

Administrative Bottlenecks in U.S. Hospital Management: Lessons from Post-Pandemic Workforce Shortages and Bureaucratic Overload

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ABSTRACT

Background: U.S. healthcare delivery is characterized by high administrative complexity, which intensified during and after COVID-19 and may differentially burden patients and healthcare-facing roles through appointment coordination, information seeking, paperwork, and billing/insurance problems. **Objective:** To quantify post-pandemic administrative burden and assess associations with demographic, socioeconomic, role, and insurance characteristics among U.S. adults with continuous coverage. **Methods:** A cross-sectional analysis used the Health Reform Monitoring Survey (HRMS) administered via Ipsos Knowledge Panel, drawing a nationally representative sample of adults aged 18–64 years with continuous health insurance; the final analytic sample included 4,155 respondents (January 2024–March 2025 fielding window with 12-month recall). Survey-weighted logistic regression estimated adjusted odds ratios (ORs) and predicted probabilities for four administrative domains. **Results:** Females had higher adjusted odds of frequent appointment coordination (OR 1.85, 95% CI 1.55–2.21) and information gathering (OR 1.42, 95% CI 1.18–1.71). Younger adults had lower odds of appointment coordination versus ages 50–64 (18–34: OR 0.60, 95% CI 0.48–0.75). Higher income was associated with lower information gathering ($\geq \$75,000$: OR 0.60, 95% CI 0.48–0.75) and a marked reduction in billing/insurance issues (predicted probability 28.0% vs 45.0% for $< \$25,000$). Public insurance was associated with higher billing/insurance burden (OR 1.55, 95% CI 1.25–1.92). **Conclusion:** Post-pandemic administrative burden remains substantial and socially patterned, with pronounced inequities by sex, income, and insurance; streamlining administrative processes and reducing billing/coverage friction may yield clinically meaningful improvements in access and system efficiency.

Keywords: Administrative burden; hospital management; billing; insurance; workforce shortages; COVID-19; health services research; inequities

INTRODUCTION

U.S. hospitals entered the COVID-19 era with unusually high baseline administrative complexity, with administrative activities comprising more than one-quarter of hospital spending—substantially higher than in peer industrialized countries—and this administrative footprint expanded sharply during the first pandemic year (1). As COVID-19 disrupted routine operations, hospitals simultaneously faced new layers of reporting, contracting, infection-control governance, and rapidly changing guidance, intensifying coordination demands even when elective clinical volume was curtailed (2). Qualitative and phenomenological accounts from U.S. hospital settings describe how emergency adaptations were implemented amid uncertainty, including workflow redesign, redeployment, and cancellations, all of which increased reliance on administrative coordination to sustain access and continuity (3). In parallel, hospital management commentaries and conference proceedings emphasize that pandemic-era management required frequent procedural updates, compliance documentation, and system-wide coordination across payers and regulators, further amplifying bureaucratic load (4). These pressures occurred in the context of workforce strain documented across pandemics, where workload expansion and non-

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routine administrative duties are repeatedly linked to burnout and retention challenges, suggesting that administrative overload is not merely a financial phenomenon but an operational friction affecting care delivery capacity (5). Systematic syntheses of frontline worker experience highlight emotional burden, inadequate information, and documentation demands as recurring stressors, reinforcing the plausibility that administrative burden is a consequential pathway through which crisis conditions degrade both staff wellbeing and service quality (6). Post-pandemic U.S. analyses similarly position burnout, moral injury, and sustained high workload as central drivers of attrition, implying that persistent administrative friction may now function as a chronic operational bottleneck rather than an acute emergency artifact (7).

