JAMA Network Open

Research Letter | Public Health

Ivermectin-Benzimidazole Prescribing Following Celebrity Endorsement

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Introduction

In early January 2025, high-profile media figures promoted a combination ivermectin-fenbendazole regimen as an off-label cancer treatment on a widely-consumed podcast (*The Joe Rogan Experience*), with claims rapidly disseminated across multiple media platforms.[1-4] Although the National Cancer Institute recently announced plans to study ivermectin for the treatment of cancer,[5] rigorous clinical trial evidence does not presently support its use, nor does evidence support the use of fenbendazole or other benzimidazoles for cancer therapy.

To examine a temporal association between the release of the podcast and combination ivermectin-benzimidazole use, we compared ivermectin-benzimidazole prescribing patterns among patients with and without cancer from the period of January 1, 2025, to July 31, 2025 (after celebrity endorsement) with corresponding monthly rates in 2024 (before celebrity endorsement).

Methods

Using deidentified electronic health record (EHR) data from a multicenter research network (TriNetX) representing 67 health care organizations from all US census regions, we identified combination ivermectin-benzimidazole prescribed to 18-to-90-year-old patients in ambulatory care settings (primary care, outpatient specialist, or emergency department visits) during the period of January 1, 2018, to July 31, 2025. Combination prescribing was defined as 1 or more prescription for ivermectin and 1 or more prescription for a benzimidazole (albendazole, fenbendazole, mebendazole, and thiabendazole) occurring on the same calendar day.

We calculated monthly combination ivermectin-benzimidazole prescribing rates per 1000 patients overall and among patients with 1 or more diagnosis of cancer (*International Statistical Classification of Diseases and Related Health Problems, Tenth Revision* [*ICD-10*] codes C00-D49 within the prior 12 months).[6] As a validation exercise, we compared our prescribing rates against reported rates from a diverse array of national data sources and found them to be comparable.[7-9]

After applying age- and sex-adjusted Poisson regression models of the monthly aggregated prescription counts to offset the total number of patients, we calculated rate ratios (RR) to compare monthly prescribing rates during the period of January 1, 2025, to July 31, 2025, with corresponding monthly rates in 2024 overall and for patients with cancer. Results were stratified by age, sex, race (as reported to TriNetX in EHR, categorized as Asian, Black or African American, White, and other [American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, or other]), and US census region (as reported in the EHR data). To account for multiple comparisons, we report Bonferroni-adjusted 99.5% CIs (2-sided $\alpha = 0.005$).

The Carilion Clinic institutional review board determined that this study was exempt due to the use of deidentified data; the requirement for informed consent was waived. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines informed the preparation of this report.

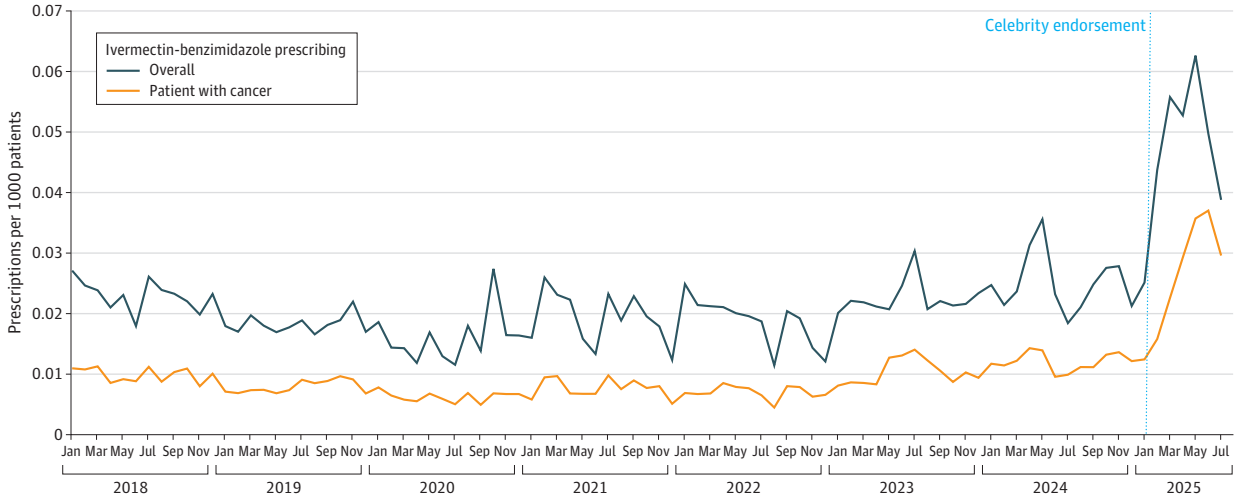
+ Supplemental content

Author affiliations and article information are listed at the end of this article.

