clinical course (1). The impact of deprivation in early assessment has yet to be characterised on a national level.
Objectives: To investigate if rapid assessment in secondary care associates with achieving a good treatment response, and if this is modulated by social deprivation.
Methods: An audit, designed as a prospective longitudinal observational study, was conducted to assess early RA care. All NHS providers in England and Wales were required to participate. Follow up data were captured over 3 months for subjects with a diagnosis of RA. Rheumatologist assessment within 3 weeks of referral was the predictor variable. The primary outcome was good EULAR DAS response; the secondary outcome was meaningful improvement in RAID score. Logistic regression was used to estimate for associations. Confounders including age, gender, baseline DAS28 and RAID scores were considered in analyses. The index of multiple deprivation (IMD) rank was calculated for each individual based on super-output geographical areas. The IMD rank was then stratified into quintiles and included as a confounder.
Results: 136 of 146 eligible trusts submitted data. 11,752 subjects consented, 5,622 were diagnosed with RA. 94/5622 (1.7%) had incomplete assessment date data. DAS28 response was available for 2234/5622 (39.7%), and RAID response for 901/5622 (16%). The table shows baseline characteristics and response for subjects with complete data. Assessment within 3 weeks associated with a significantly greater improvement in DAS28 and RAID scores, with an adjusted odds ratio for a good EULAR response 1.38 (1.15–1.66) and meaningful RAID reduction 1.44 (1.03–2.02).

	Seen within 3 weeks	Not seen within 3 weeks	P Value
N	878	1356	
Age (SD)	58.6 (14.8)	59.9 (14.1)	0.046*
Female (%)	65.2	64.4	0.24**
White British (%)	86	88.9	0.015**
Current smoker (%)	21.1	25.4	0.009**
IMD quintile mean	3	3	
DAS28 EULAR good response (%)	43.7	35.8	0.001**
DAS28 EULAR moderate response (%)	31.2	35	
DAS28 EULAR no response (%)	25.1	29.1	
Achieved MCID† RAID (%)	48	40.7	0.026*

*t-test; **chi-squared. †Minimal clinically important difference (reduction by 50% or absolute reduction >3).

Conclusions: These real world data confirm rapid assessment significantly predicts treatment response, in terms of clinical disease activity and patient reported outcomes. Amongst those who were assessed within 3 weeks of referral, an additional 8% achieved a good EULAR response. The association with RAID response was strengthened when social deprivation was included as a confounder. The relationship between IMD and RAID response appears to be non-linear and requires further study.
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SAT0700 COMPARATIVE RISK OF RESPIRATORY DEPRESSION IN PATIENTS TREATED WITH OPIOIDS FOR NON-MALIGNANT PAIN

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Background: Opioid use for non-cancer pain has increased considerably over the last 30 years. The U.S. Food and Drug Administration announced several boxed warnings in 2016 to highlight serious opioid-related risks (1) in an effort to reduce fatal overdoses, 80% of which are unintentional (2). The most serious opioid related adverse event is respiratory depression (RD), which can be potentially fatal. There are few data on the incidence of RD in opioids users for non-malignant pain and no comparative data between drugs.
Objectives: To assess the comparative risk of RD in new users of opioids for non-malignant pain using routinely collected electronic patient records (EPR).
Methods: Opioid users from Salford hospital EPR were identified between 2014–2016. Patients with prior malignancy were excluded on the basis of ICD-10 codes and health issues. Those with prior history of opioid use were excluded using keyword searches within the medicines reconciliation document. The primary analysis was on drug + 1 day lag window, unless patient switched to another opioid. Exposure was categorised as opioid monotherapy by drug or combination of opioids (so that RD events could be assigned to a single exposure category). Electronic National Early Warning Scores, used to regularly monitor physiological parameters during inpatient visits, were used to classify RD. An RD event was defined as any one of the following: respiratory rate (RR) ≤8/min, RR ≤10/min and oxygen saturations <94%, RR ≤10/min and altered consciousness, or dispensed naloxone use. Crude rates per 1000 person years of follow up were calculated and Cox proportional hazards models were used to examine the comparative risk of dispensed opioids and RD. Patients contributed follow up time for a particular drug from dispensed drug start date until day after discontinuation, first RD event, death or end of last hospital admission (by 31/05/16).
Results: 8007 opioid users were included in the study, 3,976 female (50%) and a mean age (SD) of 53 (21) years. There were 255 RD events observed on treatment, 87 with severe respiratory depression (RR <8/min), 114 requiring naloxone and 3 respiratory arrests. Patients on fentanyl, morphine, oxycodone and combination treatment had the highest crude rates of RD (table). In the age and gender adjusted Cox-model, using codeine as the referent, patients on fentanyl, morphine, oxycodone and combination opioids had the highest risk of RD [(table), adjusted HR (95% CI) for combination opioids: 2.22 (1.56, 3.16)]. Compared to morphine, combination opioids had an adjusted HR of 1.52 (1.09, 2.13).