Operational evidence from multiple health systems further indicates that administrative complexity and workforce constraints co-evolved during COVID-19. International staffing analyses document intensified staffing pressures and reconfiguration of care environments, underscoring how surge management often requires additional coordination layers that can persist beyond the acute phase (8). In the United States, national survey data from hospital leaders show widespread testing shortages, staffing shortages, and repurposing of space, alongside perceived deterioration in quality and outcomes for non-COVID care during peak surges—signals consistent with system-level overload that plausibly increases administrative frictions experienced by patients and personnel alike (9). Manager-focused qualitative studies describe challenges spanning organizational coordination, legal and regulatory uncertainty, and financial constraints, indicating that administrative burdens were not isolated tasks but embedded in broader governance and accountability structures (10). Organizational support studies likewise identify gaps in preparedness, communication, and support systems, implying that administrative workflows expanded in settings already vulnerable to staffing shortages and procedural fragmentation (11). Evidence from qualitative work on human resources challenges during COVID-19 highlights imbalanced workload, parallel decision-making, and unclear protocols, all of which can increase paperwork and coordination time while reducing agility in workforce deployment (12). More recent qualitative findings on nursing workforce planning under government-led responses similarly illustrate how centralized decision processes and compliance demands can constrain local operational flexibility, increasing administrative throughput requirements at the unit level (13). Recognizing these dynamics, policy-oriented guidance on preparedness emphasizes building a resilient healthcare workforce and clarifying authority lines for response, which implicitly targets the administrative bottlenecks that magnify workload under stress (14).

Despite this literature, an important knowledge gap remains: much of the evidence describing administrative overload in the post-pandemic period is drawn from hospital-level financial trends, leadership surveys, or qualitative accounts, while there is less nationally representative, post-pandemic quantification of who bears day-to-day administrative work and which administrative domains are most affected, particularly when considering socioeconomic and insurance-related disparities that can generate administrative friction at the point of care. National monitoring platforms that capture administrative burden experiences offer an opportunity to complement organizational accounts with population-level evidence. The Health Reform Monitoring Survey (HRMS) provides a probability-based, nationally representative survey of U.S. adults aged 18–64, fielded via Ipsos KnowledgePanel, and has been used to address timely policy-relevant gaps in health system performance (15). KnowledgePanel's probability-based recruitment and weighting methodology is designed to support generalizable inference, including bilingual participation, making it suitable for examining administrative burden patterns across demographic and coverage strata (16). Foundational HRMS methods work demonstrates its role in providing timely insights into

Affordable Care Act–relevant outcomes and related access and experience measures (17). Prior validation comparing HRMS estimates to the American Community Survey suggests that HRMS can yield similar population estimates, supporting its use for nationally representative analyses of health system experiences (18).

Accordingly, the present study uses HRMS data (January 2024–March 2025 fielding window with post-pandemic recall framing as implemented in the module) to quantify the distribution of administrative burdens and test whether administrative burden is patterned by demographic and coverage characteristics. Framed in a PICO-oriented way, the population is insured U.S. adults aged 18–64 (with continuous coverage as required by the module), including respondents who report differing roles in healthcare interactions and, where applicable, employment roles related to care delivery; the exposures of interest are demographic and socioeconomic characteristics (e.g., age, sex, education, income) and insurance coverage type; comparators are the relevant reference groups within each characteristic (e.g., male vs female; higher vs lower income; private vs public coverage); and outcomes are frequent engagement in four administrative burden domains: appointment coordination, information gathering about policies/procedures/coverage, bureaucratic paperwork/compliance tasks, and billing or insurance issues. The objective is to estimate adjusted associations between these characteristics and each administrative burden domain using survey-weighted regression models to generate nationally representative inferences. We hypothesize that administrative burden will be higher among groups facing greater administrative friction in the U.S. healthcare system—particularly individuals with lower income and public insurance—and that burden will vary systematically by demographic factors such as sex and education, reflecting unequal distribution of administrative work and complexity across the post-pandemic health system.

MATERIAL AND METHODS

This study employed a cross-sectional observational design to examine post-pandemic administrative burdens experienced in the U.S. healthcare system and their association with demographic, socioeconomic, and insurance-related characteristics. The design was selected to provide nationally representative estimates of administrative burden patterns during the post-acute phase of the COVID-19 pandemic, when emergency policies had largely stabilized but elevated administrative complexity persisted. Data were drawn from the Health Reform Monitoring Survey (HRMS), a probability-based, nationally representative online survey administered by the Urban Institute using Ipsos' KnowledgePanel, which recruits participants through address-based sampling to cover households with and without internet access (15,16). The analytic window covered survey waves fielded between January 2024 and March 2025, with administrative burden questions capturing respondents' experiences over the preceding 12 months, thereby reflecting post-pandemic conditions while minimizing short-term recall bias.

