

- pharmaceutical marketing and promotion on adverse drug events and regulation. *AEJ: Economic Policy*. 2010 Nov; 2(4):1–25. <https://doi.org/10.1257/pol.2.4.1>
24. Anand P, Kaur N, Verma V, Shafiq N, Malhotra S. Assessment of rationality of available fixed-dose combinations of antibiotics in India. *Expert Rev Anti Infect Ther*. 2022 May; 20(5):797–808. <https://doi.org/10.1080/14787210.2022.2015324>
 25. Sehdev S, Gotfrit J, Elias M, Stein BD. Impact of systemic delays for patient access to oncology drugs on clinical, economic, and quality of life outcomes in Canada: a call to action. *Curr Oncol*. 2024 Mar; 31(3): 1460–9. <https://doi.org/10.3390/curroncol31030110>
 26. Oldfield L, Penm J, Mirzaei A, Moles R. Prices, availability, and affordability of adult medicines in 54 low income and middle income countries: evidence based on a secondary analysis. *Lancet Glob Health*. 2025 Jan; 13(1):e50–8. [https://doi.org/10.1016/S2214-109X\(24\)00442-X](https://doi.org/10.1016/S2214-109X(24)00442-X)
 27. Onakpoya IJ, Heneghan CJ, Aronson JK. Post marketing withdrawal of 462 medicinal products because of adverse drug reactions: a systematic review of the world literature. *BMC Med*. 2016 Feb;14:10. <https://doi.org/10.1186/s12916-016-0553-2>
 28. Tariq RA, Vashisht R, Sinha A, Scherbak Y. Medication dispensing errors and prevention. In: StatPearls. *Treasure Island (FL): StatPearls Publishing*. 2025 Jan[cited 2025 May6]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK519065/>
 29. Belleau F, Nolin MA, Tourigny N, Rigault P, Morissette J. Bio2RDF: towards a mashup to build bioinformatics knowledge systems. *J Biomed Inform*. 2008 Oct; 41(5):706–16. <https://doi.org/10.1016/j.jbi.2008.03.004>
 30. Gaulton A, Hersey A, Nowotka M, Bento AP, Chambers J, Mendez D, et al. The ChEMBL database in 2017. *Nucleic Acids Res*. 2017 Jan; 45(D1):D945–54. <https://doi.org/10.1093/nar/gkw1074>
 31. Kuhn M, Letunic I, Jensen LJ, Bork P. The SIDER database of drugs and side effects. *Nucleic Acids Res*. 2016 Jan; 44(D1):D1075–79. <https://doi.org/10.1093/nar/gkv1075>
 32. Shamim MA, Shamim MA, Arora P, Dwivedi P. Artificial intelligence and big data for pharmacovigilance and patient safety. *J Med Surg Public Health*. 2024 Aug; 3:100139. <https://doi.org/10.1016/j.glmedi.2024.100139>
 33. Ly T, Pamer C, Dang O, Brajovic S, Haider S, Botsis T, et al. Evaluation of natural language processing (NLP) systems to annotate drug product labeling with MedDRA terminology. *J Biomed Inform*. 2018 Jul; 83:73–86. <https://doi.org/10.1016/j.jbi.2018.05.019>

COMMENTARY

Humanitarian forensics: Advancing justice, accountability, and human rights

ABUBAKAR MUHAMMAD SUNUSI, UMMUSALMA SALISU MOHAMMED, ANAMIKA DAS, GAURAV KUMAR SINGH

Abstract

Humanitarian forensics is an expanding multidisciplinary field that uses forensic science to support humanitarian operations in post-conflict, catastrophe, and human-rights contexts. This commentary underscores the pivotal importance of forensic methodologies in the identification of victims, investigation of human rights violations, and pursuit of justice and accountability in mass atrocities and war crimes. It also elucidates, with examples, the significance of forensic methodologies in disaster victim identification, international tribunal prosecutions, and providing resolution to families of missing persons. The evolution of humanitarian forensics is examined, from initial applications during World War II to the establishment of protocols by international organisations. Suggestions are offered for improving forensic capability, interdisciplinary cooperation, and incorporating developing technologies. Ethical and logistical issues, including cultural sensitivity, data management, and the balancing of legal and humanitarian goals are examined. Humanitarian forensics plays a vital role in upholding international humanitarian law and advancing peace, justice, and healing after major global disasters.

