bladder, 2,590 for lung, 4,488 for bowel, 6,474 for prostate and 10,274 for breast cancer). The definitions for cancer endpoints were matched for ICD9 and 10 codes between MDC/MPP and UK-Biobank cohorts. For both MR settings, a set of 26 urate-associated single nucleotide variants was selected to build-up the SU instrument (*SU-instr*) to test for a causal effect of SU on cancer outcomes. Statistical analysis, adjusted for age and sex, was done using multiple conventional MR methodologies and MR package in R (v4.0.2). A $p < 0.05$ was designated as statistically significant.

Results: We found no causal effect of our *SU-instr* on neither all-cause nor site-specific cancer across all MR analyses (all $p > 0.05$). In MDC/MPP, *SU-instr* did not show a causal effect on the risk of all-cause [OR = 1.06, $p = 0.32$], bladder [OR = 0.96, $p = 0.84$], lung [OR = 1.26, $p = 0.17$], bowel [OR = 0.96, $p = 0.81$], prostate [OR = 1.05, $p = 0.62$], and breast [OR = 0.99, $p = 0.98$] cancer. Similar findings were made in the two-sample settings. Detailed results are provided in Table 1.

Conclusion: Our MR study, using a series of causal inference approaches, does not support a causal effect of genetically determined SU for major cancer outcomes. There is no evidence to support changing SU levels by lifestyle or pharmacological intervention to attenuate the risk of major cancer types.

Table 1. Results from a range of MR analyses for causal effect of SU on cancer risk in MDC/MPP (one-sample MR) and GUGC and UK-Biobank (two-sample MR) cohorts

One-sample MR							
Cancer type	IVW			2SLS		GRS	
	OR (95% CI)	p -causal	p -Het	OR (95% CI)	p -causal	OR (95% CI)	p -causal
Bladder	0.96 (0.68; 1.36)	0.84	0.55	0.99 (0.70; 1.42)	0.99	0.94 (0.67; 1.34)	0.76
Lung	1.26 (0.90; 1.77)	0.17	0.89	1.29 (0.91; 1.82)	0.14	1.26 (0.90; 1.77)	0.17
Bowel	0.96 (0.72; 1.28)	0.81	0.44	0.95 (0.72; 1.27)	0.77	0.97 (0.73; 1.28)	0.83
Prostate	1.05 (0.84; 1.31)	0.62	0.84	1.04 (0.83; 1.30)	0.72	1.04 (0.83; 1.30)	0.69
Breast	0.99 (0.74; 1.33)	0.98	0.11	0.98 (0.73; 1.32)	0.92	0.98 (0.73; 1.32)	0.94
All-cause	1.06 (0.93; 1.21)	0.32	0.6	1.07 (0.94; 1.21)	0.28	1.07 (0.94; 1.21)	0.29
Two-sample MR							
Cancer type	IVW			Weighted median		MR-Egger	
	OR (95% CI)	p -causal	p -Het	OR (95% CI)	p -causal	OR (95% CI)	p -causal
Bladder	1.02 (0.88; 2.16)	0.77	0.36	1.03 (0.86; 2.10)	0.7	1.03 (0.83; 2.13)	0.75
Lung	0.86 (0.73; 1.08)	0.07	0.04	0.86 (0.73; 1.09)	0.09	0.84 (0.66; 1.16)	0.15
Bowel	0.82 (0.69; 1.02)	0.03	< 0.0001	0.89 (0.78; 1.06)	0.06	0.92 (0.72; 1.67)	0.52
Prostate	1.00 (0.91; 2.64)	0.97	0.72	0.98 (0.88; 2.17)	0.77	0.94 (0.83; 1.45)	0.37
Breast	0.97 (0.88; 1.95)	0.67	0.0002	1.00 (0.91; 2.70)	0.99	0.95 (0.81; 1.59)	0.46
All-cause	0.96 (0.90; 1.20)	0.18	< 0.0001	0.97 (0.92; 1.23)	0.21	0.93 (0.86; 1.12)	0.11

OR; odds ratio, 95% CI; 95% confidence interval, IVW; Inverse variance weighted method, 2SLS; two-stage least square, GRS; genetic risk score, p -Het; p -value for heterogeneity.

