

# Health Care Resource Utilization, Total and Out of Pocket Expenditures Among Adults with Rheumatoid Arthritis: Medical Expenditure Panel Survey Study

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## Background

- Rheumatoid arthritis (RA) is a chronic inflammatory disease and its progression can cause disability and have serious physical, mental, and economic consequences for patients.
- Understanding the economic impact on both total and out-of-pocket (OOP) expenditures by adults with RA is critical for stakeholders, including healthcare providers, policymakers, and patients themselves, to manage and plan healthcare resources effectively.
- An updated study assessing healthcare resource utilization and expenditures is required.

## Objective

- This study aimed to explore the healthcare resource utilization (HCRU), total, and OOP expenditures among adults with RA.

## Methods

- Data Source:** 2017-2021 Medical Expenditure Panel Survey (MEPS) data.
- Study Cohort:** 4,949 patients with RA diagnosis were identified, which represented a national estimation of 9.75 million US adults according to MEPS data.
- Key Variables:** HCRU components including inpatient visits, emergency department visits, outpatient visits, office-based visits, prescription medications, dental care, and home health services as well as total healthcare expenditure and OOP cost contributed to each one of HCRU components.
- Adjustments:** All cost values were converted to 2023 US dollars using the CPI index.

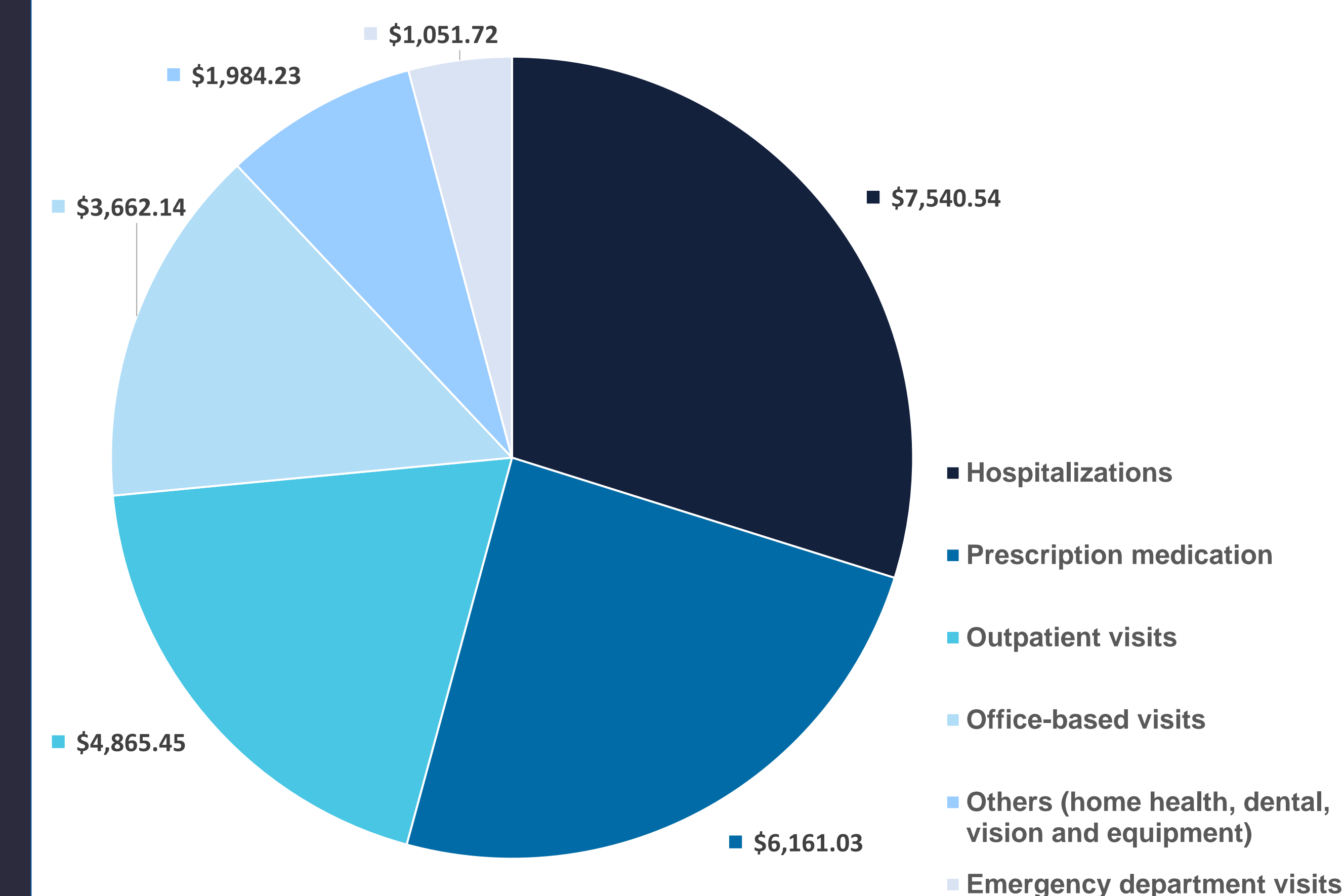
## Results

- Demographics:** The study cohort had a mean age of  $61.29 \pm 0.41$ , where the majority of them were female (61.99%), and White (62.94%).
- Healthcare Resource Utilization:** the average number of inpatient visits: 0.23, emergency department visits: 0.45, office-based visits: 10.36, and the number of prescription medications and refills: 28.14 per RA patient.
- Expenditures:** Mean total healthcare expenditure per RA patient was \$18,284, with inpatient care and prescriptions accounting for 41.24% and 33.70% of the total costs, respectively. Average total out-of-pocket cost was \$1,461.69 per RA patient among RA patients.