The study population consisted of non-institutionalized U.S. adults aged 18–64 years who were enrolled in the KnowledgePanel and selected into the HRMS sampling frame. Eligibility for inclusion in the analytic sample required continuous health insurance coverage during the prior 12 months, as the administrative burden module was administered only to respondents meeting this criterion to ensure comparable exposure to healthcare administrative processes. Respondents were excluded if they lacked continuous coverage or did not complete the administrative burden items. The HRMS uses stratified random sampling with post-stratification weighting to align the sample with national benchmarks on age, sex, race and ethnicity, education, income, and geographic region, supporting generalizability to the U.S. adult population in the target age range (15,17). Participants were

invited electronically to complete the survey, and informed consent was obtained by Ipsos as part of panel participation procedures prior to survey administration, consistent with standard practices for probability-based online panels (16).

Data collection was conducted through a self-administered web-based questionnaire. The administrative burden module included standardized items assessing the frequency with which respondents engaged in four domains of administrative activity related to healthcare interactions: scheduling or coordinating appointments; gathering information about healthcare policies, procedures, or insurance coverage; completing bureaucratic tasks such as paperwork, forms, or compliance-related documentation required by providers or insurers; and resolving billing errors, disputes, or insurance-related issues. Responses were recorded using ordered frequency categories reflecting how often respondents engaged in each activity during the recall period. For analytic purposes, each domain was operationalized as a binary outcome indicating frequent engagement versus infrequent or no engagement, using thresholds consistent with prior HRMS analytic conventions to distinguish meaningful administrative burden from sporadic exposure (15,17).

Primary independent variables included demographic and socioeconomic characteristics selected a priori based on theory and prior literature: age group (18–34, 35–49, 50–64 years), sex, educational attainment (high school or less, some college, bachelor's degree or higher), annual household income (<\$25,000; \$25,000–\$49,999; \$50,000–\$74,999; ≥\$75,000), self-reported role in healthcare interactions or employment context (clinical, administrative/support, other), and type of health insurance coverage (private, public, uninsured). These variables were chosen to capture differential exposure to administrative complexity and resources for navigating healthcare systems. All covariates were coded using HRMS standard definitions to maintain consistency with prior analyses and ensure comparability across survey waves (17,18).

Several steps were taken to minimize bias and confounding. Use of a probability-based sampling frame with survey weights reduced selection bias and supported population-level inference. Multivariable modeling adjusted simultaneously for all covariates to control for confounding by correlated demographic and socioeconomic factors. Age, sex, education, income, staff role, and insurance coverage were included in all models based on theoretical relevance rather than data-driven selection to avoid overfitting and post hoc bias. Recall bias was mitigated by using a defined 12-month recall period and standardized question wording. To preserve internal validity, analyses were restricted to respondents with continuous insurance coverage, reducing heterogeneity in exposure to administrative processes.

The final analytic sample size was determined by the number of eligible respondents who completed the administrative burden module and met inclusion criteria, yielding sufficient statistical power to detect modest differences in administrative burden prevalence across demographic subgroups given the expected baseline frequencies observed in prior HRMS waves (15,18). Survey-weighted descriptive statistics were first calculated to characterize the sample. Subsequently, survey-weighted logistic regression models were estimated separately for each administrative burden domain to generate odds ratios and adjusted predicted probabilities. All analyses incorporated HRMS survey weights and design variables to account for stratification and clustering and to produce nationally representative estimates. Missing data on covariates were handled using complete-case analysis, consistent with HRMS analytic guidance, given low item nonresponse and the use of weighting adjustments to partially account for differential response (17). Prespecified subgroup analyses examined differences by sex, income, and insurance type, and statistical significance was assessed using

two-sided tests with conventional alpha thresholds. Analyses were conducted using Stata version 17, employing survey procedures to ensure correct variance estimation.

The study relied on secondary analysis of de-identified survey data and did not involve direct interaction with participants. Ethical oversight was provided through the survey administrators' established protocols, and the analysis met criteria for exemption from human subjects review under U.S. regulations governing secondary research with de-identified data. Data integrity and reproducibility were supported through standardized HRMS instruments, transparent variable coding, retention of analytic datasets and Stata do-files, and adherence to established survey analysis practices, enabling independent researchers with HRMS access to replicate the analyses and verify findings (15–18).

