pharmacy dispensing data for 80 % of the population in Catalonia (~ 6 million people). All persons aged 18 or older at the beginning of each calendar year with an incident OA diagnosis (including both peripheral and central joints) in the study period were included. Index date was the date of first OA diagnosis, and the observation period of opioid use was 1-year after index date. Opioids considered included codeine, tramadol, fentanyl, and morphine, with the latter three classified as strong opioids. The period prevalence of any opioid use was estimated in whole and sub-population stratified by sex, age, socio-economic status (U1 – U5, higher values of the indicator equivalent to deprivation) and residence area (rural/urban).

Results: The 1-year prevalence of any opioid use among incident OA patients was around 15% from 2007 to 2012. After that, this figure grew by 10% approaching 25% in 2016. However, strong opioid use increased continuously to nearly triple, from 8% in 2007 to 20% in 2016. The different subgroups followed similar trends over time, with women 4% higher than men, oldest 10% higher than youngest, most deprived 6% higher than least deprived, and rural 1% higher than urban.

Conclusion: The use of opioids (and especially strong opioids) has substantially increased in recent years among newly diagnosed OA patients in Catalonia. Our findings call for urgent action for safe opioid prescribing to avoid opioid abuse in OA patients especially amongst older women living in deprived areas.

Disclosure of Interests: Junqing Xie: None declared, Aleksandra Turkiewicz: None declared, Gary Collins: None declared, Martin Englund Consultant of: Advisory Board 1 day (2019) Pfizer (Tanezumab)., Victoria Y Strauss: None declared, Carlen Reyes: None declared, Daniel Prieto-Alhambra Grant/research support from: Professor Prieto-Alhambra has received research Grants from AMGEN, UCB Biopharma and Les Laboratoires Servier, Consultant of: DPA's department has received fees for consultancy services from UCB Biopharma, Speakers bureau: DPA's department has received fees for speaker and advisory board membership services from Amgen

DOI: 10.1136/annrheumdis-2020-eular.3070

OP0281

TWO-YEAR COST-EFFECTIVENESS BETWEEN TWO GRADUAL TAPERING STRATEGIES IN RHEUMATOID ARTHRITIS: COST-UTILITY ANALYSIS OF THE TARA TRIAL

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Background: Current guidelines recommend to consider tapering treatment in rheumatoid arthritis (RA) patients who are in sustained remission, but the optimal approach to de-escalate conventional synthetic and biological DMARDs (respectively csDMARDs and bDMARDs) remains unknown. The benefits of tapering are a decreased risk of long-term adverse events and a reduction of health care costs, especially when bDMARDs are tapered. However, tapering treatment may lead to more transient or persistent disease flares, which have a direct impact on patients' lives and societal costs.

Objectives: To evaluate the two year cost-utility ratio between tapering the csDMARD first followed by the TNF-inhibitor, and tapering the TNF-inhibitor first followed by the csDMARD.

Methods: The TARA trial is a multicenter single-blinded randomized controlled trial. RA patients that used a csDMARD(s) plus a TNF-inhibitor and who had a well-controlled disease for at least 3 months, defined as a DAS2.4 and a swollen joint count (SJC) ≤ 1, were included. Patients were randomized into gradual tapering their csDMARD followed by the TNF-inhibitor or vice versa. Medication was tapered in three steps over the course of 6 months. Gradual tapering was done by cutting the dosage into half, a quarter and thereafter it was stopped. Data on QALYs (measured with the Dutch EuroQol [EQ5D]), direct and indirect costs were used to calculate the Incremental Cost Effectiveness Ratio (ICER). The incremental cost-effectiveness ratio (ICER) and the incremental net monetary benefit (iNMB) were used to assess cost-effectiveness between both tapering strategies. Direct costs comprises costs for treatment and medical consumption, while indirect costs comprises costs due to loss of productivity (i.e. sick leave and unemployment).

Results: Of the 189 included patients, 94 started tapering their TNF-inhibitor first, while the other 95 tapered their csDMARD first. QALYs (sd) were, respectively, 1.64 (0.22) and 1.65 (0.22). Medication costs were significantly lower in the patients who tapered the TNF-inhibitor first, but indirect cost were higher due to more productivity loss. Therefore, total costs per QALY were similar for both tapering strategies (p=0.62). The ICER between tapering csDMARDs and the TNF-inhibitor was -€184534 (-€417314, €48245; 95% CI)(figure 1). The mean iNMB was €2831 at a willingness-to-pay (WTP) level of €80000. At all WTP levels the probability of being cost-effective was higher (62% vs. 28%) for tapering the TNF-inhibitor first (figure 2)

Conclusion: Medication costs are lower when the TNF-inhibitor is tapered first, but this is counterbalanced by higher indirect costs due to loss of productivity.

