



Social Media, Survey, and Medical Literature Data Reveal Escalating Antisemitism Within the United States Healthcare Community

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Abstract

Antisemitism has been rising for decades and worsened following the events of Oct 7, 2023. Although anecdotal evidence suggests that these trends extend into the US medical community, quantitative data have been lacking. To address this gap, we quantitated publications about antisemitism, analyzed social media posts from the accounts of 220,405 healthcare professionals, and disseminated a survey to members of Jewish medical associations. Publications and social media posts about antisemitism rose > fivefold, while posts promoting antisemitic stereotypes increased 2–fourfold. Most Jewish-identifying medical students and professionals (75.4%) reported exposure to antisemitism. Together, our results suggest that antisemitism is escalating within the US healthcare community.

Keywords Antisemitism · Jew-hatred · Medicine · Social media · Israel · Israel–Hammas war

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Introduction

Antisemitism, also known as Jew-hatred, has been escalating globally and specifically within the United States over the last two decades. An unfortunate and obvious exemplar is the marked rise in violent, fatal antisemitic attacks between 1990 and 2000 versus 2018–2019 (Bravo & Staff 2019; Fattal, 2018; Hanna & Holcombe, 2019; Paybarah, 2020; Tobias et al., 2020). But antisemitism, as defined by the International Holocaust Remembrance Alliance (IHRA) and US Department of State, is not limited to violent episodes of Jew-hatred. Rather, antisemitism is defined as “a certain perception of Jews...expressed as hatred.” This may include rhetoric or physical actions that can be directed against Jewish individuals, institutions, or religious facilities—or against non-Jews who are perceived as sympathetic toward Jewish individuals (Various, 2016).

Such physical and rhetorical incidents have become so commonplace that up to 51% of American Jews reported exposure to antisemitism in 2020 (Pew, 2021; Various, 2021c). In 2022, the FBI reported 1122 antisemitic hate crimes—the highest number seen in three decades (LaFreniere Tamez et al., 2024). According to FBI crime statistics, Jewish individuals, who constitute 2% of the US population, were affected by 60% of religious hate crimes and 10% of all hate crimes (Michelli et al., 2024). Several instances of antisemitic rhetoric were reported within the medical community during this time, but these trends were never specifically investigated (Burke, 2019; Frellick, 2021).

Extensive anecdotal evidence suggests that the dramatic increase in university campus antisemitism following the Hamas invasion of and massacre in Southern Israel on Oct 7, 2023 has extended into the medical community (Kingsbury & Greene, 2023; Koch, 2024; Prince, 2023). Soon after the terrorist attack, support for the Oct 7 massacre—which included extensive atrocities against Israeli Jews and against citizens of 35 other countries who were in Israel at the time—became evident on college campuses (Cohanim & Marcus 2024). Jewish students and faculty in US medical schools have also reported experiencing Jew-hatred and hostile learning environments (Kingsbury & Greene, 2023; Prince, 2023; Serres, 2023).

This has led Jewish students and faculty to feel isolated, threatened, fearful for their safety, and unable to express themselves (Childress, 2023; Copeland & Farrell, 2023; Ma, 2023; Serres, 2023). Responses from university presidents, medical school deans, and hospital leadership have been mixed (Childress, 2023; Copeland & Farrell, 2023; Serres, 2023). In tandem, practicing physicians and faculty members at US medical schools have both made and received antisemitic comments on their social media accounts, while some academic medical courses have even promoted antisemitic stereotypes (Bram, 2023; Kingsbury & Greene, 2023; Koch, 2024; Prince, 2023). Antisemitic incidents have also been described at hospitals, with both Jewish doctors and patients reporting hate speech on social media as well as physical posters and signs (Koch, 2024).

Despite these extensive reports, to our knowledge there have been no quantitative assessments of antisemitism within the US medical community (physicians,

allied health professionals, medical and allied health professional students) before or after the Oct 7 massacre. Accordingly, the goals of our study were to measure the prevalence of and to assess the effects of the Oct 7 massacre and Israel– Hamas war on antisemitism within the medical community. We utilized three independent methodologies to address these questions.