Keywords: humanitarian forensics, crisis response, war crimes, victim identification, post-conflict forensics

Introduction to humanitarian forensics

Humanitarian forensics (HF) combines forensic medicine and investigative techniques to identify victims of mass violence, conflicts, and disasters from impartial, independent perspectives for criminal investigation and humanitarian

considerations [1]. In 2012, humanitarian forensic action was defined as “the application of forensic science to humanitarian activities” [2]. Whether in mass atrocities or natural disasters, victims' remains are often left unidentified and without proper burial, while families search for missing members for years. The right of families to know their loved ones' fate requires forensic experts to recover, identify and maintain records of victims. These records also help prosecute perpetrators. Humanitarian forensics includes monitoring detention facilities, documenting mistreatment, and investigating custody-related deaths [3].

Importance of humanitarian forensic work

Forensic science applies scientific methods to criminal investigations for culprit identification and exoneration of the innocent. The legal system relies on forensic evidence through collection and analysis while maintaining the chain of custody [4]. Individual cases of rape, murder, and cybercrime have been solved through forensic science, with wrongful convictions overturned through improved procedures. Mass violence and conflicts result in numerous casualties requiring forensic experts for victim identification. The International Criminal Court (ICC) uses forensic evidence to advance justice following conflicts and humanitarian crises. Key humanitarian forensic actions include:

- locating and identifying the deceased in mass atrocities and disasters, under international humanitarian law requirements;
- retrieval of human remains;

- compassionate handling of remains of the deceased;
- transfer of personal possessions;
- accounting for deaths;
- and accounting for missing persons [1].

Historical perspective

Humanitarian forensics addresses the aftermath of conflicts and disasters through dignified handling of remains, supporting justice, and documenting rights violations. It has evolved through various stages.

Evolution of humanitarian forensic work

The Geneva Conventions and their additional protocols (I and II of 1977) require the handling of war victims with dignity, retrieving and identifying dead bodies, providing decent burial, and maintaining records. Additional Protocol I for international armed conflicts strengthens protection of civilians, medical personnel, and cultural property while covering the rights of fighters and prisoners of war. Additional Protocol II applies to non-international conflicts, providing humanitarian protection for civilians, surrendered individuals, and non-combatants, while ensuring humane treatment and judicial protections [5].

The role of humanitarian forensics and forensic law traces back to World War II, when it evolved through some key events: the exhuming of victims of Soviet mass killing at Katyn forest, Poland in 1943, when German authorities with Polish Red Cross assistance identified the remains through records and possessions [6]; the Nuremberg Trials (1945-1946) in which, post-World War II, forensic evidence was used to prosecute war crimes [7]; the pioneering efforts of forensic anthropology by the Argentine Forensic Anthropology Team (1984) in human rights investigations during Argentina's military dictatorship [8]; forensic investigation after the Bosnian War (1993-2017) to identify Bosnian massacre victims and enable their dignified burial [9]; and the Indian Ocean tsunami (2004) [10], which claimed hundreds of thousands of lives across 14 nations.

The utility of forensics, established during these events, led to its formal inclusion in disaster victim identification operations, and in developing international mass mortality guidelines by international bodies [10].

The role of humanitarian forensic work

International humanitarian law exposes and documents human rights violations using science, and protects the rights of families to know the fate of loved ones found missing after atrocities, to seek justice through fair trials, and receive reparation. Support from human rights organisations and forensic investigation, as outlined below, is crucial for families pursuing accountability.

Mass atrocity investigation

Mass atrocities are extreme acts of violence by state or non-state actors against civilians on a large scale. After such acts, integrated action by military, political, and humanitarian agencies working together is essential to support accountability and promises long-term stability, although significant changes are needed to achieve this goal [11].