Results

Within the cohort of 68 373 949 patients, overall ivermectin-benzimidazole prescribing rates doubled from January 1, 2025, to July 31, 2025, compared with January 1, 2024, to July 31, 2024 (RR = 1.97; 99.5% CI, 1.70-2.29) (**Figure**). Relative increases in ivermectin-benzimidazole prescribing were higher in patients ages 18 to 64 years compared with those 65 years or older (RR = 2.12 [99.5% CI, 2.36-2.99] vs RR = 1.25 [99.5% CI, 0.91-1.59]), White patients compared with other racial groups

Figure. Combination Ivermectin-Benzimidazole Prescribing Following Celebrity Endorsement



Vertical dotted line represents celebrity endorsement of ivermectin-benzimidazole treatment for cancer in January 2025.

Table. Demographic Variation in Combination Ivermectin-Benzimidazole Prescribing After vs Before Celebrity Endorsement

Characteristic	Prescriptions, rate ratio (99.5% CI)[a]	
	Overall	Patients with cancer
Age, y		
18-39	1.97 (1.73-2.21)	2.63 (2.12-3.01)
40-64	2.18 (1.91-2.49)	2.81 (2.49-3.00)
65-79	1.34 (1.02-1.76)	1.72 (1.28-2.03)
≥80	1.01 (0.71-1.69)	1.45 (0.90-1.92)
Sex		
Male	2.11 (1.82-2.44)	2.79 (2.44-3.00)
Female	1.67 (1.44-1.94)	1.93 (1.68-2.18)
Other[b]	1.89 (1.33-2.67)	1.99 (1.63-2.24)
Unknown	1.71 (1.19-2.46)	2.25 (1.71-2.78)
Race		
Asian	0.96 (0.58-1.58)	1.03 (0.61-1.37)
Black or African American	1.22 (0.87-1.71)	1.34 (0.92-1.66)
White	2.61 (2.28-2.99)	3.05 (2.60-3.27)
Other[b]	1.34 (0.79-2.25)	1.48 (0.88-2.07)
Unknown	1.76 (1.39-2.23)	2.04 (1.59-2.32)
Census region		
Midwest	1.17 (0.81-1.70)	1.52 (0.92-2.48)
Northeast	0.98 (0.69-1.40)	1.04 (0.72-1.49)
South	3.12 (2.58-3.77)	3.91 (3.25-4.71)
West	1.34 (0.89-2.00)	1.29 (0.88-1.89)

[a] Rate ratio compares prescriptions during the period of January 1, 2025, to July 31, 2025 (after), with the matching dates in 2024.

[b] Other sex and race represent electronic health record data classifications reported to TriNetX.

(Asian, Black, or other in the dataset) (RR = 2.61 [99.5% CI, 2.21-3.09] vs RR = 1.38 [99.5% CI, 1.03-1.73]), and in the South compared with other census regions (RR = 3.12 [99.5% CI, 2.54-3.87] vs RR for combined other regions = 1.36 [99.5% CI, 1.01-1.72]) (**Table**).

Among patients with cancer, prescribing rates were over 2.5 times higher from January 1, 2025, to July 31, 2025, compared with January 1, 2024, to July 31, 2024 (RR = 2.63; 99.5% CI, 2.08-3.24) (Figure). Relative increases in ivermectin-benzimidazole prescribing were higher in male compared with female patients (RR = 2.79 [99.5% CI, 2.38-3.19] vs RR = 1.93 [99.5% CI, 1.61-2.32]), patients between ages 18 to 64 years compared with those aged 65 years or older (RR = 2.68 [99.5% CI, 2.36-2.99] vs RR = 1.61 [99.5% CI, 0.97-2.19]), White patients compared with other racial groups (RR = 3.05 [99.5% CI, 2.80-3.41 vs RR = 1.28 [99.5% CI, 0.93-1.63]), and in the South compared with other census regions (RR = 3.91 [99.5% CI, 3.25-4.32] and RR for combined other regions = 1.27 [99.5% CI, 1.00-1.56]) (Table).