To indirectly estimate the prevalence and awareness of antisemitism within the medical community, we first analyzed PubMed-indexed research studies about antisemitism published between 2000 and 2023. To determine broader attitudes toward Jews and antisemitism within the US medical community using an informatics-driven approach (Ashokkumar & Pennebaker, 2021; Espino-Gaucin et al., 2020; Iamnitchi et al., 2023; Kolliakou et al., 2020), we analyzed social media posts from the accounts of 220,405 self-identified American healthcare professionals. Finally, to measure the impact of rising antisemitism on a cross section of Jewish-identifying American healthcare professionals, we disseminated a pulse survey to members of four national medical associations solely comprising Jewish medical professionals and students. All three analyses suggested growing awareness and evidence of rising Jew-hatred within the US healthcare community. Posts about Jews and Judaism, including posts promoting antisemitic conspiracy theories, were prevalent within the social media accounts of self-identified healthcare professionals. Most surveyed US medical students and healthcare professionals experienced Jew-hatred and reported a marked increase following Oct 7, 2023.

Methods

Analysis of PubMed-Indexed Articles

Using PRISMA guidelines for systematic reviews (Page et al., 2021), PubMed-indexed articles were searched for the terms “antisemitism” or “antisemitic” within the title or abstract or “Holocaust” within the title or abstract. To quantitate all PubMed-indexed articles, PubMed was searched for all entries with a publication date within each calendar year (Jan 1—Dec 31), starting in 2000. Articles on antisemitism and the Holocaust were manually and independently reviewed by DMS and HSW to remove duplicates and ensure that publications covered the relevant subject material. Articles were excluded if they did not cover relevant subject material. In determining coverage of contemporary *versus* historical events, “contemporary events” were defined as those within 5 years of publication date.

Analysis of Social Media Posts

Social media analysis was performed using Brandwatch[®], an artificial intelligence digital tool used to track interactions with brands and audiences for consumer and scientific research (Ayoub et al., 2023; Brandwatch 2024; Heitkemper et al., 2023; Sussman et al., 2023). Searches were restricted to Twitter/X because it is perceived as the most useful social network by medical academic professionals and is most likely to be used for

professional communications (Espino-Gaucin et al., 2020; Pershad et al., 2018; Ventola, 2014). Based on expert-driven consensus and institutional research, the Foundation to Combat Antisemitism (FCAS) created a query built of keywords and phrases related to antisemitism while carefully excluding any posts or conversations deemed irrelevant (Supplementary Methods).

This search identified 3.43×10^6 posts from English-language Twitter/X accounts, 899,248 of which were from the accounts of 220,405 self-identified healthcare professionals (Supplementary Methods). To specifically analyze posts about the Holocaust, Israel–Hamas war, Gaza, and other subtopics, we segmented the parent group of 899,248 posts using a series of keywords specific to each subtopic (Supplementary Methods). We used the Brandwatch[®] Sentiment Analysis Tool to investigate emotions associated with social media posts.

We analyzed posts generated between Jan 1, 2020, and Apr 1, 2024, to determine trends in attitudes toward Jews, Judaism, and antisemitism over the last 4 years. To determine trends before vs. after Oct 7, we compared the total mentions of each “topic group” during the 5-month period between May 1, and Oct 7, 2023, with the 5-month period between Oct 7, 2023 and Mar 17, 2024. In some analyses, we also quantified posts per month to determine trends over time.

Survey Development and Dissemination

We developed a 12-question survey to determine the prevalence of antisemitism in the US medical and healthcare community (Appendix A). Data collected included: career stage and profession (i.e., medical student, resident/fellow, practicing physician, psychologist) and country of residence. Respondents were provided with the IHRA definition of antisemitism (Various, 2016) and asked whether they had experienced antisemitism in their professional or academic environments, either directly or indirectly (i.e., through social media and/or medical publications). Respondents were asked to specify whether they had experienced antisemitism before or after Oct. 7, and whether their experiences had changed after Oct. 7, 2023. Some demographic data (i.e., age, race, sex, gender) were not collected as they were deemed irrelevant to the aims of the survey, and to preserve respondent anonymity. Space was provided for written comments. The study was deemed exempt by the Institutional Review Board of the University of Illinois at Chicago.

The survey was broadly disseminated to four groups of Jewish physicians, allied health professionals (i.e., clinical psychologists, nurses, physicians’ assistants), and medical or allied health professional students in the United States (Supplementary Methods). Participants were informed that results would be used for research and advocacy, and that responses would be anonymous. Duplicate responses were prevented by requiring each respondent to sign in using a Google account. Full details of dissemination are in the Supplementary Methods.