Opioid (no. of patients)	Codeine (n=4,638)	Fentanyl (n=577)	Morphine (n=3,783)	Oxycodone (n=1,740)	Tramadol (n=189)	Alfentanil (n=372)	Buphrenorphine (n=93)	Combination (n=3,175)
Mean age (years, SD)	51 (20)	62(20)	48 (18)	68 (18)	48 (18)	52 (17)	75 (17)	49 (19)
Females (%)	50	49	49	55	49	35	66	50
Median follow up per patient (days)	7 (3-15)	12 (6-24)	8 (4-15)	14 (7-28)	15 (7-36)	37 (17-78)	36 (21-67)	9 (5-19)
Number of RD events	63	11	79	37	2	2	1	60
Crude rate per 1000 patient years (95% CI)	58 (46, 75)	120 (66, 217)	89 (72, 111)	102 (74, 141)	40 (10, 160)	70 (17, 283)	61 (9, 433)	152 (118, 195)
Hazard ratio (95% CI)	Ref	1.99 (1.05, 3.77)*	1.49 (1.06, 2.07)*	1.79 (1.19, 2.69)*	1.05 (0.26, 4.31)	0.48 (0.12, 1.98)	1.73(0.24, 12.51)	2.23 (1.56, 3.17)*
Age and gender adjusted hazard ratio (95% CI)	Ref	2.05 (1.08, 3.90)*	1.46 (1.05, 2.03)*	1.99(1.31, 3.03)*	1.03 (0.25, 4.20)	0.45 (0.11, 1.86)	1.83 (0.25, 13.24)	2.22 (1.56, 3.16)*
Hazard ratio (95% CI)	0.67 (0.48, 0.94)*	1.34 (0.71, 2.51)	Ref	1.21 (0.82, 1.78)	0.71 (0.17, 2.89)	0.33 (0.08, 1.32)	1.16 (0.16, 8.39)	1.50 (1.07, 2.10)*
Age and gender adjusted hazard ratio (95% CI)	0.69 (0.49, 0.95)*	1.40 (0.74, 2.65)	Ref	1.37 (0.91, 2.06)	0.70 (0.17, 2.87)	0.31 (0.08, 1.27)	1.25 (0.17, 9.06)	1.52 (1.09, 2.13)*

* p<0.05

Conclusions: Fentanyl, oxycodone, morphine monotherapy have a significantly higher risk of RD than codeine, but these are not significantly different from each other. Combination opioids confer the highest risk of RD, compared to both codeine and morphine. The strengths of this study include capture of real time physiological parameters to define RD and dispensed medication use (rather than prescribed) to define exposure.
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SAT0701 TOWARDS DIAGNOSIS-SPECIFIC LIFETIME RISKS FOR TOTAL HIP ARTHROPLASTY REVISION SURGERY

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Background: An important aspect regarding optimal timing of primary hip arthroplasty (THA) is to weigh the benefit associated with the primary surgery at a certain point in time against the risk for revision surgery. Revision surgery should be avoided, as outcomes after revision surgery are less favourable than outcomes after primary surgery. Information on lifetime revision risks is needed to guide decision making for individual patients regarding timing of primary surgery.
Objectives: Our aim was to provide the 7 year cumulative percentages for revision surgery stratified for diagnosis, sex, type of fixation and age at which primary THA was performed.
Methods: Data on arthroplasties was available from the Dutch Arthroplasty Register (LROI), a nationwide population-based registry with information on all joint arthroplasties in the Netherlands from 2007 onwards. For the current study, all patients who received a primary THA in the period 2007 to 2015 were included except patients with a metal on metal prosthesis, patients with a hybrid or reversed hybrid fixation type or patients with revision surgery without primary surgery registered. Revision surgery was defined as any change of one or more components of the prosthesis. For the current study age at primary surgery, diagnosis, sex, type of fixation (uncemented, cemented) and survival (alive/dead) and revision of prosthesis (yes/no) were extracted from the LROI database.

