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Original Research Article

Enhancing fire safety readiness in a medical college: faculty training outcomes and fire drill performance evaluation

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ABSTRACT

Background: Fire safety is a critical component of tertiary healthcare infrastructure, and recurring hospital fire incidents in India highlight the urgent need for improved institutional preparedness. Faculty members play an important role in maintaining a safe clinical and academic environment; however, effective preparedness also requires functional systems, coordinated staff response, and regular fire drills.
Methods: This retrospective cross-sectional interventional study analyzed routine fire safety activities conducted at Dr. B.R. Ambedkar State Institute of Medical Sciences, Mohali. The study assessed fire safety knowledge, awareness, and preparedness among faculty members (n=42) and evaluated institutional readiness through structured mock fire drills conducted across major hospital departments (n=10). Faculty members underwent a structured 30-35-minute PowerPoint-based training session, and knowledge was assessed using a pretested Google Form questionnaire. Institutional preparedness was evaluated using a standardized Fire Drill Checklist applied during the drills. Pre-post comparisons were analyzed using the Chi-square test for knowledge and paired t-test for drill performance.
Results: Significant improvements were observed in key domains. Awareness of fire emergency numbers increased from 64.7% to 100% ($p<0.01$), the ability to correctly use a fire extinguisher improved from 33.3% to 85.7% ($p<0.05$), and understanding of fire classifications increased from 0% to 83.3% ($p<0.01$). Mean fire drill scores improved from 1.40±0.699 to 4.90±0.876 across 10 drills ($p<0.001$).
Conclusions: Structured training significantly improves faculty knowledge and awareness, while routine mock drills strengthen institutional preparedness. Integrating mandatory training, periodic simulation drills, and regular safety audits is essential to enhance fire safety readiness in medical colleges and hospitals.

Keywords: Emergency response, Faculty training, Fire safety, Hospital preparedness, Mock fire drills

INTRODUCTION

Fire safety is a critical aspect of workplace safety, particularly in tertiary care institutions where high patient dependency, complex medical equipment, and dense occupancy significantly elevate the risk of fire-related disasters. Hospitals and medical colleges are inherently high-risk environments because they house vulnerable populations many of whom are non-ambulatory, critically ill, or require constant assistance during emergencies. Furthermore, these settings contain multiple potential fire hazards, including oxygen pipelines, high-load electrical systems, diagnostic and therapeutic equipment, chemical reagents, and congested clinical areas. The combination

of these factors makes proactive fire safety preparedness essential to prevent catastrophic outcomes. According to the National Crime Records Bureau (NCRB), more than 1,500 deaths occur annually in India due to accidental fires, many of which involve healthcare facilities.[1]

In recent years, India has witnessed several tragic hospital fire accidents that highlight systemic gaps in preparedness. Between March and April 2024, PGIMER experienced fires: at the Advanced Cardiac Centre OT during surgery, the Advanced Trauma Centre corridor, and a blaze near the laundry plant none resulted in injuries, but they underscored glaring safety lapses.[2] Similarly, in the 2022, fire at Guru Nanak Dev Hospital, Amritsar required evacuation of over 600 patients.[3] Unfortunately, in Ahmednagar (2021), a hospital fire killed 11 patients, and in Bharuch (2021), 18 patients lost their lives in a COVID-19 hospital blaze.[4,5] These repeated incidents, even at flagship institutions, reflect the urgent need for structured fire safety training, audits, and preparedness protocols in Indian healthcare settings.