Analysis of Survey Data

Google results were extracted and analyzed manually by DMS (Microsoft Office, GraphPad Prism). Respondents who did not practice medicine in the United States ($n = 11$) were excluded. Any respondents who reported exposure to antisemitism in the initial screening or follow-up questions (Appendix A) were designated as having experienced antisemitism. Demographic data were analyzed for all respondents practicing medicine in the United States ($n = 170$). Qualitative data on antisemitism were analyzed only for the respondents who reported exposure to antisemitism ($n = 129$).

Statistical Analysis

PubMed-indexed articles were normalized to initial publication year (2000), while monthly social media posts were normalized to initial month analyzed (January 2023). Trends over time were tested by nonlinear (least squares) regression with outlier adjustment in Prism (GraphPad Prism); statistical significance was determined by Welch ANOVA with Dunnett multiple comparison adjustment. For social media posts, odds ratios were calculated using Woolf logit interval, and p -values were calculated using Chi-square with Yates correction (GraphPad Prism). For survey data, odds ratios were calculated using the Baptista–Pike method, and p -values were calculated using Fisher's exact t test (GraphPad Prism). All 95% confidence intervals were calculated by the Wilson/Brown method (GraphPad Prism).

Results

Analysis of PubMed-Indexed Articles About Antisemitism (2000–2023)

Between 2000 and 2023, there was a tenfold increase in annual PubMed-indexed publications about antisemitism (Fig. 1). This included an 18-fold increase in manuscripts about contemporary issues rather than historical events such as the Holocaust, significantly outpacing the overall increase in PubMed-indexed annual publications over the same period ($p < 0.001$, ANOVA). As a comparator, publications about the Holocaust and its consequences increased slightly less than the overall increase in annual PubMed-indexed publications.

Publications about contemporary Jew-hatred identified several antisemitic tropes relevant to the biomedical community, including conspiracy theories about Jews engineering the COVID-19 pandemic and blood libels related to the Hamas–Israel conflicts of 2014–2023 (Dadon, 2022; Jikeli et al., 2022; Sundberg et al., 2023). Together, these data suggested that awareness of antisemitism increased within the biomedical community between 2000 and 2023, and that some contemporary antisemitic stereotypes might primarily affect the biomedical community.

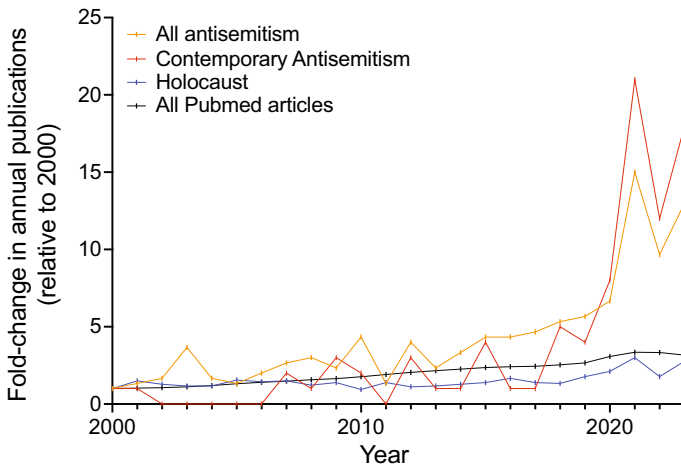


Fig. 1 Analysis of PubMed-indexed articles about antisemitism. Graph shows fold change in PubMed-indexed articles published between 2000 and 2023 (black). Graph also shows articles published over the same time frame about with the term “holocaust” in the title or abstract (blue), with the terms “antisemitism” or “antisemitic” in the title or abstract (orange), or about contemporary antisemitism (incidences within 5 years of article publication, red). Data were normalized to the number of articles published in 2000. Differences between articles about antisemitism ($p < 0.001$, ANOVA) and contemporary antisemitism ($p < 0.001$, ANOVA) vs. all articles were statistically significant (Color figure online)

Analysis of Social Media Posts from Self-Identified Healthcare Professionals (May 2023–March 2024)

Like PubMed-indexed articles, monthly social media posts about Jews, Judaism, and antisemitism from the accounts of healthcare professionals increased dramatically in 2023, echoing the trends seen in posts from all English-language accounts (Fig. 2a). A sevenfold increase in traffic was seen after Oct 7, with 453,559 posts appearing between Oct 7, 2023 and March 17, 2024. Posts about Israel rose 43.4-fold after Oct 7 while conversations about the Holocaust rose only 1.6-fold.