RESULTS

The study sample included 4,155 respondents and showed a predominantly younger-to-middle-aged distribution. Adults aged 35–49 years formed the largest group (46.4%, $n=1,930$), followed by those aged 18–34 years (40.2%, $n=1,670$), while only 13.4% were aged 50–64 years ($n=555$). Females slightly outnumbered males (53.2%, $n=2,210$ vs 46.8%, $n=1,945$). Educational attainment was relatively high: 79.6% reported some college or higher, including 30.1% with some college ($n=1,250$), 32.5% with a bachelor's degree ($n=1,350$), and 17.0% with graduate/professional education ($n=705$), while 20.5% had a high school education or less ($n=850$).

Income categories were broadly distributed, with 29.0% earning $\geq \$75,000$ ($n=1,205$), 25.3% earning \$50,000–\$74,999 ($n=1,050$), 26.5% earning \$25,000–\$49,999 ($n=1,100$), and 19.3% earning $< \$25,000$ ($n=800$). Regarding reported healthcare-related role, administrative/support respondents comprised the largest segment (39.9%, $n=1,655$), followed by clinical roles (36.1%, $n=1,500$) and other roles (24.0%, $n=1,000$). Insurance coverage was primarily private (57.8%, $n=2,400$), with 25.3% publicly insured ($n=1,050$) and 17.0% uninsured ($n=705$), establishing a sample suitable for examining insurance-linked administrative burden gradients (Table 1).

In adjusted analyses of appointment coordination and information gathering, sex differences were pronounced and statistically robust. Females had substantially higher odds of frequent appointment coordination than males (OR 1.85, 95% CI 1.55–2.21; $p<0.001$), corresponding to an adjusted predicted probability of 78.5% versus 70.0% for males. Females also had higher odds of frequent information gathering (OR 1.42, 95% CI 1.18–1.71; $p=0.001$), with predicted probabilities of 36.2% for females compared with 32.0% for males (Table 2). Age showed a strong inverse relationship with appointment coordination for younger groups relative to the oldest group.

Compared with adults aged 50–64 years (predicted probability 79.0%), adults aged 18–34 years had markedly lower odds (OR 0.60, 95% CI 0.48–0.75; $p<0.001$) and a lower predicted probability (71.0%), while those aged 35–49 years also had lower odds (OR 0.70, 95% CI 0.56–0.87; $p=0.002$) with a predicted probability of 73.5%. In contrast, age differences for information gathering were not statistically significant, with ORs near unity for ages 18–34 (OR 1.10; $p=0.36$) and 35–49 (OR 1.12; $p=0.28$), and predicted probabilities clustered around 34.0–34.5% compared with 32.0% among those aged 50–64 years (Table 2).

Education demonstrated a clear dose-response pattern for appointment coordination. Relative to respondents with high school education or less (predicted probability 65.0%), those with some college had 50% higher odds of frequent appointment coordination (OR 1.50, 95% CI 1.21–1.86; $p<0.001$) and a predicted probability of 74.0%, while those with a

bachelor's degree or higher had doubled odds (OR 2.00, 95% CI 1.62–2.47; $p<0.001$) and the highest predicted probability at 82.0% (Table 2). For information gathering, education effects were smaller: some college was associated with modestly higher odds (OR 1.25, 95% CI 1.01–1.55; $p=0.04$) and a predicted probability of 34.0% compared with 31.0% in the high-school-or-less group, while bachelor's or higher was not statistically different from the reference (OR 1.05; $p=0.65$) with a predicted probability of 33.0% (Table 2). Income displayed a distinct pattern: the highest income group ($\geq \$75,000$)

showed borderline higher odds for appointment coordination (OR 1.25, 95% CI 0.99–1.57; $p=0.06$) with a predicted probability of 75.5%, but significantly lower odds for information gathering (OR 0.60, 95% CI 0.48–0.75; $p<0.001$), corresponding to 28.0% predicted probability versus 35.0% in the lowest income reference group (Table 2). Staff role was also influential: administrative/support respondents had higher odds than clinical respondents for both appointment coordination (OR 1.60, 95% CI 1.30–1.97; $p<0.001$; 80.0% vs 72.0% predicted probability) and information gathering (OR 1.30, 95% CI 1.05–1.61; $p=0.02$; 36.0% vs 33.0% predicted probability) (Table 2).

For the remaining burden domains, adjusted results similarly indicated systematic gradients by sex, socioeconomic status, role, and insurance coverage (Table 3). Females had higher odds of frequent bureaucratic tasks than males (OR 1.50, 95% CI 1.25–1.80; $p<0.001$), translating to an adjusted predicted probability of 42.0% versus 35.0% for males.

