self-reported health, executive function, location of OA, pain score, duration of hip pain dominant handgrip strength, timed 10 chair raises and perception of OA medication were identified as candidate variables for the binary logistic regression model, reaching the p≤0.10 threshold. The results of the logistic regression analysis are presented in **Table 2**. When analysed, access to a car, the duration of hip pain and timed 10 chair raises were significant variables. Those who had access to a car were 56 times more likely to take OA medicines compared to those who did not have access to a car (OR: 56.2; 95% CI: 3.350 to 941.36). Those with

a greater duration of hip pain were nearly six times more likely to take OA medications compared to those who had a shorter duration than 12 months (OR: 5.79; 95% CI: 1.40 to 24.0). People who achieved 10 chair raises faster were 8% more likely to take medications for OA symptoms (OR: 1.08; 95% CI: 1.03 to 1.14). There was no significant difference between OA medication-taking for variables such as age, NS-SEC socioeconomic group category, self-reported health, executive function, location of OA, dominant grip strength and perception of OA medication (**Table 2**).

There was no significant relationship between OA medication-taking compared to medication-taking for other chronic diseases is presented in **Table 3**. As this illustrates, there was no relationship between OA medication-taking and those for anticoagulants (p=0.78), medicines for diabetes (p=0.79) or medicines for hypertension (p=0.65).

CONCLUSIONS

The findings of this study indicate that three variables were associated with whether individuals took medication for their OA symptoms. Individuals who had access to a car, had a longer duration of hip pain and those who could complete 10 raises from a chair faster were more likely to take medications for their OA. There was no relationship between taking medications for OA compared to anticoagulants or medicines for diabetes or hypertension. Given that taking medicines may slow OA disease progression (such as though strontium ranelate (Rodrigues et al, 2018)) and improve both pain and structural changes (Wang et al, 2015; Han et al, 2017), encouraging medicine-taking for these people at most risk of not is clinically warranted. This is further encouraged by this data where there was a signal for greater functional performance, as measured by timed chair raises, for individuals who took medications compared to those who did not. This suggests that individuals who take medications may be more physically capable compared to those who do not.

The duration of hip pain was reported as a significant predictor in medication-taking. This may relate to people having a greater time period and therefore opportunity to take medicines (Rillo et al, 2016). It was not possible to negate the problem of reverse causation using concurrent measures of pain and medication-taking. Nonetheless, duration of hip pain may also relate to long-term health beliefs,

advocating the advantages of medication control for hip symptoms. Whilst reported as a potential candidate variable, the variables of hip and knee pain scores were not reported as significant predictors. This contrasts to previous findings which suggests that pain severity and associated reduced mobility are significant predictors in other musculoskeletal cohorts (Mody et al, 2008; Pokela et al, 2010; Fisher et al, 2012). The mean VAS scores for the cohorts were between five to seven. Therefore, it remains unclear whether medication-taking is different between participants with higher or lower scores, given that the cohort presented with minimal variance. Further exploration with cohorts who present with different pain severities may therefore be prudent.

There was a difference in medication-taking between people who reported hip, knee or multi-site OA. A greater proportion of participants with hip and knee OA presented in the medication-taking group (47%). It is unclear why this should be the case. One hypothesis is a difference in health beliefs towards managing more global (all-body) symptoms with medications of those with multi-site OA compared to individuals with single-joint pathology. There remains limited evidence around different symptom management approaches for those with single-joint compared to multi-joint pathology (Comer et al, 2018). Further exploration on why individuals with multi-joint pain are more likely to take medications would be useful. Examination of previous consultations with health care professionals, symptoms levels and attitudes towards OA would all be beneficial areas for investigating to better understand why this difference occurs.

The findings of this study indicate no association between medication-taking with OA to other chronic diseases. This conflicts with previous literature which has suggested a disconnect in practices where people are more likely to take medications for cardiovascular disease and diabetes management compared to OA (Sale et al, 2006). These studies have suggested that patients were more likely to take medications to control blood pressure, blood sugar or reduce the risk of thrombotic events. The difference may be attributed to either a difference in outcome for this population compared to those who are older and from other countries to France (Alami et al, 2011), Australia (Laba et al, 2013; Milder et al, 2011) and Canada (Sale et al, 2006) where the current evidence arises from. The results may also be attributed to this sample size where the subgroup analysis consisted of between 90 to 259

participants (**Table 3**) and therefore the non-statistically significant finding may be attributed to type two statistical error.