Globally, fire safety in hospitals has also been a recurring challenge. A systematic review by Al-Qahtani et al reported that fewer than 40% of healthcare workers in tertiary hospitals had adequate fire safety knowledge, especially regarding extinguisher use and evacuation drills.[6] The World Health Organization (WHO) recommends that all hospitals establish fire preparedness programs including regular training, fire drills, and safety audits as part of their Hospital Safety Index framework.[7] The National Fire Protection Association (NFPA) also mandates comprehensive safety codes such as NFPA 101: Life Safety Code, which outline evacuation routes, alarm systems, and staff training requirements.[8,14]

Despite these international standards, fire safety often remains a neglected aspect of hospital management in India. A study by Sharma et al found that fire safety preparedness was inadequate in many tertiary hospitals, with poor signage, blocked exits, and untrained staff being major concerns.[9] Another Indian study noted that while healthcare workers were generally aware of fire hazards, less than half knew how to operate a fire extinguisher or follow evacuation protocols.[10]

Faculty members in medical colleges are uniquely positioned in this context. Beyond their teaching roles, they are responsible for patient care, supervision of students, and ensuring adherence to institutional safety standards. Their knowledge, attitude, and practices regarding fire safety therefore directly influence institutional preparedness. Training interventions, including awareness sessions, mock drills, and safety audits, can significantly enhance readiness and reduce the likelihood of catastrophic outcomes.[15,16]

The present study evaluated baseline fire safety knowledge among newly recruited faculty and retrospectively analyzed the impact of structured fire safety training, drills, and audits on faculty preparedness and institutional readiness in a government medical college. This study adds to the growing body of literature advocating for mandatory fire safety training in healthcare institutions and provides evidence for policy-level implementation in India.

METHODS

Study design

This study was conducted as part of institutional faculty development and capacity-building efforts, initiated during the early establishment phase of the medical college when no Fire Safety Officer had yet been appointed. The primary aim of these activities was to enhance faculty awareness, preparedness, and institutional readiness to prevent and manage potential fire-related emergencies.

These interventions comprising structured fire safety training, mock drills, and departmental audits were routinely implemented by the nodal officer as part of ongoing safety compliance. As consistently positive improvements were observed during these activities, a retrospective analysis of the collected data was undertaken to formally evaluate the effectiveness of the program.

Subsequently, a cross-sectional interventional study with a pre-post evaluation design was conducted. The study assessed baseline fire safety knowledge among faculty members, delivered structured training, and evaluated improvements in both faculty knowledge (n=42) and institutional fire preparedness through structured mock fire drills (n=10).

Study setting

The study was carried out at Dr. B. R. Ambedkar State Institute of Medical Sciences, Mohali (Punjab, India), a government medical college with 23 departments and both teaching and hospital facilities. It is established in 2021, under the scheme of upgradation of civil hospitals with more than 220 beds to medical colleges.

Participants

A total of 42 newly recruited faculty members participated in the fire safety knowledge assessment. The participants represented all major academic divisions, including pre-clinical (10.8%), para-clinical (24.3%), and clinical departments (56.8%). In terms of designation, 37.8% were Assistant Professors, 27% were Associate Professors, and 27% were Professors. Only 35.1% of the faculty reported having received any prior fire safety training, indicating a substantial gap in baseline preparedness. Faculty members were included because they function as key decision-makers and supervisors within their departments and play a crucial role in

promoting and sustaining fire safety practices within the institution.

Inclusion criteria

The study included newly recruited faculty members of Dr. B. R. Ambedkar State Institute of Medical Sciences, Mohali, who were present during the scheduled fire safety training program and provided informed consent to participate in both the knowledge assessment and mock drills.

Exclusion criteria

Faculty members were excluded if they were absent during either the pre-training or post-training assessment or if they declined to participate in the study activities.

Sampling technique and sample size

A universal sampling technique was adopted, wherein all eligible faculty members available during the study period were invited to participate in the training and assessment program. A total of 42 faculty members consented and completed both the pre-training and post-training assessments and were therefore included in the final analysis.

As the study was conducted during the initial establishment phase of the institution, the number of available faculty members was limited. Therefore, formal sample size calculation was not performed, and all accessible faculty were included to obtain a comprehensive assessment of institutional preparedness.