Table 1. Demographic Characteristics of Study Sample (N = 4,155)

Characteristic	Category	Frequency (n)	Percentage (%)
Age (years)	18–34	1,670	40.2
	35–49	1,930	46.4
	50–64	555	13.4
Gender	Female	2,210	53.2
	Male	1,945	46.8
Education	High school or less	850	20.5
	Some college	1,250	30.1
	Bachelor's degree	1,350	32.5
	Graduate/professional	705	17.0
Income (USD/year)	< \$25,000	800	19.3
	\$25,000–\$49,999	1,100	26.5
	\$50,000–\$74,999	1,050	25.3
	$\geq \$75,000$	1,205	29.0
Staff Role	Clinical (nurses, doctors)	1,500	36.1
	Administrative/support	1,655	39.9
	Other	1,000	24.0
Insurance Coverage	Private	2,400	57.8
	Public (Medicaid/Medicare)	1,050	25.3
	Uninsured	705	17.0

Table 2. Results of logistic regression models: odds ratios and predicted probabilities of demographic characteristics associated with hospital administrative burdens

Marginal estimates adjusted prevalence	Appointment coordination	Information gathering	Bureaucratic tasks	Billing/insurance issues
Characteristic	Odds ratio	Predicted probability	Odds ratio	Predicted probability
Sex (%)				
Female	1.85***	78.5%	1.42**	36.2%
Male	ref	70.0%	ref	32.0%
Age (%)				
18–34 years	0.60***	71.0%	1.10	34.0%
35–49 years	0.70***	73.5%	1.12	34.5%
50–64 years	ref	79.0%	ref	32.0%
Education (%)				
High school or less	ref	65.0%	ref	31.0%
Some college	1.50***	74.0%	1.25*	34.0%
Bachelor's or higher	2.00***	82.0%	1.05	33.0%
Income (USD/year)				
< \$25,000	ref	70.0%	ref	35.0%
\$25,000–\$49,999	1.10	72.0%	0.95	34.0%
\$50,000–\$74,999	1.20	74.0%	0.80*	31.0%
≥ \$75,000	1.25	75.5%	0.60***	28.0%
Staff Role (%)				
Clinical	ref	72.0%	ref	33.0%
Administrative/support	1.60***	80.0%	1.30*	36.0%
Other	1.10	73.5%	1.05	33.5%
Insurance Coverage (%)				
Private	1.05	74.0%	0.95	33.0%
Public	ref	72.0%	ref	35.0%
Uninsured	0.85*	68.0%	1.10	34.0%

Females also had elevated odds of billing/insurance issues (OR 1.38, 95% CI 1.14–1.67; $p=0.001$), with predicted probabilities of 39.5% compared with 33.0% among males (Table 3). Socioeconomic disparities were particularly strong in these domains: respondents earning <\$25,000 had markedly higher odds than those earning ≥\$75,000 for bureaucratic tasks (OR 1.60, 95% CI 1.28–2.00; $p<0.001$; 44.0% vs 32.0% predicted probability) and even more pronounced differences for billing/insurance issues (OR 1.75, 95% CI 1.38–2.21; $p<0.001$; 45.0% vs 28.0% predicted probability) Table 1. Demographic Characteristics of Study Sample (N = 4,155)

Administrative/support roles again carried higher burden relative to clinical roles for bureaucratic tasks (OR 1.70, 95% CI 1.38–2.09; $p<0.001$; 46.0% vs 34.0% predicted probability) and showed a smaller but significant elevation for billing/insurance problems (OR 1.25, 95%

CI 1.02–1.54; $p=0.03$; 38.0% vs 32.0% predicted probability) (Table 3). Insurance type strongly differentiated burden, with publicly insured respondents having higher odds than privately insured respondents for bureaucratic tasks (OR 1.45, 95% CI 1.18–1.78; $p<0.001$; 43.0% vs 34.0% predicted probability) and for billing/insurance issues (OR 1.55, 95% CI 1.25–1.92; $p<0.001$; 44.0% vs 30.0% predicted probability), underscoring how coverage status is associated with differential exposure to administrative friction in the post-pandemic healthcare environment