Diagnosis was dichotomized into osteoarthritis (OA) and other diagnoses. Annual revision risks were calculated for each subsequent year after primary arthroplasty by dividing the number of revisions by the total number of patients at risk during that year. The risks were stratified according to the underlying diagnosis, sex, age at primary arthroplasty and fixation type. In addition cumulative annual revision percentages were calculated for the full follow-up period. Furthermore we estimated the percentage of avoided OA revisions by assuming that all OA patients received their primary THA 5 years later (in all age groups <85 yrs) and that the revision risks remained the same in all age categories.

Results: In total 134463 primary THA patients were included of whom 68% were female, 89% had OA as underlying indication and 66% of the THAs were uncemented. The 7th year cumulative risk percentage varied between 2.0 and 11.7% (Table 1). Overall cumulative revision percentages were higher in younger age categories (Table 1), with the exception of a 11.7% revision in the group aged 85–90 yrs (uncemented, male, other diagnosis), but this finding is likely due to chance as this group existed of 67 patients. We estimated that by delaying THA for 5 years, a total of 197 revision surgeries (4.4% of all revision surgeries) could be avoided, 48 (14.0%) in the OA male cemented group, 11 (0.9%) in the OA male uncemented group, 69 (3.3%) in the OA female cemented group and 69 (8.6%) in the female uncemented group. This could result in a yearly cost reduction of approximately 4 million euros.

Table 1. Cumulative revision percentages within 7 years after index surgery.

	Osteoarthritis				Other diagnosis			
	Male		Female		Male		Female	
Age-categories	Cemented	Uncemented	Cemented	Uncemented	Cemented	Uncemented	Cemented	Uncemented
50-54	4,10	4,46	3,14	5,27	8,31	6,56	4,44	7,19
55-59	4,55	5,46	6,70	4,63	8,94	5,38	8,02	5,95
60-64	4,72	4,34	3,55	4,24	5,03	5,54	7,23	3,82
65-69	4,23	4,06	2,36	3,63	5,92	7,30	6,86	4,99
70-74	3,71	4,53	2,92	4,50	5,24	7,34	2,46	4,28
75-79	3,00	4,67	2,47	3,78	4,15	7,25	3,87	2,94
80-84	2,69	3,84	2,20	3,59	5,94	3,76	3,48	3,79
85-90	2,02	4,93	2,11	3,73	2,04	11,65	2,47	2,51
Total	3,45	4,50	2,62	4,11	5,53	6,39	4,31	4,54

Conclusions: Cumulative 7th year risk percentages decreased by age in all different categories. By delaying the primary THA surgery, revisions might be avoided thereby resulting in cost reduction.

Disclosure of Interest: None declared

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SAT0702 LOCAL AND SYSTEMIC INFLAMMATION IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS WITH CHLAMYDIA TRACHOMATIS INFECTION

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Objectives: We had to study local and systemic inflammation in rheumatoid arthritis patients with persistence Chlamydia trachomatis (Ch tr) in the joint

Methods: 31 patients with early RA; mean age 54,5 (10,6) years, disease duration 21,5 (14,4) weeks witch persistence Ch tr in the joint (mRNP Ch tr had been revealed in synovial fluid by NASBA PCR) were enrolled in this study. The comarison group was patients with RA (n=42) without mRNP in synovial fluid (Ch tr-). Mean age was 51,7 (15,4) years, disease duration 20,8 (13,3) weeks. All the patients had been received only symptomatic treatment (NSAID). Disease activity had been detected by DAS 28. Systemic inflammation was estimated by levels of erythrocyte sedimentation rate (ESR), hsp C-reactive protein (hspCRP), orozomucoid (OR) in the blood samples; local inflammation- by detection hsp CRP, OR in synovial fluid. Also we had been detected level of ACCP in the blood samples and synovial fluid.

Results: We didn't reveal statistically significant differences between levels of ESR, hsp CPR, OR, ACCP in blood samples patients with RA Chtr+ and RA Ch tr-. Level of hsp CPR and OR in synovial fluid of research group (Ch tr+) were significantly higher than comparison group (4,1±0,3 mg/l versus 2,4±0,2 mg/l, $p<0,05$ –hspCRP and 157,4±17,5mg/dl versus 78,5±18,9 mg/dl, $p<0,001$- OR). In the group of research (Ch tr+) level of ACCP in synovial fluid was statistically significant higher than comparison group (Ch.tr -) (195,6±37,3 versus 67,9±15,4; $p<0,001$)

Conclusions: Patients with early RA detected by NASBA PCR in synovial fluid Ch tr+, had been characterized by absence differences compared RA Ch tr- patients in the level of systemic inflammation and had differences in the level of local inflammation. We revealed high level of ACCP in RA patients with Ch tr in the joints, that may be important for understanding some aspects of RA pathogenesis.