Therefore, overall cost savings are similar for both tapering strategies. However, tapering the TNF-inhibitor first has a higher chance of being cost-effective at all WTP thresholds. For this reason we advise to taper the TNF-inhibitor first when tapering medication is considered.

Figure 1 Summary of economic evaluation of tapering csDMARDs first minus tapering TNF-inhibitor first. (A) Results of 1000 bootstrapped replications, presented in a cost-effectiveness plane which represents uncertainty of the cost-effectiveness ratio. (B) Mean incremental net monetary benefit for tapering csDMARDs minus tapering TNF-inhibitors with 95% confidence intervals plotted against different levels of willingness to pay (WTP) per quality adjusted life year (QALY). csDMARDs: conventional synthetic DMARDs; iNMB: incremental net monetary benefit; QALY: quality adjusted life year; WTP: willingness to pay.

Figure 2 Cost effectiveness acceptability curve for tapering csDMARDs first versus tapering TNF-inhibitor first. Results of 1000 bootstrapped replication, presented for several levels of willingness to pay, indicated per quality adjusted life year (QALY). csDMARDs: conventional synthetic DMARDs; QALY: quality adjusted life year; WTP: willingness to pay.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.740

OP0282

COST-EFFECTIVENESS ANALYSIS OF A CAFASPA REFERRAL MODEL FOR AXIAL SPONDYLOARTHRITIS

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Background: Chronic low back pain (CLBP) poses a significant individual and socio-economic burden. A substantial amount of patients with CLBP have axial spondyloarthritis (axSpA), but early recognition of these patients is difficult for general practitioners (GPs). Guidelines form primary care and secondary care differ in criteria for referral recommendation. The Dutch primary care guideline is restrictive in referring CLBP patients to secondary care whereas ASAS recommend to refer CLBP patients having at least 1 axSpA feature¹. Therefore several referral models have been developed to assist GPs. Although the validated CaFaSpA referral model² is able to identify CLBP patients at risk for axSpA, its cost-effectiveness is yet unknown and essential before implementation in daily clinical practice.

Objectives: Primary objective to assess the cost-effectiveness of the CaFaSpA referral model for axSpA in primary care. Secondary objective to evaluate the costs made for screening by following the CaFaSpA vs ASAS referral model.

Methods: A clustered randomized controlled trial was performed with GPs as clusters. Clusters were randomized into the intervention (CaFaSpA referral, CS) or usual care (UC). Cost-effectiveness analysis from a societal perspective was performed to compare the CS and UC. Clinical outcomes were disability

(Roland-Morris Disability Questionnaire (RMDQ)) and health-related quality of life (EuroQol (EQ-5D)) after 12 months. Direct (Medical Consumption Questionnaire IMCQ) and indirect healthcare (Productivity Cost Questionnaire IPCQ) costs were evaluated. Complete case analysis was performed. Incremental cost-effectiveness ratios (ICERs) were calculated for both clinical effects. Fictive costs according to the Dutch standard prices were assessed if the ASAS guideline would be followed (screening costs)³.

Results: Of all 679 patients sixty-four percent were female and mean age was 36 (SD) years. In the CS 333 patients were included and in the UC. Non-significant differences in clinical outcomes were for RMDQ: 0.78 (95% CI: -0.38-2.07) and for EQ5D 0.03 (95% CI: -0.04-0.11). Costs were significantly higher in the UC group €19,748 (95% CI: € 15,327-25,022) vs CS € 14,169 (95% CI: € 10,723-18,066).

Productivity loss was the largest contributor to the total costs (CS group: 62%, UC group: 96%). The majority of the bootstrapped ICERs presented were located in the south-eastern quadrant of the cost-effectiveness planes (Figure 1a and 1b), indicating that the CS is cost-effective. The ICER for RMDQ was €-5,579, indicating that per point improvement on the RMDQ the intervention saved €5,579. The difference in QALY's between the CS and UC was very small resulting in a large ICER of €16,9583.

The fictive screening costs by using the ASAS referral advice, i.e. referring 85% of 679 patients, results in €876 per patient. The total screening costs per patient by using the CaFaSpA model, i.e. referring 60% of 679 patients is €618.