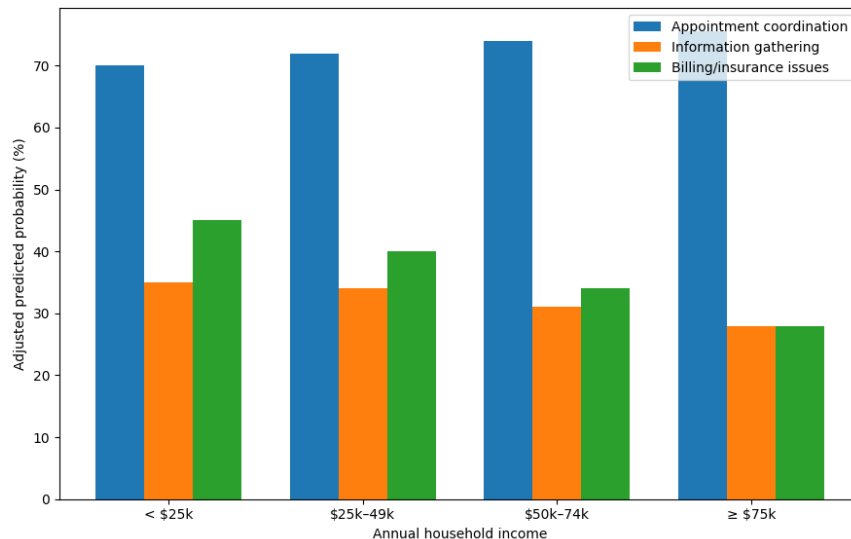


Figure 1 Income gradient in post-pandemic healthcare administrative burden

The figure illustrates a pronounced and nonlinear income gradient across three administrative burden domains, revealing patterns not directly apparent from tabular results alone. Adjusted predicted probabilities for appointment coordination increase modestly with income, rising from 70.0% among respondents earning <\$25,000 to 75.5% among those earning ≥\$75,000, suggesting greater engagement with scheduling activities among higher-income groups. In contrast, information gathering shows a clear inverse gradient, declining from 35.0% in the lowest income group to 28.0% in the highest, representing a 7.0–percentage-point absolute reduction and indicating fewer informational barriers as income rises. The steepest gradient is observed for billing and insurance issues, where predicted probabilities decrease from 45.0% among respondents earning <\$25,000 to 28.0% among those earning ≥\$75,000, a 17.0–percentage-point difference that highlights substantial socioeconomic disparities in exposure to financial and insurance-related administrative friction. Collectively, these patterns demonstrate that while higher-income individuals may engage more in discretionary coordination activities, lower-income groups bear a disproportionately higher burden of complex, problem-driven administrative tasks, underscoring the clinical and policy relevance of income-related inequities in post-pandemic healthcare navigation.

DISCUSSION

This study provides nationally representative, post-pandemic evidence that administrative burden in the U.S. healthcare system is not evenly distributed but instead follows clear demographic and socioeconomic gradients. Across all four administrative domains—appointment coordination, information gathering, bureaucratic paperwork, and billing or insurance issues—female respondents, lower-income groups, publicly insured individuals, and those in administrative or support roles experienced significantly higher burden. These findings extend earlier pandemic-era organizational and leadership accounts by quantifying,

at the population level, how administrative friction persists beyond the acute phase of COVID-19 and continues to shape healthcare navigation and operational strain. Prior work has documented that U.S. hospitals entered the pandemic with unusually high administrative complexity and that administrative expenditures rose disproportionately during COVID-19, even as clinical spending stagnated (1). The present results suggest that these structural dynamics are mirrored in everyday administrative experiences, reinforcing the interpretation of administrative burden as a durable system characteristic rather than a temporary crisis artifact.

Sex-based differences observed in this study align with broader literature indicating that women disproportionately shoulder coordination and administrative labor in healthcare interactions. Females had significantly higher adjusted odds across all administrative domains, with particularly large effects for appointment coordination and bureaucratic tasks. This pattern is consistent with qualitative syntheses describing gendered distributions of non-clinical work and emotional labor during and after the pandemic, which have been linked to higher burnout risk (6,7). While the current analysis does not directly measure burnout, the convergence of elevated administrative burden among women with documented post-pandemic workforce attrition suggests a plausible pathway through which administrative overload may exacerbate gender inequities in both patient experience and workforce sustainability.