Disaster victim identification (DVI)

After natural disasters, DVI action locates human remains, identifies the deceased, and determines the cause of death. Efficient morgue records and communication between law enforcement and forensics are essential to identify even minute human fragments [12], and are enabled by advances in DNA technology [13,14]. An instance is the Malaysia Airlines MH17 crash, when Australian police identified 298 victims through DNA and dental records. Fragments require examination for primary identifiers while documenting characteristics for recognition [15].

Use of these techniques raises concerns about contamination in the chain of custody, and false results. Privacy, consent, and genetic data storage should be respected for ethical investigation. Scientific and legal protocols must be established for identification methods.

Supporting justice and accountability

Forensic science resources are primarily produced by internal government agencies. Beyond identifying disaster victims and investigating political violence, the agencies look for potential torture during detention [16]. Humanitarian forensics needs to be based on integrity, dignity and human rights [17]. Forensic test results must be explained to the individuals involved and the relevant authorities, to avoid mistrust due to a perceived lack of transparency [18].

Operational methodology in humanitarian forensics

A variety of specialised techniques and equipment are utilised in humanitarian forensic work. The primary forensic techniques used in victim identification, evidence gathering, and analysis are:

Forensic odontology

Forensic odontology plays a vital role in victim identification processes [19] by examining and comparing ante-mortem and postmortem dental records. When forensic records are unavailable owing to unclear preliminary identity, a dental profile is developed to determine race, sex, and age at death. This is recognised by forensic and legal systems in inquiries where visual identification is not possible [20].

Forensic anthropometry

Anthropometric examinations of skeletal remains complement forensic odontology in the determination of

age, sex, and time of death. More recently, three-dimensional scanners are applied instead of directly measuring the subjects [21].

Digital technology

Digital technology provides the specialised methodology required for accurate victim identification. While its potential for further advancement in humanitarian forensic work is recognised, research on technology adoption remains nascent and technology-centric, as seen with Big Data [22], RFID, Sensors, AI, and Block chain [23].

Forensic anthropology, archaeology, and pathology aid in recovery and analysis of human remains, whereas odontology, fingerprints, and radiology support identification. DNA analysis and forensic genetics enable matching of familial samples during mass disasters or conflicts. Toxicology and digital documentation support evidence collection and the chain of custody. These approaches maintain both scientific rigour and humanitarian principles in their investigations.

Ensuring the chain of custody and integrity of evidence

"Chain of custody" is a key concept defined by the International Organisation for Standardisation (ISO 22095:2020) as the "chronological record of handling and storage of an item from collection to disposal", which exposes vulnerabilities in the preservation of evidence. It emerged in the USA during the mid-1900s, though without a clear consensus on its usage, but it has influenced forensic practice globally. Hospital emergency services while treating victims of violence must also preserve physical and psychological forensic evidence [24, 25]. To achieve this, emergency and police personnel require evidence handling training, as improper handling can compromise forensic analysis through contamination [26].

Role of international organisations dealing with humanitarian law and forensics

The United Nations

Several United Nations (UN) agencies share their expertise and guide humanitarian forensics investigations. The United Nations Office on Drugs and Crime (UNODC) provides guidelines for forensic procedures in humanitarian settings. The UN Human Rights Council and the Office of the High Commissioner for Human Rights (OHCHR) use forensic evidence in investigations of war crimes and human rights violations. The UN's adoption of the Manual on the Effective Prevention and Investigation of Extra-Legal, Arbitrary, and Summary Executions (Minnesota Protocol) in 1989 [27] was significant in protecting the right to life through effective investigations into unlawful deaths and disappearances, providing common standards and guidelines for the involved parties.

International Committee of the Red Cross (ICRC)

The ICRC is a key organisation in rendering humanitarian aid to victims of war; but it also helps in forensic intervention by providing guidelines and training support to local authorities to improve forensic capabilities in identifying remains in conflict-affected nations [28,29]. The ICRC operates on the principles of humanity, impartiality, neutrality, and independence [30].

International Committee for Missing Persons (ICMP)

The ICMP provides governments with its expertise in pathology, anthropology, and forensic archaeology for DNA-based identification of missing persons during armed conflicts, human rights violations, and disasters [31]. Through ICMP, international organisations and the European nations work together to improve data collection and identification of missing migrants during their journeys [32].