Conclusion: Although the clinical effects between the CaFaSpA referral strategy and usual care were comparable, the CaFaSpA referral strategy resulted in a better cost-effectiveness. Lower costs were mainly driven by the increased productivity.

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Figure 1. Cost-effectiveness plane for disability (RMDQ) (figure 1a) and health related quality of life (EQ-5D) in which the CaFaSpA referral strategy is compared to usual care.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4683

OP0283

COMPARING COST-UTILITY OF DMARDS IN SERONEGATIVE RHEUMATOID ARTHRITIS PATIENTS; A TREACH SUBANALYSIS

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Background: The diversity of the clinical phenotype of rheumatoid arthritis (RA) is increasing due to the emphasis on early diagnosis and treatment. This resulted in an increased number of RA patients without autoantibodies, also known as seronegative RA. We recently showed that newly diagnosed seronegative RA patients initially treated with hydroxychloroquine (iHCQ) had a similar clinical efficacy to initial methotrexate (iMTX). To our knowledge, however, there are no data on the cost-effectiveness of different initial treatment strategies in seronegative RA patients.

Objectives: To evaluate the 1-year cost-effectiveness between three different initial treatment strategies in seronegative rheumatoid arthritis (RA) patients, according to 2010 criteria.

Methods: For this analysis we selected all seronegative RA patients (n=131) within the intermediate probability stratum of the tREACH trial (table 1). Selected patients either received initial methotrexate 25mg/week (iMTX), hydroxychloroquine 400mg/day (iHCQ) or oral glucocorticoids, starting dose 15mg, in a 10-week tapering scheme without csDMARDs (iGCs). Quality adjusted life year (QALY) were derived from the EQ-5D. Costs were calculated with data from patient records and questionnaires. Direct costs are health care costs, whereas indirect costs are costs due to productivity loss. The incremental cost-effectiveness ratio (ICER) was used to assess the cost-effectiveness between treatment strategies.

Table 1. Baseline characteristics and response after 1 year.

	A.iMTX (n=50)	B.iHCQ (n=40)	C.iGCs (n=41)
Baseline (t=0)			
Age (years), mean (SD)	57 (14)	54 (14)	53 (15)
Sex, female, n (%)	38 (76)	24 (60)	27 (66)
Symptom duration (days), mean (SD)	143 (86-209)	146 (102-226)	126 (94-192)
Das, mean (SD)	3.43 (0.92)	2.93 (0.84)	3.50 (0.93)
HAQ, mean (SD)	1.20 (0.56)	0.90 (0.61)	1.03 (0.69)
Response after 1 year (t=12)			
Das, mean (SD)	1.71 (0.81)	1.78 (0.97)	1.72 (1.00)
HAQ, mean (SD)	0.78 (0.55)	0.77 (0.60)	0.71 (0.68)

Results: Average QALYs (sd), for iMTX, iHCQ and iGCs were respectively 0.71 (0.14), 0.73 (0.13) and 0.70 (0.15). The average total costs (sd) per QALY for iMTX, iHCQ and iGCs were respectively €11.004 (17.611), €13.231 (19.886) and €18.415 (35.660). Direct and indirect costs were higher in the iGCs group compared to iMTX and iHCQ (table 2). The ICERs did not differ between the initial treatment strategies (figure 1A-C). For WTP levels <€33.900 iMTX has the highest probability of being cost-effective, while for WTP levels >€33.900 iHCQ has the highest probability (figure 1D).

Table 2. Total costs per QALY after 1 year of follow-up.

	A.iMTX (n=50)	B.iHCQ (n=40)	C.iGCs (n=41)
QALYs (AUC)	0.71 (0.14)	0.73 (0.13)	0.70 (0.15)
Cost per QALY (EQ5D)			
• Total direct costs, €	€3873 (4706)	€3262 (4434)	€5008 (6869)
• Medication, €	€2224 (4025)	€1134 (2493)	€3135 (5343)*
• Medical consumption, €	€1394 (1067)	€1915 (3274)	€1874 (2367)
• Hospitalization, €	€256 (1353)	€213 (785)	-
• Total indirect costs, €	€7131 (15164)	€9969 (17340)	€13406 (31255)
Total costs, €	€11004 (17611)	€13231 (19886)	€18415 (35660)

Results shown are mean (SD) unless stated otherwise. *p<.05 for HCQ vs. GCs (student t test)

Conclusion: iMTX and iHCQ are more cost-effective than iGCs. However, depending on the WTP threshold either iMTX or iHCQ has the highest probability of being cost-effective.