Conversations about antisemitism increased 5.4-fold, suggesting that the events of Oct 7 had a significant impact on antisemitism within the US healthcare community. Furthermore, there was a 24-fold increase in sentiments of fear within social media conversations about Jews and Judaism. Although increased fear could be multifactorial, this combination of findings led us to hypothesize that these trends in social media conversations might reflect increased antisemitism within the healthcare community.

To test this hypothesis, we searched for occurrences of classic antisemitic stereotypes in posts from self-identified healthcare professionals. One such trope concerns false claims of Jewish influence and/or Jewish conspiracies underlying global or national events. Within the accounts of self-identified healthcare professionals, there was a 1.92-fold increase in posts about “Jewish power” between 2022 ($n = 2319$) and 2023 ($n = 4456$).

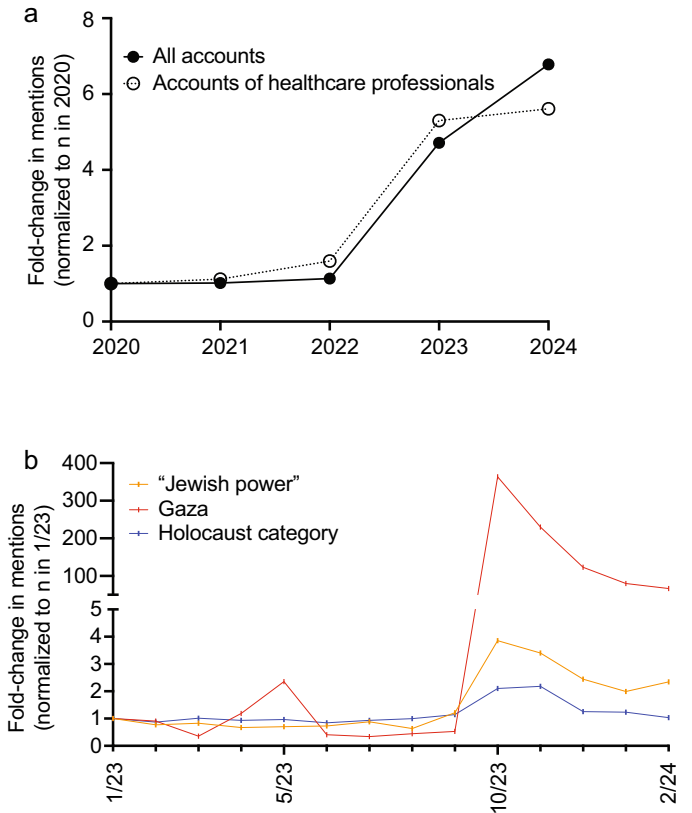


Fig. 2 Analysis of social media posts. **a** Shows fold change in average number of posts about Jews, Judaism, Israel, and antisemitism that were posted per month from all Twitter/X accounts (solid line) and from Twitter/X accounts of self-identified healthcare professionals (dotted line) between 2020 and 2024. Numbers remained stable between 2020 and 2022 and increased sharply in 2023. Data were normalized to average number of posts per month in 2020. **b** Shows fold change in number of posts about the Holocaust (blue), Gaza (red), and the “Jewish power” conspiracy (orange) between Jan 2023 and Feb 2024, from the Twitter/X accounts of self-identified healthcare professionals. Data were normalized to the number of posts published in Jan 2023. Differences between posts about Gaza vs. the Holocaust ($p < 0.001$, ANOVA) and posts about “Jewish power” versus the Holocaust ($p < 0.001$, ANOVA) were statistically significant (Color figure online)

We next quantified the effects of the Oct 7 massacre and Israel–Hamas war by tracking the number of posts about “Jewish power” per month (Fig. 2b). As comparators, we measured monthly posts about Gaza and the Holocaust. As expected, posts about Gaza increased >200-fold, while posts about the Holocaust increased only 1.6-fold. In comparison, posts about “Jewish power” increased 3.4-fold.