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SAT0703 INFLUENCE OF PHYSICAL ACTIVITY AND SLEEP ON FUNCTIONAL CAPACITY AND PAIN IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Knee osteoarthritis (OA) is a degenerative disease in which pain and functional disability progression tend to increase with reducing the health-related quality of life (HRQOL). Factors related to healthy lifestyles, such as physical activity and sleep, are known to have restorative benefits on function and pain in these patients. A previous study found that patients with reparative sleep achieved better WOMAC and SF-36 HRQOL questionnaire dimension scores.

Objectives: To determine the influence of physical activity and sleep on functional capacity and pain in patients with long-term knee OA.

Methods: Cross-sectional study. Sociodemographic and clinical variables, physical activity (PA) (regular physical exercise ≥3 times a week ≥30 minutes per session (PE) and sitting ≤6 hours/day [S]) and sleep quality/reparative sleep (RS) were determined using the question: How do you usually sleep? (1=well [RS], 2=regular, 3=badly, 4 =with medication/treatment [NRS]). Functional capacity and pain were evaluated using the WOMAC (specific) and SF-36 (generic) HRQOL questionnaires. Associations were analysed using multiple regression models.

Results: 453 patients (84.3% female), mean age 69.73 (8.4), BMI 35.27 [SD 6.3], comorbidities 2.43 (SD 1.5), 78.6% with obesity (BMI 33.68 [SD 6.7]), depression/anxiety in 36.4%, PE 60.5%, S 72.2% and PA 48.6%, were included. 22.5% reported RS. Bivariate analysis showed patients with PA and those with RS had better functional capacity and less pain intensity (>10, $p>0.001$, in both WOMAC and SF-36). The four multiple regression showed that patients with PA and SR had better scores, both in functional capacity (dependent variables, WOMAC and SF-36) and pain (dependent variables, WOMAC and SF-36), $p<0.006$. Age, gender, number of comorbidities and obesity were included in the models as potential confounders. Obesity was associated with worse function and more pain in the four models ($p<0.05$). Being female and greater comorbidity were associated with poorer functional capacity and pain assessed by the SF-36.

Conclusions: Physical activity and sleep were associated with less pain and better functional capacity, suggesting these variables should be determined systematically in clinical practice due to their significant relationship with HRQOL. Obesity was negatively associated with function and pain. There was also a negative relationship between female gender and comorbidity according to the SF-36. Differences in generic and specific questionnaires mean they should be used together to provide more detailed information.

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SAT0704 THE IMPACT OF AUTOIMMUNE DISEASE IN THE MANAGEMENT AND PROGNOSIS OF ACUTE CORONARY SYNDROME

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Background: Patients with autoimmune diseases (AID) have a high burden of cardiovascular disease leading to premature morbidity and mortality. But it is unclear if it is due to a higher prevalence of cardiovascular disease, to a worse case fatality or to a different management after an index event.

Objectives: The primary aim of the study is to assess the prognostic implications of the presence of AID both during the hospitalization and after discharge after an acute coronary syndrome (ACS). The secondary objectives included the assessment of the prevalence of AID in patients with ACS, their clinical profile and the management of this index event

Methods: The study included consecutive patients admitted after ACS from January 2011 to December 2015 at the University Hospital Virgen de la Arrixaca, Murcia (Spain). For AID patients, in-hospital management and ACS presentation was compared to non-AID patients. We also compared in-hospital and major adverse events during follow-up (death, recurrent non-fatal myocardial infarction, stroke and major bleeding, between groups). A multivariate Cox regression model was performed to assess the independent role of the presence of AID in the occurrence of the events of interest.

Results: Of 2236 patients included with ACS, 78 had AID (3.3%): 24 rheumatoid arthritis, 10 inflammatory bowel disease, 7 ankylosing spondylitis, 6 psoriatic arthritis, 5 polymyalgia rheumatica, 2 systemic lupus erythematosus and 20 miscellanea. Mean age of AID patients was 67±13 years and median evolution of the disease was 10 [4–14] years. Seventy percent of AID patients were taking corticosteroids, 50% disease modifying antirheumatic drugs, 22% non-steroidal anti-inflammatory drugs and 8 biological theraphy. No significant differences were found in clinical and demographics characteristics between groups except for a