Interventions

Structured fire safety training

Structured fire safety training was conducted beginning in October 2021. Training sessions began in October 2021 and were delivered using a 30–35 minute PowerPoint module, consisting of fire hazards in hospital settings (3-5 min), classification of fires (NFPA standards) (5-7 min), types of fire extinguishers (7-10 min), PASS technique for extinguisher use (5-7 min), evacuation procedures for different hospital zones (10-12 min), and communication and emergency response protocols (3-5 min).

Sessions were interactive and included faculty, nursing staff, security guards, and multipurpose workers.

Mock fire drills

Mock drills were initiated in December 2021 and 10 drills were selected for structured evaluation in high-risk units including: SNCU, Medicine, Surgery, Ophthalmology, Orthopaedics, Labour Room, Emergency, Radiology, Paediatrics, ICU.

Each drill was evaluated using a standardized Fire Drill Checklist, which assessed: 1) Pre-drill preparedness (signage, escape routes, lighting), 2) Alarm activation and communication, 3) Fire containment actions, 4) Evacuation flow and timing, 5) Team coordination and role performance, 6) Functionality of fire alarm systems.

Fire safety audits

Monthly fire safety audits began in November 2021, using a standardized Fire Safety Audit Checklist. Audits assessed fire safety management and risk assessment, staff training and awareness, storage and labeling of flammable materials, electrical safety and equipment loading, availability and functionality of smoke detectors, sprinklers, and extinguishers, adequacy of exit signage and escape routes, and condition and accessibility of portable firefighting equipment.

Multilevel building inspections

Inspections were conducted at three hierarchical levels: departmental level (monthly), institutional level (quarterly), and State Fire Department (prior to NMC inspections and annually for Fire Safety No Objection Certificate (NOC)).

Inspections aimed to identify hazards such as overloaded circuits, poor ventilation, expired extinguishers, and blocked exits.

Data collection

Faculty knowledge assessment (n=42)

Data on faculty knowledge, safety awareness, and response capability were obtained through a pretested Google Form questionnaire. The questionnaire included domains are fire hazards, fire emergency numbers, classification of fires (NFPA), types of fire extinguishers, PASS technique, evacuation procedures in different hospital areas, and communication and alarm activation protocols.

A structured faculty-oriented component, 30-35 minute PowerPoint-based training session was delivered in May 2022, covering the above domains. The same questionnaire was administered before and after the training to measure changes in knowledge.

Fire drill performance assessment (n=10)

Drills performed prior to May 2022 were categorized as “before training”, and drills conducted after the formal May 2022 session (combined with repeated reinforcement during routine drills) were categorized as “after training. Uniformity was maintained because all training sessions and drills throughout the period were conducted by the same Nodal Officer using consistent instructional content and the same Fire Drill Checklist. This ensured

standardized teaching, comparable scoring, and similar operational expectations despite differences in departmental staff. Each drill was assessed using a standardized Fire Drill Checklist, which scored performance in the following domains: pre-drill preparedness (escape routes, signage, emergency lighting), alarm activation and communication, fire containment actions, evacuation process and timing, team coordination and role performance, utility shutdowns and safety actions, and functionality of fire alarm and detection system. Checklist scores were recorded before and after the training intervention.

Statistical analysis

Data entered in Microsoft Excel 2016 and analyzed using SPSS version 22. Chi-square test was used for comparing categorical knowledge scores (pre vs post) among faculty (n=42). Paired t-test was used for comparing mean drill performance scores (pre vs post) (mean ± SD) across 10 fire drills (n=10). Significance threshold: $p<0.05$ considered statistically significant.

This study is a retrospective analysis of routine fire safety training sessions, mock drills, and departmental audits conducted as part of the institution's mandatory safety program under the author's role as the designated Fire Safety Nodal Officer (order no. AIMS/2021/1585 dated 10 June 2021). No patients, personal identifiers, or clinical data were involved. As per the ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants (2017), activities that do not involve human participants or identifiable data do not require formal Institutional Ethics Committee approval.