The International Criminal Court (ICC)

Established in 2002, the ICC, is the only permanent international court to prosecute crimes against humanity, war crimes and aggression. Humanitarian forensics supports ICC justice efforts through the application of forensic science [33].

The Argentine Forensic Anthropology Team (EAAF)

The EAAF is a non-profit forensic anthropology organisation, originally established in Argentina in 1984, to locate and identify victims of the 1976-1983 regime of the military junta. The EAAF now operates globally and has become a model for similar teams which it has helped establish in South Africa, Peru, Guatemala, and Mexico [34].

Although international organisations provide institutional support and global coordination for humanitarian forensic efforts, the practice itself must be guided by strong ethical principles. This brings attention to the ethics involved in humanitarian forensic practice.

Ethics in the practice of humanitarian forensics

The establishment of moral standards, based on philosophical principles, by professional authorities informs the guidelines for protecting field integrity [35]. In forensic science, ethical handling of the dead requires a victim-centred approach. Collaboration among authorities enables effective investigation, while maintaining the victims' dignity. Getting access to locations and cordial relationships within and between teams are essential. Interviews with the kin of victims provide identification data, and families generally support truth-seeking. Children require special care when DNA samples are required from them. Witnesses must also be treated with cultural sensitivity.

Forensic scientists require to be impartial in conflict zones. War crime victims may experience trauma that affects their

testimony, and their safety must be prioritised. Visual identification requires consideration of the family's emotional burden when viewing the remains. Although collaboration is necessary, victim privacy remains paramount. Ethical investigations focus on information privacy and protection of all parties [4]. Disasters demand complicated forensic work and require coordination. The 2004 tsunami and the 9/11 attacks in the United States highlighted the importance of dignified investigation. During epidemics such as Ebola, public health concerns supersede identification needs. Forensic science must prioritise ethics and protect both the deceased and the living [36].

Challenges and ethical considerations in humanitarian forensics

Limitations of humanitarian forensic work

Humanitarian activities generally face obstacles in their operations and humanitarian forensic action is no exception. To charge individuals with violations of human rights, international courts require substantial evidence and testimonies that are difficult to gather in war-torn areas. Limited access and politicisation hinder impartial investigations and require innovative approaches in order to document violations [20]. The ICC prosecutes genocide, crimes against humanity, war crimes, and aggression in member states, on its own initiative or on a state party's request, or through UN Security Council referrals. Successful prosecution requires evidence and the authorities' willingness to pursue accountability [37]. Discussed below are some of these challenges.

Access and security risks

Accessing conflict or catastrophe zones is typically extremely difficult for humanitarian forensic teams because of political unrest, persistent violence, or hazardous conditions. This may cause a delay or stop the gathering of important evidence. Unfortunately, regions most in need of forensic investigation often have the least capacity in terms of resources and training [38].

Political influence

In keeping with the knowledge that many essential negotiations occur at a higher level of government, forensic experts participating in a study by Adamovic et al [39], claimed that a large number of the difficulties they encountered were beyond their control. For instance, political considerations may impact the management of a DVI operation and may necessitate careful manoeuvring.

Financial limitations

Lack of or limited financial resources can increase dependency on international support in numerous sectors, compounding the problems of local authorities and decision makers in gathering resources. Such issues are particularly pertinent to developing countries [40].

Confronting the emotional realities of DVI

In the research work conducted by Adamovic et al [39], participants' comments revealed that the DVI experience could occasionally be overwhelming due to a variety of factors — emotional, cultural, political, and financial — all coming together.

Data management and evidence preservation

In hostile environments, it can be challenging to ensure effective forensic data collection, preservation, and management. The integrity of forensic investigations may be jeopardised by poor data management, which can cause evidence to be lost or to deteriorate.

The balance between humanitarian and legal objectives

In humanitarian forensics, balancing legal and humanitarian goals is difficult. Victim identification provides closure to the victims' families but can conflict with legal objectives like evidence for criminal prosecution. Forensic experts must balance these competing needs for families and justice [41]. This tension emerged in war crime tribunals after the massacres in Rwanda (1994) and Srebrenica (1995).