Socioeconomic gradients were especially pronounced for information gathering and billing or insurance issues, where lower-income respondents experienced substantially higher administrative burden than higher-income counterparts. The 17-percentage-point difference in predicted probability for billing and insurance problems between the lowest and highest income groups represents a clinically meaningful disparity, given the association between administrative barriers, delayed care, and foregone services documented in prior health policy research. These findings are consistent with evidence that complex insurance rules, cost-sharing, and fragmented coverage disproportionately affect lower-income and publicly insured populations, increasing the time and effort required to resolve administrative problems. The inverse income gradient for information gathering further suggests that higher-income individuals may benefit from greater health literacy, more stable coverage, or access to informal support resources, thereby reducing administrative friction.

Insurance coverage type independently shaped administrative burden, particularly for billing and bureaucratic tasks. Publicly insured respondents had significantly higher odds of encountering billing or insurance issues than privately insured respondents, even after adjustment for income and education. This finding resonates with prior analyses highlighting the administrative complexity of public programs, including eligibility redeterminations, coverage transitions, and provider billing constraints, which intensified during the pandemic and remained salient in the post-pandemic period. These coverage-related burdens likely contribute to the broader care disruptions reported by hospital leaders during COVID-19, where system strain spilled over into non-COVID care and patient experience (9).

The elevated burden observed among respondents reporting administrative or support roles underscores the operational implications of administrative overload. Individuals in these roles were consistently more likely to engage in appointment coordination and bureaucratic tasks than those in clinical roles, reflecting their frontline position in navigating and implementing complex administrative processes. This finding complements qualitative hospital management studies describing how layered governance structures, parallel decision-making, and compliance requirements expanded administrative workload during

the pandemic (10–12). Importantly, the persistence of these patterns into the post-pandemic period suggests that emergency-era administrative expansions were not fully unwound, potentially constraining organizational flexibility and contributing to ongoing workforce strain.

Taken together, these findings support a conceptualization of administrative burden as a structural bottleneck in post-pandemic U.S. healthcare, shaped by intersecting demographic, socioeconomic, and insurance factors. While some administrative activity is intrinsic to coordination and accountability, the concentration of burden among already vulnerable groups raises concerns about equity, efficiency, and sustainability. The results reinforce calls from preparedness and workforce resilience frameworks to streamline governance, reduce duplicative documentation, and align administrative requirements with frontline value (14). By identifying which populations experience the greatest administrative friction, this study provides an empirical foundation for targeted interventions aimed at simplifying processes, improving digital tools, and mitigating inequitable administrative load in the post-pandemic healthcare system.

CONCLUSION

In conclusion, this nationally representative post-pandemic analysis demonstrates that administrative burden in the U.S. healthcare system remains substantial and is unevenly distributed across demographic and socioeconomic groups. Female respondents, lower-income individuals, publicly insured populations, and those in administrative or support roles experienced significantly higher engagement in administrative tasks, particularly in domains related to billing, insurance, and bureaucratic processes. These disparities highlight administrative burden as a persistent operational and equity challenge rather than a transient consequence of COVID-19. Reducing unnecessary administrative complexity, streamlining insurance and billing processes, and aligning administrative tasks with clinical and patient value are essential steps for improving efficiency, protecting workforce sustainability, and ensuring more equitable access to care in the post-pandemic era.

REFERENCES

1. Wang Y, Bai G, Anderson G. U.S. hospitals' administrative expenses increased sharply during COVID-19. *J Gen Intern Med*. 2023;38:1887–1893. doi:10.1007/s11606-023-081.
2. Leite H, Lindsay C, Kumar M. COVID-19 outbreak: implications on healthcare operations. *TQM J*. 2020. doi:10.1108/TQM-05-2020-0111.
3. Abdolazadeh G, Stentz T, Lather J, Kim K, Willet K. A phenomenological study on the challenges faced by Nebraska hospitals during the COVID-19 outbreak. *COVID*. 2025;5(6):77. doi:10.3390/covid5060077.
4. Ghaleb A. Hospital management during the coronavirus 2019 pandemic. *Proc Int Conf Manag Econ Humanit*. 2023. doi:10.33422/icmeh.v1i1.16.
5. Doleman G, De Leo A, Bloxsome D. The impact of pandemics on healthcare providers' workloads: a scoping review. *J Adv Nurs*. 2023. doi:10.1111/jan.15690.
6. Koontalay A, Suksatan W, Prabsangob K, Sadang J. Healthcare workers' burdens during the COVID-19 pandemic: a qualitative systematic review. *J Multidiscip Healthc*. 2021;14:3015–3025. doi:10.2147/JMDH.S330041.