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Public Health, Health Services and Health Economics

POS0296 DOSING OF BDMARDS IN AXSPA AND PSA IN A REAL WORLD SETTING

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Background: The treatment of patients with axial spondyloarthritis (axSpA) and psoriatic arthritis (PsA) has been revolutionised by the introduction of biologic DMARDs targeting TNF, IL17, and IL23 inhibitors (i). In Germany, about 30-50% of axSpA and PsA patients receive treatment with bDMARDs. Although many patients benefit from these drugs, in some patients effectiveness of the standard dose may be insufficient and higher doses are used.

Objectives: To describe dosing of TNFi and non-TNFi bDMARDs over a 2 year period in a real world cohort of patients with axSpA and PsA managed by rheumatologists.

Methods: RABBIT-SpA is a prospective longitudinal cohort study including axSpA and PsA patients enrolled at the start of a new conventional treatment (including NSAID) or b/tsDMARD treatment. Description of dosing of TNFi (adalimumab bio-original (bo), adalimumab bio-similar (bs), etanercept bo, etanercept bs, golimumab, certolizumab) in comparison to nonTNFi-bDMARDs (secukinumab, ustekinumab, ixekizumab, guselkumab) in axSpA and PsA. Standard dosing was defined according to the current labels for axSpA and PsA.

Results: 1628 patients (axSpA: n=903, PsA: n=725) were included in this analysis. At inclusion mean age was 44 years in axSpA and 51 years in PsA. 44% of patients with axSpA and 58% of those with PsA were female. The mean disease duration of axSpA was 7.6 years, of PsA 6.4 years.

Standard doses of TNFi were used during a 2 year period in > 90% of patients with axSpA and PsA (Figure 1). In contrast, standard doses of non-TNFi-bDMARDs were only used in 70-80% of patients. The percentage of documented higher doses in patients with axSpA ranged from 20-30% at different time points. In PsA, this percentage increased from 27% at baseline to 44% at 2 years. On the other hand, TNFi were used in lower doses than the label in up to 9% and 7% of patients with axSpA and PsA, respectively, after 2 years.

Figure 1. Percentages of patients with axSpA or PsA who received less than, equal to, or more than the approved doses of bDMARDs at baseline and at 5 follow-up visits.

Conclusion: While TNFi are used in licensed doses in most patients, non-TNFi-bDMARDs were often used in higher doses, which corresponds to higher doses approved in other indications like psoriasis. The effectiveness of this treatment strategy in axSpA and PsA needs to be analysed further.

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POS0297 HOSPITAL ADMISSIONS FOR PATIENTS WITH RHEUMATOID ARTHRITIS IN WESTERN AUSTRALIA HOSPITALS HAVE DECLINED OVER TIME

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Background: Rheumatoid arthritis (RA) represents a substantial burden on patients and society in terms of morbidity, enduring disability, and medical expenses (1). RA prevalence is poorly described in Australia, and linked health datasets can provide a more meaningful picture for RA epidemiology in the Australian population.

Objectives: To describe the period prevalence rate of RA patients per 1000 hospital separations coded as RA primary or secondary diagnosis in Western Australia (WA) hospitals between 1995 and 2014.

Methods: We extracted data on all patients identified in the WA Hospital Morbidity Data Collection between 1995 and 2014, with the International Classification of Diseases (ICD) codes for RA (ICD 10 M05.00–M06.99, and the corresponding ICD 9 codes). We estimated period prevalence rates per 1000 hospital separations and annual average percentage changes, with the total number of hospital separations each year.

Results: A total of 17,125 patients were admitted to WA hospitals with a diagnostic code for RA over the study period (1995–2014). The total number of hospital separations for RA patients was 50,353, indicating an average of three hospital separations per patient over twenty years. The RA prevalence was 3.4 per 1000 separations over the study period, with a -2.89% annual average decrease since 1995.

Conclusion: These data demonstrate that hospitalisation for RA has decreased considerably in WA over the last two decades. As this decrease roughly coincides with the introduction of biological drug treatment for RA, the reduced need for hospital admission is likely due to improvements in RA management.

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Table1: Hospitalisation for rheumatoid arthritis (RA) in Western Australia (WA) (1995–2014).