Cultural sensitivity and ethical dilemmas

Humanitarian forensic investigators must understand the cultural barriers existing in nations where investigation is carried out, especially for employee safety. The International Committee of the Red Cross (ICRC) recognised that cultural differences were insufficiently considered in their operations. Better understanding of cultural variations would improve acceptance of their work, and address difficulties in victim access and delegate security [42].

Recommendations

As humanitarian forensics advances, addressing key challenges and leveraging innovations is crucial for enhancing effectiveness. The recommendations made here aim to ensure that forensic operations remain robust and responsive to future crises, focusing on collaboration, capacity building, and ethical, cultural, and technological considerations.

Capacity building in forensic science

Building forensic capabilities in war-affected and disaster-stricken nations is vital. Prioritising funding for forensic training, facilities, and technology will ensure timely investigations aligned with the local culture and help develop standard procedures.

Enhancing multidisciplinary collaboration

Cooperation among forensic specialists, law enforcement, humanitarian organisations, and governments is essential for humanitarian forensics. Multidisciplinary frameworks ensure effective integration of forensic science into humanitarian actions. Cooperative efforts enable better exchange of

resources and expertise, particularly in areas where forensic infrastructure is lacking. International forensic organisations should facilitate this through conferences and seminars with governments and humanitarian groups.

Utilising emerging technologies

Humanitarian forensics should further leverage AI, digital forensics, and DNA analysis to enhance their efficiency. AI can achieve speedy identification through data analysis, image recognition, and mass grave mapping, whereas block chain may enable secure victim identification records, but these technologies also encounter challenges, including high costs, data privacy concerns, and expertise requirements. AI requires quality datasets, whereas blockchain must balance transparency with confidentiality. Integrating these technologies with traditional methods can improve efficiency and accuracy of humanitarian forensic investigation.

Development of international forensic standards

International standards must be established and accepted to ensure uniformity in humanitarian forensic investigations by adopting recognised methods for forensic work and data management in crises.

Addressing ethical and cultural sensitivities

Forensic specialists in humanitarian settings need training in ethical principles and cultural sensitivity, including awareness of the social aspects of war-affected populations. Local communities should be involved in forensic processes while respecting their losses and grieving customs.

Increasing public awareness and education

Increasing public awareness of the role of humanitarian forensics is crucial to promote justice and reconciliation. Educational programmes should be developed to inform communities, governments, and stakeholders of the importance of forensic science in resolving conflicts, disasters, and human rights violations. This could also build public trust in forensic processes and increase cooperation during investigations.

Conclusion

Humanitarian forensics is a critical tool for addressing loss of life in armed conflicts, natural disasters, and human rights violations by documenting crimes, identifying victims, and supporting judicial processes. The rapid evolution of forensic techniques, including DNA analysis and disaster victim identification protocols, has been demonstrated above through several landmark cases. However, this field faces significant challenges, such as a reliance on collaboration between forensic scientists, humanitarian organisations such as the ICRC, and judicial bodies such as the ICC. Emerging technologies offer promise of improvement in forensic investigations.

Further research and global standards are needed to streamline forensic processes. Developing local forensic capabilities is essential for prompt and culturally appropriate action in conflict-prone areas. Local expertise enables a deeper understanding of social, cultural, and legal contexts, which is crucial for respectful investigations preserving the dignity of victims and witnesses.

Forensic evidence is crucial to successful prosecution in international tribunals, providing a basis for closure and justice. With commitment to a scientific approach, forensic teams help restore justice and dignity in communities traumatised by conflict or disaster, particularly where the psychological scars remain deep.

Authors: **Abubakar Muhammad Sunusi** (abubakarmsunusi98@gmail.com), Student, Department of Forensic Science, SSAHS, Sharda University, Greater Noida 201310, INDIA; **Ummusalma Salisu Mohammed** (2023000770.ummusalma@pg.sharda.ac.in), Student, Department of Forensic Science, SSAHS, Sharda University, Greater Noida 201310, INDIA; **Anamika Das** (dr.dasanamika07@gmail.com), Assistant Professor, Department of Forensic Science, SSAHS, Sharda University, Greater Noida 201310, INDIA; **Gaurav Kumar Singh** (corresponding author — grvsng01@gmail.com), Assistant Professor, Department of Forensic Science, SSAHS, Sharda University, Greater Noida, U.P, INDIA.