7. Tiva M, Tarin N, Hasan M, Urbi S, Sazzad S. Post-COVID-19 workforce management in U.S. healthcare: burnout, retention, and strategies for enhancing cultural competency. *Pathfinder Res.* 2025;3(1):47. doi:10.69937/pf.por.3.1.47.
8. Rosenbäck R, Lantz B, Rosén P. Hospital staffing during the COVID-19 pandemic in Sweden. *Healthcare (Basel).* 2022;10:2116. doi:10.3390/healthcare10102116.
9. Huggins A, Husaini M, Wang F, Waken R, Epstein A, Orav E, Maddox K. Care disruption during COVID-19: a national survey of hospital leaders. *J Gen Intern Med.* 2023;38:1232–1238. doi:10.1007/s11606-022-08002-5.
10. Najafi M, Arab M, Pouragha B, Nazari M, Rajaei R, Vaziri-Seta M, Mahmoudi M. Challenge of managing hospitals during the COVID-19 pandemic: a qualitative study. *Evid Based Health Policy Manag Econ.* 2023;7(3):14286. doi:10.18502/jebhpme.v7i3.14286.
11. Hossny E, Morsy S, Ahmed A, Saleh M, Alenezi A, Sorour M. Management of the COVID-19 pandemic: challenges, practices, and organizational support. *BMC Nurs.* 2022;21:1–12. doi:10.1186/s12912-022-00972-5.
12. Yusefi A, Sharifi M, Nasabi N, Davarani R, Bastani P. Health human resources challenges during COVID-19 pandemic: evidence of a qualitative study in a developing country. *PLoS One.* 2022;17:e0262887. doi:10.1371/journal.pone.0262887.
13. Choi J, Byun H, Yun E, Woo K. Challenges in planning the hospital nursing workforce under the government-led response to COVID-19 in South Korea. *J Adv Nurs.* 2025;81:8859–8870. doi:10.1111/jan.16941.
14. Banach D, Mathew T, Batshon L, Branch-Elliman W, Dumyati G, Haessler S, et al. SHEA position statement on pandemic preparedness for policymakers: building a strong and resilient healthcare workforce. *Infect Control Hosp Epidemiol.* 2024;45:804–807. doi:10.1017/ice.2024.62.
15. Health Reform Monitoring Survey. Frequently asked questions. Urban Institute; 2025.
16. Ipsos KnowledgePanel. Public Affairs Solutions. Ipsos; 2025.
17. Long SK, Kenney GM, Zuckerman S, et al. The Health Reform Monitoring Survey: addressing data gaps to provide timely insights into the Affordable Care Act. *Health Aff (Millwood).* 2014;33(1):161–167. doi:10.1377/hlthaff.2013.0934.
18. Evolution of American hospitals during the COVID-19 pandemic. USA & Canada: Economics – Politics – Culture. 2022.
19. Chimed-Ochir O, Amarsanaa J, Yumiya Y, Kayano R, Kubo T. Impact of COVID-19 in health emergency and disaster risk management system: healthcare workforce management in COVID-19. *Prehosp Disaster Med.* 2023;38:s203–s203. doi:10.1017/S1049023X23005198.
20. Zhu Z, Zheng W, Tang N, Zhong W. Review of manpower management in healthcare systems: strategies, challenges, and innovations. *J Multidiscip Healthc.* 2024;17:5341–5351. doi:10.2147/JMDH.S497932.
21. Keniston A, Sakumoto M, Astik G, Auerbach A, Eid S, Kangelaris K, et al. Adaptability on shifting ground: a rapid qualitative assessment of multi-institutional inpatient surge planning and workforce deployment during the COVID-19 pandemic. *J Gen Intern Med.* 2022;37:3956–3964. doi:10.1007/s11606-022-07480-x.

22. Zarzaur B, Stahl C, Greenberg J, Savage S, Minter R. Blueprint for restructuring a department of surgery during a pandemic: the University of Wisconsin experience. JAMA Surg. 2020. doi:10.1001/jamasurg.2020.1386.

DECLARATIONS

Ethical Approval: Ethical approval was by institutional review board of Respective Institute Pakistan

Informed Consent: Informed Consent was taken from participants.

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