Previous research has suggested that increasing age, gender, social circumstance, education, and socioeconomic status in addition to pain severity and mobility impairment may be associated with medication use (Mody et al, 2008; Pokela et al, 2010; Fisher et al, 2012). This cohort of community-dwelling individuals from England suggests that whilst there was no significant relationship on logistical regression analysis on medication adherence for age, gender or education, the variable as to whether individuals have access to a car may be viewed as a surrogate for social circumstance or socioeconomic status. It remains unclear whether this factor should be interpreted in respect to the economics of not being able to afford access to transport, which has been previously reported as a factor (Macintyre et al, 1998), or whether this should be interpreted as a marker for social isolation and loss of social capital (Drennan et al, 2008). Both factors have been suggested to have major impact on quality of life (Woodcock and Aldred, 2008) and hence should be considered as important factors for people with osteoarthritis.

This study has highlighted subgroups of the OA population who are at risk of not taking medications (i.e. people without access to a car, those with a shorter duration of disease and who take longer to complete 10 chair raises). Previous literature has identified strategies, which health professionals may adopt to address such behaviours. These include educating patients about conditions and medicines, so they understand their value, identifying barriers and facilitators to medication-taking and action planning and monitoring to support individuals (Roberts et al, 2014; Gellad et al, 2011). Accordingly, these people who have been identified at greatest risk of not taking medications should be better supported through education on the different types of medicines available and how to use them to relieve symptoms and improve their health and wellbeing.

Whilst this study has considerable strengths, most notably its size for the primary analysis and national-representation for people who present with OA, it presented with two key limitations. Firstly, the findings on medication-taking were self-reported. Accordingly, both recall and social desirability bias may have affected findings to either supress or inflate estimated medication-taking practice. This may have been

negated through validation techniques of medication-taking such as pill count or reported prescription counts. However, since the data from the ELSA cohort is anonymised, such validation approaches could not be undertaken. Secondly, it was not possible to ascertain whether there was a difference in medication-taking between simple medications such as paracetamol, non-steroid anti-inflammatories compared opioid-based medications. Assessing differentiation of medication-taking by medication type would provide further granularity to the analysis and may provide greater insights into medication-taking behaviours of people with OA.

To conclude, the findings of this study indicate that access to a car, duration of hip pain and time to complete 10 chair raises are significant predictors as to whether individuals with hip and/or knee OA take medications. Further study to consider what strategies should be used to better support these individuals at greater risk would be advantageous given the current evidence-based recommendations that medication-taking can significantly improve the health and wellbeing of these individuals and reduce the burden of not taking medicines for OA symptoms on primary and secondary care services.

TABLE AND FIGURE LEGENDS

Table 1: Demographic characteristics of individuals who reported taking compared to not taking medications for hip and knee osteoarthritis.

Table 2: Results of the logistic regression analysis to determine the probability of people taking and not taking medications for hip and knee osteoarthritis.

Table 3: Results of the analysis comparing medication-taking to osteoarthritis medication to medications for three other chronic diseases.

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Table 1: Demographic characteristics of individuals who reported taking compared to not taking medications for hip and knee osteoarthritis.

	Hip or Knee		P-Value
	Taking OA Medications	Not Taking OA Medications	
N	543	111	
Mean Age (SD)	66.45 (10.04)	68.65 (9.76)	**0.035**
Mean weight in Kg (SD)	162.71 (10.02)	162.44 (9.68)	0.819
Gender			
Male	171 (31.5)	34 (30.6)	0.911
Female	372 (68.5)	77 (69.4)	
Access to a car (yes;%)	411 (87.3)	26 (28.0)	**<0.001**
Ethnicity			
White	517 (95.2)	109 (98.2)	0.291
Non-white	25 (4.6)	2 (1.8)	
In paid work (yes)	128 (27.2)	26 (28.0)	0.877
NS-SEC 5 Category			
1: Managerial and professional occupations	114 (21.0)	24 (21.6)	**0.142**
2: intermediate occupations	61 (11.2)	7 (6.3)	
3: Small employers and own account workers	42 (7.7)	13 (11.7)	
4: Lower supervisory and technical occupations	64 (11.8)	18 (16.2)	
5: Semi-routine and routine occupations	232 (42.7)	43 (38.7)	
Not reported	30 (5.5)	6 (5.4)	
Self-Reported Health			
Excellent	2 (0.4)	24 (21.6)	**0.093**
Very Good	30 (5.5)	7 (6.3)	
Good	117 (21.5)	13 (11.7)	
Fair	207 (38.1)	18 (16.2)	
Poor	187 (34.4)	43 (38.7)	
Not reported	0	6 (5.4)	
Mean Fluency Executive Function score	5.33 (2.24)	2.69 (2.59)	**<0.001**
Physical Activity Participation			
Low	191 (35.2)	32 (28.8)	0.327
Moderate	224 (41.3)	50 (45.0)	
High	58 (10.7)	17 (15.3)	
Not reported	70 (12.9)	12 (10.8)	
Location of OA			
Knee (yes; %)	230 (42.4)	52 (46.8)	**0.003**
Hip (yes; %)	56 (10.3)	22 (19.8)	
Hip and Knee (yes; %)	257 (47.3)	37 (33.3)	
Pain			
Mean Hip VAS (SD)	6.97 (1.84)	6.37 (1.96)	**0.009**
Mean Knee VAS (SD)	4.82 (2.96)	5.59 (2.75)	**0.013**
Duration of hip pain (N=110)			
< 3 months	1 (0.18)	0	**0.037**
≥3 < 6 months	1 (0.18)	0	
≥6 months < 12 months	16 (2.94)	9 (8.1)	
≥ 12 months	295 (54.33)	50 (45.0)	
Not Reported	313 (57.64)	52 (46.8)	
Duration of knee pain (N=387)			
< 3 months	1 (0.18)	1 (0.9)	0.400
≥3 < 6 months	2 (0.37)	0	
≥6 months < 12 months	27 (4.97)	7 (6.3)	
≥ 12 months	457 (84.16)	81 (73.0)	
Not reported	56 (10.31)	22 (19.8)	