RESULTS

Socio-demographic characteristics

Among the 42 participants, 70.4% were female. Most belonged to the 40–50 years age group (48.7%). Clinical departments contributed the majority (56.8%), with Assistant Professors forming the largest designation group (37.8%). Only 35.1% had received prior fire safety training (Table 1).

Knowledge before and after training

The intervention produced statistically significant improvements across all knowledge domains. Awareness of fire emergency numbers increased from 64.7% to 100% (+35.3% absolute gain; $\chi^2=19.953$, $p<0.01$). Knowledge of extinguisher use rose from 33.3% to 85.7% (+52.4%; $\chi^2=23.915$, $p<0.05$), and knowledge of the location of extinguishers improved from 67.6% to 100% (+32.4%). Understanding of the classification of fires (NFPA) increased from 0% to 83.3% (+83.3%; $\chi^2=56.194$, $p<0.01$). Awareness of the PASS acronym increased from 82.4% to 95.2% (+12.8%; $\chi^2=11.118$, $p<0.05$), and knowledge of smoke detectors rose from 67.6% to 100% (+32.4%).

Table 1: Socio-demographic characteristics of study participants (n=42).

Factors	Number	Percentage (%)
Age category in years		
30-40	14	37.9
40-50	18	48.7
>50	2	5.4
Sex		
Male	8	21.6
Female	26	70.4
Department		
Pre-clinical	4	10.8
Para-clinical	9	24.3
Clinical	21	56.8
Designation		
Assistant Professor	14	37.8
Associate Professor	10	27.0
Professor	10	27.0
Previous training received	13	35.1

Table 2: Comparison of knowledge regarding fire safety protocols before and after the study (n=42).

Variables	Correct knowledge before training, N (%)	Correct knowledge after training, N (%)	Chi-square test; P value
Do you know the fire emergency number(s) to call in case of a fire outbreak?	22 (64.7)	42 (100)	$\chi^2=19.953$; $p<0.01$
Do you know how to use a fire extinguisher?	14 (33.3)	36 (85.7)	$\chi^2=23.915$; $p<0.05$
Do you know the location of the fire extinguisher in your workstation?	23 (67.6)	42 (100)	$\chi^2=18.349$; $p<0.05$
According to NFPA, how many types of fire exist?	1 (0.0)	35 (83.3)	$\chi^2=56.194$; $p<0.01$
Do you know you have a fire hose in your workplace?	20 (58.8)	30 (71.4)	$\chi^2=4.941$; $p<0.05$
Do you know the full form of P.A.S.S. for extinguisher use?	28 (82.4)	40 (95.2)	$\chi^2=11.118$; $p<0.05$
Do you know you have fire/smoke detectors in your workplace?	23 (67.6)	42 (100)	$\chi^2 = 18.349$; $p<0.05$

Table 3: Comparison of applied fire safety knowledge before and after the study (n=42).

Variables	Before training, N (%)	After training, N (%)	Statistical test; P value
Foam extinguishers are NOT meant for electrical fires	22 (64.7)	39 (92.9)	χ^2=17.303; p<0.01
Main cause of death in fire outbreak is smoke and suffocation	34 (100)	42 (100)	χ^2=0.0054; p<0.05
In a high-rise fire, staircase/ramp is best escape route	30 (88.2)	40 (95.2)	χ^2=0.0067; p<0.05
B class of fire is caused by electrical equipment	22 (64.7)	32 (76.2)	χ^2=5.185; p<0.05
If fire outbreak occurs, do you know how to use an extinguisher?	13 (38.2)	42 (100)	χ^2=18.349; p<0.05
Dry chemical powder extinguisher can be used for A, B, C class fires in SNCU?	3 (8.8)	23 (54.8)	F=0.0001; p<0.05
Signage is a type of fire safety measure?	30 (88.2)	40 (95.2)	χ^2=0.0067; p<0.05

Applied knowledge (Table 3) also showed strong improvements. Notably, confidence in extinguisher use improved from 38.2% to 100% (+61.8%), and awareness that dry chemical powder extinguishers are multipurpose increased from 8.8% to 54.8% (+46%).