To validate this finding, we analyzed posts about three antisemitic conspiracy theories (Various, 2024b): the blood libel that Israel harvests organs and/or blood from Palestinians (2.6-fold increase), the term “ZioNazi” that equates Zionists with Nazis (3.6-fold increase), and the term “Khazarian Mafia” that

Table 1 Professional roles of survey respondents

Role	Number	Percentage	95% CI (%)
Practicing physician	112	65.9	58.5–72.8
Student	19	11.2	7.3–16.8
Resident or fellow	6	3.5	1.6–7.5
Allied health professional	12	7.1	4.1–11.9
Nurse	2	1.2	0.2–4.2
Clinical Psychologist	12	7.1	4.1–11.9
Other	6	3.5	1.6–7.5
Not given	1	0.6	0–3.3

Table 2 Professional and academic environments of survey respondents*

Environment	Number	Percentage	95% CI (%)
Academic hospital or medical center (including schools)	109	64.1	56.7–72.1
Community hospital or clinic	18	10.6	6.8–16.1
Privately owned hospital or medical center	60	35.3	28.5–42.7
Government	5	2.9	1.3–6.7
Industry	2	1.2	0.2–4.2
Not given	1	0.6	0–3.3

*Some respondents practiced in multiple environments; for these individuals, both environments were included, so that percentages add up to > 100%. This was done to reflect the full range of potential professional and academic environments in which respondents may have been exposed to antisemitism

suggests European Jews are pursuing world domination (1.9-fold increase). Together, these data strongly suggest that antisemitic rhetoric has increased within the US healthcare community, as measured by social media posts from the accounts of American healthcare professionals.

Survey of Jewish-Identifying Healthcare Professionals and Students

Demographics

170 respondents working in 24 states completed the survey (Supplementary Table 1). Eight practitioners worked in multiple states, and one practitioner worked solely via remote telehealth. Most respondents were practicing physicians. Medical students, residents, clinical psychologists, and other healthcare professionals were also represented (Table 1). Most respondents worked or studied in academic settings and/or private practice (Table 2). A smaller number worked in community hospitals and/or clinics, government facilities, and industry.

Table 3 Timing of antisemitic incidents experienced by survey respondents

Timing of antisemitic exposures	Number	Percentage	95% CI (%)
Any antisemitic incidents before 10/7	52	40.3	32.2–48.9
Any antisemitic incidents after 10/7	114	88.4	81.7–92.8
Effect of 10/7 on antisemitic exposures	Number	Percentage	95% CI (%)
Increase after 10/7	108	83.1	75.7–88.6
No change after 10/7	18	13.8	8.9–20.8
Answer not provided	4	–	–

Table 4 Type of antisemitic exposures among survey respondents

Type of incident	Number	Percentage	95% CI (%)
Personally directed	48	37.2	29.4–45.8
Posted or published to a member society or group*	71	55.0	46.4–63.4
Posted or published for a general audience**	94	72.9	64.6–79.8
Face to face	41	31.8	24.4–40.2
Academic/institutional social media	56	43.4	35.2–52
Public social media	78	60.5	51.8–68.5
Protest at place of work or school	38	29.5	22.3–37.8
In class or seminar	27	20.9	14.8–28.7
In professional publication	47	36.4	28.6–45

*Includes statements from professional societies, posts to social media groups (i.e., Physician Moms Group on Facebook, medical student groups on Slack)

**Includes publications in medical journals, posts made by other physicians or students to public-facing social media accounts (i.e., Twitter/X, Instagram)

Prevalence and Timing of Antisemitism

In total, 129 survey respondents (75.4%, 95% CI 68.5–81.3%) reported antisemitism within their work or school environment. A total of 119 individuals answered “yes” to the question “Have you experienced antisemitism in your professional or academic environment?” Ten answered “no” to this question but described exposure to antisemitism within their professional environment in subsequent questions.

Exactly 52 respondents (40.3%) experienced antisemitism prior to October 7 (Table 3); while, 114 (88.4%) experienced Jew-hatred after October 7, a > two-fold increase (odds ratio 11.3, 95% CI 6–20.6, $p < 0.001$). A total of 108 (83.1%) reported an increase in antisemitic incidents after October 7; while, 18 (13.8%) reported no change. Two (1.5%, 95% CI 0.3–5.5%) experienced physical antisemitic attacks; while, 127 (98.5%, 95% CI 94.5–99.7%) experienced verbal or rhetorical attacks and six (4.7%, 95% CI 2.1–9.8%) reported incidents involving property.

Type of Antisemitic Exposure

Most antisemitic exposures were posted or published for a general audience, with incidents of Jew-hatred on public social media reported by over 50% of respondents (Table 4). Similarly, 71 respondents (55%, 95% CI 46.4–63.4%) reported exposure to antisemitism in private social media groups. Academic Slack channel groups were repeatedly singled out in the comments section.