Year	Total RA hospital separations	WA hospital separations	RA per 1000 separations	Average annual change per annum (RA hospital separations)	Average annual change per annum (WA hospital separations)
1995	3,518	451,195	7.8	0%	0%
1996	3,751	473,677	7.9	7%	5%
1997	3,994	506,721	7.9	6%	7%
1998	3,927	544,566	7.2	-2%	7%
1999	2,785	575,489	4.8	-29%	6%
2000	1,755	612,774	2.9	-37%	6%
2001	1,577	617,891	2.6	-10%	1%
2002	1,685	648,423	2.6	7%	5%
2003	1,908	657,439	2.9	13%	1%
2004	1,836	691,975	2.7	-4%	5%
2005	2,045	714,353	2.9	11%	3%
2006	2,215	740,059	3.0	8%	4%
2007	2,282	783,620	2.9	3%	6%
2008	2,184	829,595	2.6	-4%	6%
2009	2,682	887,209	3.0	23%	7%
2010	2,627	966,033	2.7	-2%	9%
2011	2,597	1,024,462	2.5	-1%	6%
2012	2,689	1,058,751	2.5	4%	3%
2013	2,281	1,070,399	2.1	-15%	1%
2014	2,015	1,081,463	1.9	-12%	1%
Total RA hospital separations	50,353				
Total WA hospital separations		14,936,094			
RA Period prevalence per 1000 separations (1995–2014)		3.4			
Average annual change since 1995				-2.89%	4.71%

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POS0298

UNDERSERVED POPULATIONS IDENTIFY BARRIERS AND PROPOSE SOLUTIONS FOR SELF-MANAGING ARTHRITIS AND CHRONIC CONDITIONS

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Background: Underserved populations, such as ethnic minorities, low-income adults, and Indigenous people living with arthritis are more likely to have lower health literacy, higher rates of multi-morbidity, and face challenges in accessing care¹⁻³. Self-management support (SMS) can help to mitigate the impacts of living with arthritis⁴. However, we require a more in-depth understanding of the daily barriers underserved communities face in living with arthritis in order to develop effective SMS that can meaningfully improve well-being and quality of life.

Objectives: The study objective was to bring together underserved people living with arthritis to identify common barriers they face in taking care of their conditions in daily life, and to identify their solutions to the identified challenges.

Methods: A team of researchers from several universities, nurse practitioners, physicians, policy makers, an arthritis consumer-patient leader and our

community partners (Multi-lingual Orientation Service Association for Immigrant Communities and the Portland Hotel Society Community Services Society) engaged in a Community-based Participatory and Concept Mapping (CM) study⁵⁻⁷ where participants from underserved communities identified major barriers they face in managing arthritis, agreed on key themes that emerged, and determined priorities for actions. This involved three key CM activities: 1) brainstorming ideas; 2) sorting and rating ideas; and 3) analyzing and interpreting concept maps⁸. Data was collected through face-to-face interviews and prioritized and interpreted in workshop settings.

Results: Sixty-three individuals who were ethnic minorities, immigrants, refugees, low-income, over 65, and/or housing insecure and living with arthritis identified 35 common barriers and made recommendations in the areas of financial difficulties, social services, access to health services, quality of health services, lack of knowledge, and mental health. Additional funding has been sought through Community-University Engagement Support Funding to enable our community partners to prioritize the recommendations in their communities, and to develop mechanisms for implementation using already existing community structures, processes, and services.

Conclusion: Persons living with arthritis in diverse underserved communities face significant health and social inequities, including lack of access to basic life necessities such as food, housing, employment, and safety, which creates barriers to self-managing arthritis and other chronic conditions in daily life. SMS for these communities needs to address these social and environmental barriers shaping capacity for self-management, and ultimately, quality of life and well-being.

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POS0299

SOCIOECONOMIC BACKGROUND IS ASSOCIATED WITH DISCORDANCE BETWEEN HEALTH LITERACY OF PEOPLE WITH RMDs AND ASSESSMENT OF HEALTH LITERACY BY THEIR TREATING HEALTH PROFESSIONAL

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Background: Health literacy is increasingly recognised as a critical determinant of health. While care should be tailored to the health literacy needs of each patient [1], research in primary care shows that physicians often under- or over-estimate their patients' health literacy, with socioeconomic factors playing a role [2]. Evidence in a rheumatology setting is scarce.