Conflict of Interest: None declared

Funding: None

To cite: Sunusi AM, Mohammed US, Das A, Singh GK. Humanitarian forensics: Advancing justice, accountability, and human rights. *Indian J Med Ethics*. 2026 Jul-Sep; 11(3) NS: 229-234. DOI: 10.20529/IJME.2026.019

Submission received: November 4, 2024

Submission accepted: November 1, 2025

Published online first: March 27, 2026

Manuscript Editor: Veena Johari

Peer Reviewers: Nani Gopal Das and an anonymous reviewer

Copyright and license

©Indian Journal of Medical Ethics 2026: Open Access and Distributed under the Creative Commons license (CC BY-NC-ND 4.0), which permits only non-commercial and non-modified sharing in any medium, provided the original author(s) and source are credited.

References

- Gaggioli G. International Humanitarian Law: The legal framework for humanitarian forensic action. *Forensic Sci Int*. 2018 Jan; 282:184–94. <https://doi.org/10.1016/j.forsciint.2017.10.035>
- Cordner S, Tidball-Binz M. Humanitarian forensic action — Its origins and future. *Forensic Sci Int*. 2017 Oct; 279:65–71. <https://doi.org/10.1016/j.forsciint.2017.08.011>
- Ktori M, Baranhan G. Development and future perspectives of a humanitarian forensic programme: the committee on missing persons in Cyprus example. *Egypt J Forensic Sci*. 2018 Dec; 8(1):25. <https://doi.org/10.1186/s41935-018-0057-7>
- Bowen RT. *Ethics and the Practice of Forensic Science*. Second Edition. CRC Press; 2017 Oct.
- Henckaerts JM. Bringing the Commentaries on the Geneva Conventions and their Additional Protocols into the twenty-first century. *Int Rev Red Cross*. 2012 Dec; 94(888):1551–5.
- Debons D, Fleury A, Pitteloud JF. Katyn and Switzerland: forensic investigators and investigations in humanitarian crises 1920–2007. Geneva Georg. 2009;
- Blewitt GT. The Role of Forensic Investigations in Genocide Prosecutions before an International Criminal Tribunal. *Med Sci Law*. 1997 Oct 1 [cited 2024 Aug 19]; Available from: <https://journals.sagepub.com/doi/abs/10.1177/002580249703700402>
- Doretti M, Snow CC. Forensic Anthropology and Human Rights: The Argentine Experience. In: Steadman DW, editor. *Hard Evidence*. Routledge; 2015 [cited 2024 Aug 19]. p. 303–20. Available from:

- <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315664057-30/forensic-anthropology-human-rights-mercedes-doretti-clyde-snow>
9. Markusen E, Mennecke M. Genocide in Bosnia and Herzegovina. *Hum Rights Rev*. 2004 Jul 1;5(4):72–85. <https://doi.org/10.1007/s12142-004-1029-x>
 10. Ioualalen M, Asavanant J, Kaewbanjak N, Grilli ST, Kirby JT, Watts P. Modeling the 26 December 2004 Indian Ocean tsunami: Case study of impact in Thailand. *J Geophys Res Oceans*. 2007 Jul;112(C7):2006JC003850. <https://doi.org/10.1029/2006JC003850>
 11. Cordner S. Humanitarian forensic science. *Forensic Sci Int*. 2017 Oct;279:65–71. <https://doi.org/10.1016/j.forsciint.2017.08.011>
 12. Charny JR. Upholding Humanitarian Principles in an Effective Integrated Response. *Ethics Int Aff*. 2004 Sep;18(2):13–20. <https://doi.org/10.1111/j.1747-7093.2004.tb00462.x>
 13. De Boer HH, Roberts J, Delabarde T, Mundorff AZ, Blau S. Disaster victim identification operations with fragmented, burnt, or commingled remains: experience-based recommendations. *Forensic Sci Res*. 2020 Jul 2;5(3):191–201. <https://doi.org/10.1080/20961790.2020.1751385>
 14. De Boer HH, Maat GJR, Kadarmo DA, Widodo PT, Kloosterman AD, Kal AJ. DNA identification of human remains in Disaster Victim Identification (DVI): An efficient sampling method for muscle, bone, bone marrow and teeth. *Forensic Sci Int*. 2018 Aug;289:253–9. <https://doi.org/10.1016/j.forsciint.2018.05.044>
 15. Mundorff AZ, Shaler R, Bieschke ET, Mar-Cash E. Marrying Anthropology and DNA. In: *Commingled Human Remains*. Elsevier; 2014 [cited 2024 Apr 28]. p. 257–73. Available from: <https://linkinghub.elsevier.com/retrieve/pii/B9780124058897000125>
 16. Simpson EK, James RA, Eitzen DA, Byard RW. Role of Orthopedic Implants and Bone Morphology in the Identification of Human Remains. *J Forensic Sci*. 2007 Mar;52(2):442–8. <https://doi.org/10.1111/j.1556-4029.2006.00370.x>
 17. Ubelaker DH. The Humanitarian and Human Rights Resource Center: support to address global forensic issues. *Forensic Sci Res*. 2017 Oct 2;2(4):210–2. <https://doi.org/10.1080/20961790.2017.1329055>
 18. Pittayapat P, Jacobs R, De Valck E, Vandermeulen D, Willems G. Forensic odontology in the disaster victim identification process. *J Forensic Odontostomatol*. 2012 Jul 1;30(1):1–12.
 19. Mercer S, Gabel J. Shadow Dwellers: The Underregulated World of State and Local DNA Databases. *N Y Univ Annu Surv Am Law*. 2013–2014;69:639.
 20. De Valck E. Major incident response: Collecting ante-mortem data. *Forensic Sci Int*. 2006 May 15;159:S15–9. <https://doi.org/10.1016/j.forsciint.2006.02.004>
 21. Mrugalska B, Karwowski W. *Anthropometry* - Google Books. [cited 2024 Oct 10]. Available from: <https://www.google.co.in/books/edition/Anthropometry/UgvgEAAAQBAJ?hl=en&gbpv=1&pg=PA1&printsec=frontcover#v=onepage&q&f=false>
 22. Dubey R, Gunasekaran A, Childe SJ, Bryde DJ, Giannakis M, Foropon C, et al. Big data analytics and artificial intelligence pathway to operational performance under the effects of entrepreneurial orientation and environmental dynamism: A study of manufacturing organisations. *Int J Prod Econ*. 2020 Aug 1;226:107599. <https://doi.org/10.1016/j.ijpe.2019.107599>
 23. Mari J, Galera-Zarco C, Opazo-Basáez M. The emergent role of digital technologies in the context of humanitarian supply chains: a systematic literature review. *Ann Oper Res*. 2022;319(1):1003–44. <https://doi.org/10.1007/s10479-021-04079-z>
 24. de Oliveira Musse J, Santos VS, da Silva Santos D, dos Santos FP, de Melo CM. Preservation of forensic traces by health professionals in a hospital in Northeast Brazil. *Forensic Sci Int*. 2020 Jan 1;306:110057. <https://doi.org/10.1016/j.forsciint.2019.110057>
 25. Silva RX, Ferreira CAA, Sá GGDM, Souto RQ, Barros LM, Galindo-Neto NM. Preservation of forensic traces by Nursing in emergency services: a scoping review. *Rev Lat Am Enfermagem*. 2022;30:e3593.