Functional Capability			
Mean grip strength: dominant hand in Kg (SD)	23.55 (10.92)	21.73 (10.34)	**0.137**
Mean timed 5 chair raises completed (SD)	12.94 (5.11)	13.70 (4.25)	0.259
Mean timed 10 chair raises completed (SD)	24.90 (8.24)	28.16 (8.30)	**0.015**
Self-reported ADL impairment			
Walking 100 yards	69 (12.7)	12 (2.2)	0.580
Sitting for two hours	68 (12.1)	17 (3.1)	0.425
Getting up from a chair	143 (25.4)	23 (4.2)	0.216
Ascending several flight of stairs	203 (36.1)	37 (6.8)	0.420
Ascending one flight of stairs without resting	80 (14.2)	13 (2.4)	0.406
Stooping, kneeling or crouching	207 (36.8)	41 (7.6)	0.815
Reaching to lift something above shoulder level	68 (12.1)	12 (2.2)	0.616
Pushing or pushing large objects	101 (17.9)	17 (3.1)	0.412
Carrying a weight of over 10 pounds	134 (23.8)	27 (5.0)	0.937
Picking 5 pence from a table	36 (6.4)	6 (1.1)	0.632
Dressing including putting shoes and socks on	74 (13.1)	14 (2.6)	0.775
Walking across a room	18 (3.2)	3 (0.6)	0.739
Bathing or showering	54 (9.6)	14 (2.6)	0.401
Eating including cutting up foot	10 (1.8)	1 (0.2)	0.483
Getting in and out of bed	23 (4.1)	8 (1.5)	0.179
Toileting including getting up or down	18 (3.2)	1 (0.2)	0.168
Shopping for groceries	51 (9.1)	10 (1.8)	0.899
Doing work around the house or garden	84 (14.9)	17 (3.1)	0.967
Medication Taking Behaviour			
Perception that OA medication is effective (yes; %)	295 (54.3)	14/39 (35.9)	**<0.001**
Medication-taking: anticoagulants (yes; %)	95/170 (55.9)	22/36 (61.1)	0.822
Medication-taking: diabetes medication (yes; %)	72/90 (80.0)	14/18 (77.8)	0.974
Medication-taking: hypertensive (yes; %)	233/259 (90.0)	42/45 (93.9)	0.477

ADL – activities of daily living; Kg- kilograms; N – number of participants; NS-SEC – National Statistics Socio-economic classification; OA – osteoarthritis; SD – standard deviation

Table 2: Results of the logistic regression analysis to determine the probability of people taking and not taking medications for hip and knee osteoarthritis.

Variable	Odd Ratio	95% CI	P-value
Executive Function	0.595	0.339-1.044	0.232
Age	1.050	0.886-1.244	0.572
Dominant Grip Strength	0.947	0.848-1.057	0.330
Site of OA	2.215	0.649-7.558	0.204
VAS Hip Score	0.108	0.010-1.148	0.065
VAS Knee Score	1.240	0.591-2.602	0.569
Perception OA medication works	5.210	0.420-64.667	0.199
NS-SEC Group	0.509	0.206-1.261	0.145
Access to Car	56.155	3.350-941.364	0.005
Duration Hip Pain	5.793	1.397-24.021	0.015
Self-Reported Health	4.812	0.581-39.850	0.145
Timed 10 Chair Raises	1.082	1.026-1.142	0.004

Classification – percentage correct: 92.4%

B – beta-value; CI – confidence intervals; NS-SEC – National Statistics Socio-economic classification; OA – osteoarthritis; VAS – visual analogue scale

Table 3: Results of the analysis comparing medication-taking to osteoarthritis medication to medications for three other chronic diseases.

	Medication-taking OA medication (%)	**Chi^2 P-value**
Anticoagulant	95/170 (55.9)	0.779
Diabetes	72/90 (80.0)	0.786
Hypertension	233/259 (90.0)	0.648

OA - osteoarthritis