**Table 1.** HCRU, total and OOP cost for rheumatoid arthritis per person

	Mean	95% confidence interval
<b>Healthcare Resource Utilization</b>		
Total Healthcare resource utilization		
Number of hospitalizations	0.23	0.21- 0.26
Number of nights hospitalized	1.21	1.01 - 1.39
Number of emergency department visits	0.45	0.41 0.49
Number of outpatient visits	1.49	1.3 - 1.67
Number of office-based visits	10.36	9.79 - 10.94
Number of home health visits	12.14	9.59 - 14.69
Number of dental visits	0.88	0.81 - 0.95
Number of prescriptions medication	28.14	26.45 - 29.83
<b>Healthcare Expenditures</b>		
Total healthcare expenditures	18,284	16,610.48 - 19,956.71
Expenditure on hospitalizations	7,540.54	6,415.4 - 8,665.67
Expenditure on emergency department visits	1,051.72	897.8 - 1,205.64
Expenditure on outpatient visits	4,865.45	2,951.88 - 6,779.01
Expenditure on office-based visits	3,662.14	3,135.63 - 4,188.64
Expenditure on home health visits	1,336.68	1,050.34 - 1,623.02
Expenditure on dental visits	459.08	394.46 - 523.69
Expenditure on prescription medication	6,161.03	5,366.24 - 6,955.83
Expenditure on vision and equipment	188.47	172.02 - 204.92
<b>Out-of-Pocket Expenditures</b>		
Total out-of-pocket expenditures	1,461.69	1,331.68 - 1,591.71
Expenditure on hospitalizations	105.68	69.32 - 142.04
Expenditure on emergency department visits	61.22	32.16 - 90.29
Expenditure on outpatient visits	193.3	121.91 - 264.69
Expenditure on office-based visits	310.64	268.15 - 353.14
Expenditure on home health visits	45.68	18.67 - 72.69
Expenditure on dental visits	252.42	203.09 - 301.75
Expenditure on prescription medication	491.95	416.71 - 567.19
Expenditure on vision and equipment	114.92	101.89 - 127.95

## Results



**Figure 1.** Total healthcare expenditure distribution

## Conclusion

- In this study, using a nationally representative dataset, we found that rheumatoid arthritis is associated with a significant burden on the U.S healthcare system, with a major contribution from inpatient care and prescription drugs.
- Further studies are needed to identify the predictors of Healthcare resource utilization and expenditure among rheumatoid arthritis patients.

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## Key References

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