 26. Budowle B, Schutzer SE, Burans JP, Beecher DJ, Cebula TA, Chakraborty R, et al. Quality Sample Collection, Handling, and Preservation for an Effective Microbial Forensics Program. *Appl Environ Microbiol*. 2006 Oct;72(10):6431–8. <https://doi.org/10.1128/aem.01165-06>
 27. Manual on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions (Minnesota Protocol). University of Minnesota Human Rights Library. [cited 2024 Aug 19]. Available from: <http://hrlibrary.umn.edu/instreetree/executioninvestigation-91.html>
 28. International Committee of the Red Cross (ICRC). [cited 2024 Aug 17]. Available from: <https://www.icrc.org/en>
 29. International Committee of the Red Cross. Forensic Science and Humanitarian Action. Available from: <https://www.icrc.org/en/document/forensic-science-and-humanitarian-action>
 30. Labbé J, Daudin P. Applying the humanitarian principles: Reflecting on the experience of the International Committee of the Red Cross. *Int Rev Red Cross*. 2015 Jun;97(897–898):183–210.
 31. Hanson I, Rizvić A, Parsons TJ. Bosnia and Herzegovina. In: Groen WJM, Marquez-Grant N, Janaway R, editors. *Forensic archaeology: A global perspective*. John Wiley & Sons, Ltd; 2015 [cited 2024 Aug 19]. p. 19–31. <https://doi.org/10.1002/9781118745977.ch3>
 32. Press release. ICMP Brings International Organizations And European Countries Together to Enhance Cooperation in Accounting for Missing Migrants. International Commission on Missing Persons. 2018 Jun 12 [cited 2024 Aug 19]. Available from: <https://icmp.int/press-releases/icmp-brings-international-organizations-and-european-countries-together-to-enhance-cooperation-in-accounting-for-missing-migrants/>
 33. Choo JC. Reconstructing hidden international humanitarian law violations through digital forensics: case studying Palestine and the greater Middle East. *Gonzaga J Int Law*. 2024 Jun [cited 2024 Aug 19];27(2):174. Available from: <https://gjil.scholasticahq.com/article/119008-reconstructing-hidden-international-humanitarian-law-violations-through-digital-forensics-case-studying-palestine-and-the-greater-middle-east>
 34. Tidball-Binz MV, Cordner S. Humanitarian forensic action: A new forensic discipline helping to implement international law and construct peace. *WIREs Forensic Sci*. 2022 Jan [cited 2024 Aug 19];4(1):e1438. Available from: <https://www.scribd.com/document/559949846/Tidball-Binz-Humanitarian-forensic-action-A-new-forensic-discipline-2021>
 35. Gordon-Cameron X. Ethical Issues in Forensic Science and the Implications of Artificial Intelligence. *ResearchGate*. [Unpublished]; 2024 Dec 13. <https://doi.org/10.13140/RG.2.2.29153.01122>
 36. Thomsen JL. Ethical considerations for forensic scientists participating in humanitarian action: A personal reflection. *Forensic Sci Int*. 2017 Sep;278:379–80. <https://doi.org/10.1016/j.forsciint.2017.07.029>
 37. Burke-White WW. Proactive complementarity: The International Criminal Court and national courts in the Rome system of international justice. *Harv. Int'l LJ*. 2008;49:53.
 38. Ubelaker DH, editor. *Forensic Science: Current Issues, Future Directions*. 1st ed. Wiley; 2012 [cited 2024 May 9]. Available from: <https://onlinelibrary.wiley.com/doi/book/10.1002/9781118373880>
 39. Adamovic N, Howes LM, White R, Julian R. Understanding the challenges of disaster victim identification: perspectives of Australian forensic practitioners. *Forensic Sci Res*. 2023 Aug 23;8(2):107–15. <https://doi.org/10.1093/fsr/owad020>
 40. Scanlon J. Identifying the Tsunami Dead in Thailand and Sri Lanka: Multi-National Emergent Organizations. *Int J Mass Emergencies Disasters*. 2008 Mar;26(1):1–18. <https://doi.org/10.1177/028072700802600101>
 41. International Committee of the Red Cross. Missing Persons Global Response. 2023 Aug 6 [cited 2024 Aug 19]. Bridging humanitarian and criminal-justice objectives in forensic science. Available from: <http://missingpersons.icrc.org/news-stories/bridging-humanitarian-and-criminal-justice-objectives-forensic-science>
 42. Grossrieder P. Humanitarian Action in the 21 st century: the danger of a setback. *Refug Surv Q*. 2002;21(3):23–32. <https://doi.org/10.1093/rsq/21.3.23>