Unexpectedly, over one-third of respondents reported encountering Jew-hatred in medical or scientific publications; comments made in the free-text sections listed several major medical journals. Analysis of specific articles mentioned in the survey comments and of publications in other journals did indeed reveal several antisemitic stereotypes in articles published both before and after October 7 (Barhoush & Amon, 2023; Giacaman, 2023; Hanbali et al., 2024; Salam, 2024; Smith et al., 2023; Veronese et al., 2023). These included assertions that American Jewish physicians were part of a “Zionist lobby” or agents of Israeli state propaganda (Giacaman, 2023; Hanbali et al., 2024), COVID-19-related antisemitic tropes (Barhoush & Amon, 2023; Howard et al., 2022; Toameh, 2020), characterizations of Israelis as settler-colonialists, (Giacaman, 2023; Smith et al., 2023; Veronese et al., 2023), use of Nazi imagery to describe Israel (Salam, 2024), and unfounded allegations that Israel was engaged in genocide (Hanbali et al., 2024; Smith et al., 2023; Various, 2021a, 2023c).

Over 35% of respondents reported antisemitic incidents directed against them personally, and over 30% reported antisemitic face-to-face encounters (Table 4). Specific incidents were described by 47 respondents in the comments section: most involved interactions with peers and colleagues. Other encounters involved patients, medical staff (i.e., nurses, unit clerks), and trainees. Of particular concern was one instance of an attending physician making antisemitic comments to a Jewish student during a supervised patient encounter.

Campus protests have also emerged as a major source of Jew-hatred in the undergraduate community (Foer, 2024; Horn, 2024), and 29.5% of respondents reported exposure to antisemitism at protests held on work or school grounds. Furthermore, 27 (20.9%, 95% CI 14.8–28.7%) reported antisemitism in classes or seminars. In addition to comments related to the Israel–Hamas war, specific incidents included multiple references to a “Jewish lobby” and/or “Zionist lobby,” comments about respondents’ physical characteristics or facial features, and claims that Jewish physicians should be barred from treating certain ethnoreligious or racial groups (Table 5).

Institutional Responses to Antisemitism

Several news reports about antisemitism on medical school and hospital campuses have described fears of retaliation or fears for personal safety within the Jewish healthcare community (Koch, 2024; Prince, 2023). When asked, 51.9% of survey respondents (95% CI 43.4–60.4%) reported feeling unsafe or threatened due to antisemitism within their work or school environments. Several respondents described anonymous personal threats in the comments section; these included violent threats

Table 5 Feelings of safety and institutional support among survey respondents

Feelings of safety	Number	Percentage	95% CI (%)
Felt unsafe or threatened	67	51.9	43.4–60.4
Did not feel unsafe or threatened	57	44.2	35.9–52.8
Answer not given	5	3.9	1.7–3.9
Institutional, professional, and/or administrative support	Number	Percentage	95% CI (%)
Felt supported	18	14.0	9–21
Did not feel supported	46	35.7	27.9–44.2
Mixed Experiences	6	4.7	2.1–9.8
Did not ask for support	50	38.8	30.8–47.4
Answer not given	9	7.0	3.7–12.7

and dissemination of personal identifying information (i.e., photograph, home/work address) on social media.

A total of 70 respondents reported asking for support from their institutional administrations and/or professional organizations. Of these, only 18 reported that they received institutional support; most individuals reported a lack of support or mixed experiences. Two people reported that Jewish individuals were excluded from administrative resources available to other ethnoreligious minority groups. Nine respondents explicitly requested anonymity in the comments section due to fears of personal or professional retaliation.

Limitations

While our study represents a significant advance in the field as the first investigation of contemporary antisemitism within the healthcare field, several limitations should be acknowledged. The literature review may have been limited by potential selection bias, as the search was limited to publications with the term “antisemitism” or “Holocaust” in the abstract or title and thus may have missed some relevant articles. However, because we reviewed large numbers of publications, used the same methods to review all articles, and normalized the trend analysis to starting time, this bias would not be expected to significantly affect the results.

Limitations of the social media analysis included inability to confirm self-identification of healthcare professionals. The analysis was restricted to one social media platform (Twitter/X). Finally, some antisemitic posts may have been removed for violating the rules against hateful conduct, which prohibit antisemitism (X, 2024): This could lead to underrepresentation.