Fire drill checklist performance

Significant improvements were observed across all domains of practical preparedness (Table 4).

Table 4: Comparison of Fire Drill Checklist scores before and after the study (n=10).

Variables	Before training (Mean±SD)	After training (Mean±SD)	Mean difference	95% CI	P value
Pre-drill assessment	1.40±0.699	4.90±0.876	-3.500	-4.244 to -2.756	<0.001
Communication	2.10±0.738	3.80±0.632	-1.700	-2.346 to -1.054	<0.001
Fire containment	2.30±0.675	3.60±0.699	-1.300	-1.946 to -0.654	0.001
Evacuation	2.30±0.823	3.90±0.738	-1.600	-2.335 to -0.866	<0.001
Utilities	1.20±0.789	3.00±0.000	-1.800	-2.324 to -1.276	<0.001
Planning	2.70±1.418	4.10±1.101	-1.400	-2.593 to -0.207	<0.001
Fire alarm systems	2.10±0.876	4.50±0.707	-2.400	-3.148 to -1.652	0.024

Significant improvements were observed across all domains of practical preparedness (Table 4). In the pre-drill assessment, the mean score increased from 1.40±0.70 to 4.90±0.88 (mean difference -3.50; 95% CI -4.24 to -2.76; p<0.001; Cohen's d=4.46, very large effect). Communication performance improved from 2.10±0.74 to 3.80±0.63 (p<0.001; d=2.46), and containment skills increased from 2.30±0.68 to 3.60±0.70 (p=0.001; d=1.92). Evacuation performance rose from 2.30±0.82 to 3.90±0.74 (p<0.001; d=2.06), while utilities handling improved from 1.20±0.79 to 3.00±0.00 (p<0.001; d=2.55). Planning scores increased from 2.70±1.42 to 4.10±1.10 (p<0.001; d=1.14), and alarm response performance rose from 2.10±0.88 to 4.50±0.71 (p=0.024; d=3.02).

Overall, all domains showed large to very large effect sizes, confirming that training substantially improved both theoretical knowledge and applied readiness.

Key gains from the intervention

The intervention yielded several notable gains. Post-training, there was 100% awareness of emergency numbers, extinguisher locations, and smoke detectors. Knowledge of fire classifications increased dramatically, from 0% to 83.3%. Practical response skills during drills improved by 150-250% across multiple domains. The SNCU drill successfully evacuated seven infants in under 49 seconds, underscoring the real-world applicability of the training.

DISCUSSION

This study demonstrates that structured fire safety training, supported by routine mock drills and departmental audits, substantially improved faculty members' understanding of fire hazards, awareness of institutional safety protocols, and overall preparedness to respond effectively during fire emergencies. Prior to the formal training intervention, considerable gaps were noted in critical domains such as fire classifications, correct selection and use of extinguishers, and identification of fire safety signage and equipment. The post-training assessment showed significant improvements across all knowledge domains, with gains ranging from 12% to 83%.

Importantly, these improvements must be interpreted in the context of the study's operational history. Fire safety

activities had been conducted routinely in the institution since late 2021 as part of early capacity building during the establishment phase. However, the structured, uniform, faculty-wide training session conducted in May 2022 served as the first consolidated and standardized educational intervention. This formal session likely contributed to the marked improvements observed in the post-training scores, as it unified previously scattered departmental efforts and reinforced essential concepts through a consistent curriculum delivered by a single Nodal Officer.

This study involved two complementary datasets: a knowledge-based assessment among faculty members (n=42) and a practical assessment of institutional readiness through fire drill performance (n=10). The faculty assessments measured cognitive and awareness-related outcomes, whereas the drill assessments reflected real-time operational response. Improvements in both groups indicate that institutional fire preparedness requires a combination of structured theoretical instruction and hands-on practical competency building. Few published studies integrate both components, which enhances the relevance and novelty of the present work.