Discussion

Ivermectin-benzimidazole prescribing rose rapidly following celebrity endorsement in January 2025, with disproportionate increases among male patients, White patients, residents of the US South, and individuals with cancer. The elevated prescribing observed among patients with cancer is particularly concerning; individuals facing life-threatening illness may delay or forgo conventional treatments in favor of unproven therapies, potentially allowing their disease to progress.

The podcast in which celebrities endorsed combination ivermectin-benzimidazoles for cancer treatment was viewed by more than 60 million individuals across multiple platforms.[3] The demographic and regional variation that we observed in prescribing rates mirror the audience characteristics of the podcasts and media platforms promoting these regimens, suggesting selective amplification and reach of health misinformation.

Limitations of this study include the observational design, which cannot establish causality; prescription data reflecting orders rather than dispensing or consumption; potential misclassification of cancer status; and the large geographic regions used in the analysis. In addition, we did not assess whether patients substituted ivermectin-benzimidazole therapy for conventional cancer treatment or if conventional cancer care way delayed by such use. Nevertheless, our findings extend prior work on the potential influence of celebrity endorsement on health care utilization.[10] Such influence gains traction when institutional trust erodes. Protecting vulnerable populations from misinformation-driven deviations from evidence-based care requires coordinated action by clinicians, health systems, researchers, and policymakers.

ARTICLE INFORMATION

Accepted for Publication: April 15, 2026.

Published: May 12, 2026. doi:10.1001/jamanetworkopen.2026.16780

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Author Contributions: Dr Rockwell had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: Rockwell, Kahn, Fendrick, Mafi.

Acquisition, analysis, or interpretation of data: All authors.

Drafting of the manuscript: Rockwell, Fendrick, Mafi.

Critical review of the manuscript for important intellectual content: Kahn, Fendrick, Vangala, Mafi.

Statistical analysis: Rockwell, Vangala, Mafi.

Obtained funding: Mafi.

Supervision: Kahn, Fendrick, Mafi.

Conflict of Interest Disclosures: Dr Rockwell reported receiving grants from Ardmore Institutes of Health, Arnold Ventures, and Commonwealth Fund outside the submitted work. Dr Fendrick reported serving as director for the University of Michigan Center for Value-Based Insurance Design; he reported providing consulting services to AbbVie, Centivo, Clover Insurance, Community Oncology Association, Covered California, Eebu Health, Elektra Health, EmblemHealth, Employee Benefit Research Institute, Exact Sciences, GRAIL, HealthCorum, Johnson & Johnson, Medtronic, MedZed, Merck and Company, Mother Goose Health, Phathom Pharmaceuticals, Proton Intelligence, Sempre Health, Sera Prognostics, Silver Fern Healthcare, Virginia Center for Health Innovation, Washington Health Benefit Exchange, Wellth, and Zansors; he reported receiving research support from the Agency for Healthcare Research and Quality, West Health Policy Center, Arnold Ventures, National Pharmaceutical Council, Patient-Centered Outcomes Research Institute, Pharmaceutical Research and Manufacturers of America, and the Centers for Medicare and Medicaid Services; he reported serving as co-editor in chief for the *American Journal of Managed Care*; he previously served as a member of the Medicare Evidence Development and Coverage Advisory Committee; and he maintains a partnership at VBID Health. Dr Mafi reported receiving grants from the National Institutes of Health (NIH) National Institute on Aging (NIA), Arnold Ventures, and Commonwealth Fund; he reported nonfinancial support for studying low-value care from Milliman MedInsight outside the submitted work; and he reported providing unpaid consulting to the Agency for Healthcare Research and Quality (AHRQ) outside the submitted work. No other disclosures were reported.

Funding/Support: Dr Mafi reported a grant from NIH/NIA (No. R01AG070017-01) and a NIH/NIA Beeson Emerging Leaders in Aging Research Career Development Award (No. K76AG064392-01A1) during the conduct of the study.

Role of the Funder/Sponsor: The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

Data Sharing Statement: See the Supplement.

Additional Contributions: The authors thank Martha Tenzer from Carilion Clinic (Roanoke, Virginia) for assistance with data acquisition.

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SUPPLEMENT.
Data Sharing Statement