Limitations of the survey included its brevity, short dissemination period, inability to measure response rates due to our grassroots dissemination strategy, and the highly selected distribution groups. While we did not ask respondents whether they were Jewish, membership for the selected organizations nearly exclusively consists

of Jewish-identifying individuals, reducing the possibility of collecting data from other populations. Three of the groups (JPN, JOWMA, and Orthodox) primarily consist of Orthodox Jews, who are relatively easily identified as Jewish-identifying individuals, although the AJMA cohort is more diverse. Individuals experiencing Jew-hatred may also have been more likely to respond to the survey.

However, the concordance of our pre-October 7 results with data from other surveys of the Jewish community suggests that our results are likely representative of the broader Jewish-identifying population (Pew, 2021; Various, 2021c). Moreover, our survey results concord with our concurrent unbiased analyses of the social media feeds of American healthcare professionals and students. Therefore, our results compellingly demonstrate a disturbingly large amount of antisemitism within the healthcare community, particularly since October 7, 2023.

Discussion

Antisemitism, often described as the world's oldest hatred, is increasingly recognized as a major issue within the United States and globally (Czech et al., 2023; Horn, 2024; Various, 2021c). The contributors to this modern surge of Jew-hatred are multifactorial and are thought to include pervasiveness of ancient tropes, failure to recognize antisemitism as a form of racism, and the protean nature that allows Jew-hatred to continually reinvent itself (Feldman, 2024). Antisemitism may also be viewed as a “lesser” form of bigotry because it does not fit the oppressor–oppressed paradigm used to conceptualize other forms of racism (Baddiel, 2021; Feldman, 2024; Horn, 2024). In recent years, national and international governing bodies have recognized Jew-hatred as a form of both race-based and religion-based discrimination (Mathur-Ashton, 2024; Priddy & Torrence, 2019). However, continued debate over the definition of antisemitism may have encouraged the spread of Jew-hatred by preventing recognition of antisemitism and by averting legal or social repercussions for antisemitic behavior (Baddiel, 2021; Horn, 2024; Mathur-Ashton, 2024; Priddy & Torrence, 2019).

Although there is now widespread awareness of escalating Jew-hatred on undergraduate campuses (Foer, 2024; Horn, 2024), antisemitism within the healthcare community exists but has not been well-characterized. Since October 7, 2023 there have been multiple anecdotal reports of antisemitic social media posts from the accounts of healthcare professionals and students, antisemitic postings and incidents on medical school campuses, and fears expressed by Jewish medical students and faculty (Board, 2024; Kingsbury & Greene, 2023; Prince, 2023).

However, until recently, several challenges prevented systematic assessment of Jew-hatred within the medical community. Firstly, all the national Jewish medical societies were founded within the last five years, rendering it challenging to identify and contact Jewish-identifying physicians for administering questionnaires and surveys prior to 2020. Additionally, Jewish healthcare professionals and students have expressed fears of retaliation or harassment; lack of trust could create a potential barrier to obtaining accurate data (Koch, 2024; Prince, 2023). Indeed, we found that multiple survey respondents who provided specific examples of Jew-hatred in their

profession requested anonymity and/or described fears of retaliation—making the safety of our anonymized internal survey critical to obtaining accurate reports. Due to these and other challenges, reports of antisemitism within the US healthcare community have so far been anecdotal and sporadic.

Our study is the first systematic quantitation of antisemitism and Jew-hatred within the United States healthcare community. Unbiased informatic analysis of trends in PubMed-indexed publications and social media posts suggested increased awareness of antisemitism within the biomedical community. This is likely multifactorial: Prior analyses of PubMed-indexed articles showed that rising general awareness of bias between 2000 and 2023 correlated with increased biomedical research articles about bias-related topics (Hardeman et al., 2018; Paradies et al., 2015), which could include antisemitism (Various, 2023b). The rising prevalence of antisemitic incidents over the last several decades (Various, 2021b, 2023a, 2023b) could also promote increased awareness of Jew-hatred within the healthcare community.