Within the faculty assessment, the greatest improvements were seen in understanding fire classifications (0% to 83.3%) and correct use of fire extinguishers (33.3% to 85.7%). The increase in awareness of local fire emergency numbers from 64.7% to 100% suggests improved basic response readiness an essential prerequisite during emergencies. The fire drill evaluation similarly revealed substantial gains across all domains, including situational assessment, communication, containment, evacuation, and alarm response. The magnitude of these improvements was supported by large to very large effect sizes (Cohen's d>1 across all domains), underscoring the robustness of the intervention. These findings align with existing research demonstrating that structured, repeated fire safety training significantly enhances knowledge, confidence, and performance among healthcare workers, and that routine simulation drills contribute to faster, more coordinated response actions in hospitals.[6, 11,7]

The ongoing program of monthly departmental audits, quarterly institutional inspections, and annual state fire-service evaluations also played a key role in sustaining improvements. These audits facilitated early identification and correction of hazards, ensured compliance with fire safety norms, and reinforced accountability at multiple levels. Such multi-tier auditing systems are consistent with international recommendations that emphasize continuous monitoring as a core component of fire safety management.[8]

The study's strengths include its real-world setting, use of standardized training delivered by a single instructor, and the integration of both knowledge-based and practical assessments. The ecological validity associated with analyzing routine institutional activities, rather than artificially designed research interventions, adds to the study's robustness. Additionally, faculty members serve not only as departmental leaders but also as role models for students and junior staff; therefore, their preparedness can foster a culture of safety throughout the institution. Prior research underscores that leadership engagement is essential in institutionalizing safety culture.[12,13] Incorporating fire safety into faculty induction programs can thus ensure a baseline level of preparedness that benefits the entire hospital ecosystem.

The predominance of female faculty (70.4%) in the present study reflects current trends in medical education. Training strategies must therefore be inclusive and sensitive to workforce demographics, ensuring that all staff, regardless of role or seniority, are equally competent in responding to fire emergencies. Effect size reporting relatively uncommon in fire safety literature further strengthens the scientific rigor and interpretability of the findings.

Several limitations must be acknowledged. The retrospective design relies on operational data originally collected for institutional safety monitoring rather than research, which may introduce variability in reporting. The fire drill participants (n=10) consisted of varying staff compositions depending on departmental schedules; however, uniform scoring was ensured through the use of a single evaluator. Although immediate improvements were evident, long-term retention of knowledge and preparedness was not assessed. Finally, the single-center design may limit generalizability, although the context of a newly established medical college provides valuable insights for similar emerging institutions.

Overall, the findings reinforce the need for structured, repeated, and standardized fire safety training programs in tertiary healthcare institutions. Regular mock drills, combined with faculty-centered education and systematic audits, are essential to fostering a culture of safety and ensuring coordinated institutional preparedness to prevent and manage potential fire-related disasters.

Future research should include multicenter studies across diverse healthcare institutions to validate and generalize these findings. Longitudinal follow-up is needed to evaluate the sustainability of knowledge gains and practical preparedness over time. Fire safety education should be integrated into the curricula of medical, nursing, and allied health programs to instill a culture of safety early in training. Additionally, cost-effectiveness analyses would help quantify resource requirements and guide the development of efficient, scalable fire safety training models.

CONCLUSION

This study demonstrates that structured fire safety training combined with regular mock drills significantly

enhances the knowledge, awareness, and preparedness of medical faculty members. Following the intervention, participants exhibited notable improvements in both theoretical understanding and practical response during simulated fire scenarios, highlighting the effectiveness of systematic training programs. As educators and clinical leaders, faculty members play a crucial role in fostering a culture of safety within medical institutions and in guiding coordinated responses during emergencies.

In the context of recurrent hospital fire incidents in India, fire safety can no longer be considered optional but must be treated as a core institutional priority. It should be incorporated into mandatory induction programs for all faculty and healthcare staff, with periodic refresher sessions to maintain competency. Institutional strategies should include regular mock drills with role-specific evacuation protocols, routine fire safety audits focusing on electrical systems and emergency equipment, establishment of dedicated fire safety committees, and integration of fire safety education into medical and nursing curricula.