Finally, several recent triggers of escalating antisemitism have disproportionately affected the medical community. Conspiracy theories related to COVID-19, for example, are primarily associated with Jewish healthcare practitioners and biomedical researchers. Our analysis was consistent with results of prior studies implicating these COVID-19 conspiracy theories as a trigger of antisemitism (Dadon, 2022; Sundberg et al., 2023; Various, 2021b). Between 2014 and 2023, conflicts between Israel and Hamas have sparked false claims including accusations that Israeli and/or Jewish health professionals practice organ harvesting, withhold medical care from Palestinian Arabs, and deliberately target Palestinian healthcare workers and/or ambulances (Barhoush & Amon, 2023; Hanbali et al., 2024; Smith et al., 2023; Various, 2023d). These repurposed antisemitic blood libels single out healthcare professionals, which disproportionately affects the Jewish-identifying biomedical community. Of particular concern, some antisemitic tropes and unfounded allegations have been published in leading biomedical journals (Barhoush & Amon, 2023; Giacaman, 2023; Hanbali et al., 2024; Salam, 2024; Smith et al., 2023; Veronese et al., 2023).

Survey results also suggested a high exposure to antisemitism within the United States Jewish-identifying healthcare community; 40.3% of respondents reported experiencing at least one instance of antisemitism within their professional or academic environment prior to October 7, 2023. These results are consistent with two independent reports from the American Jewish Committee (AJC) and Pew Research Center, showing that 24–51% of American Jews experienced antisemitism in 2020 (Pew, 2021; Various, 2021c). Based on FBI crime statistics, the Anti-Defamation League has reported a $>300\%$ increase in antisemitic incidents between October–December 2023 (Various, 2023a). Analysis of self-identified American healthcare professionals' social media accounts also showed a significant increase in antisemitic posts after Oct 7, 2023, suggesting increased exposure within the broader US biomedical community.

Accordingly, nearly 90% of Jewish healthcare professionals and students reported exposure to antisemitism within their work or school environment after October 7, 2023. Similar results were seen in independent surveys of Jewish high school students, 71% of whom reported experiencing antisemitism between

Jan-Feb 2024 (Various, 2024a). Over 50% of respondents stated they felt unsafe or threatened by Jew-hatred, suggesting that this critical issue is jeopardizing the well-being of Jewish-identifying healthcare workers and students. Most respondents who requested support from their institutions or professional organizations did not feel they had received it, consistent with prior reports of alienation and isolation experienced by Jewish individuals following the events of October 7 (Foer, 2024; Horn, 2024).

In conclusion, awareness of and exposure to antisemitism were common within the American Jewish healthcare community even before October 7, 2023. This likely reflects a rise in antisemitism within the United States, increased awareness of bias within the healthcare field, and the impact of contemporary antisemitic tropes specific to healthcare and medicine. Exposure to Jew-hatred has markedly increased since October 7, impacting a large majority of Jewish-identifying healthcare professionals and medical students in the United States. Exposures have occurred in multiple contexts, including face-to-face interactions and medical school classes or seminars. Many Jewish-identifying individuals feel unsafe or threatened by antisemitism and perceive their institutions and/or professional organizations to be largely unresponsive.

Rising antisemitism in the medical field has grave potential implications for the future of healthcare in America. This could include reduced enrollment in medical schools, increased mental health issues and physician burnout, loss of physicians to early retirement, and/or reluctance of Jewish-identifying patients to seek treatment in hospitals or institutions associated with antisemitic incidents. While some of these issues have been described in the lay press, these implications have not yet been explored in a systematic fashion and should form the basis for future investigations. Nonetheless, given the gravity of these potential implications, medical schools, healthcare organizations, and medical associations should urgently institute targeted interventions and education to ameliorate the rising impact of antisemitism within the United States healthcare community (Wald & Roth, 2024).

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Declarations

Conflict of interest Mr. Leiba is a full-time employee of the Foundation to Combat Antisemitism (Foxboro, MA). Dr. Wald is Commissioner, Lancet Commission on Medicine, Nazism, and the Holocaust. Dr. Roth is president of the Healthcare Council of the Coalition for Jewish Values (Baltimore, Maryland), and head of the Publications Committee of the American Jewish Medical Association (New York, NY). Dr. Schwartz, Dr. Spence, Dr. Oratz and Dr. Feldman are members of the Publications Committee of the American Jewish Medical Association. The opinions expressed herein are those of the authors and not necessarily of their employers or of the Lancet Commission on medicine, Nazism, and the Holocaust.

Ethical approval This study utilized de-identified public social media data and an anonymous, voluntary survey of health professionals. All survey respondents were informed that their data would be used for research. The University of Illinois College of Medicine Institutional Review Board deemed this study “exempt.”

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