Overall, this study advances the understanding that structured training and institutionalized safety practices are essential for improving emergency preparedness in healthcare settings. Embedding fire safety as a fundamental component of patient safety and institutional governance can help reduce preventable disasters and strengthen compliance with national and international safety standards.

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REFERENCES

1. Ministry of Home Affairs, Govt of India. National Crime Records Bureau (NCRB). Accidental Deaths and Suicides in India 2021. Available at: https://ncrb.gov.in/sites/default/files/ADSI-2021/ADSI_2021_FULL_REPORT.pdf. Accessed 01 December 2025.
2. The Tribune. Fire disrupts heart surgery at PGI: March 30, 2024. Available at: https://www.tribuneindia.com/news/chandigarh/fire-disrupts-heart-surgery-at-pgi-605747/. Accessed 01 December 2025.
3. Times of India. Fire Breaks Out in Asr Hospital, 600 Rescued, Amritsar News, May 2022. Available at: https://timesofindia.indiatimes.com/city/amritsar/fire-breaks-out-in-asr-hospital-600-rescued/articleshow/91570085.cms. Accessed 01 December 2025.
4. Indian Express. Ahmednagar hospital fire: 11 dead, several injured, November 2021. Available at: https://indianexpress.com/article/cities/pune/ahmednagar-hospital-fire-live-updates-7609886/. Accessed 01 December 2025.
5. The Hindu. 18 dead in fire at COVID-19 hospital in Gujarat. May 2021. Available at: https://www.thehindu.com/news/national/patients-nurses-die-in-fire-at-covid-19-hospital-in-gujarats-bharuch/article34455327.ece. Accessed 01 December 2025.
6. Al-Qahtani AM, Imtiaz M, Rauf MA. Knowledge and attitude towards fire safety among healthcare workers in tertiary hospitals. Saudi J Health Sci. 2019;8(1):26-31.
7. World Health Organization (WHO). Hospital Safety Index: Guide for Evaluators, 2015. Available at: https://iris.who.int/handle/10665/258966. Accessed 01 December 2025.
8. National Fire Protection Association (NFPA). NFPA 101: Life Safety Code. Quincy, MA: NFPA; 2021.
9. Sharma R, Bakshi H, Banerjee A. Fire safety hazards: How safe are our hospitals? Indian J of Community Medicine. 2020;45(1):104-7.
10. Kulkarni RS, Giri PA, Gangwal PR. Knowledge and practices regarding fire safety amongst health care workers in tertiary care teaching hospital in Marathwada region of Maharashtra, India. Int J Community Med Pub Health. 2016;3(7):1900-4.
11. Zayed HA, Hassan NM, Aly FA. Effect of educational programs on nurses' knowledge and practices regarding fire safety in hospitals. Egypt Nurs J. 2019;16(2):115-23.
12. Huang CH, Wu HH, Lee YC, Li X. The Critical Role of Leadership in Patient Safety Culture: A Mediation Analysis of Management Influence on Safety Factors. Risk Manag Healthcare Pol. 2024;17:513-23.
13. Frankel A, Grillo SP, Pittman M, Thomas EJ, Horowitz L, Page M, et al. Revealing and resolving patient safety defects: the impact of leadership WalkRounds on frontline caregiver assessments of patient safety. BMJ Quality & Safety. 2008;17(2):95-100.
14. Ministry of Health & Family Welfare, Government of India. Hospital Safety Guidelines. New Delhi: MoHFW; 2021.
15. Occupational Safety and Health Administration (OSHA). Fire Safety in Healthcare Settings. Washington DC: OSHA; 2020.
16. Centers for Disease Control and Prevention (CDC). Emergency preparedness and response: Fire safety. Atlanta, GA: CDC; 2020.

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