
FAJR

SCIENTIFIC • GLOBAL

Peer-Reviewed Publications Portfolio

Executive Summary | January 2026

18
Publications

4
Years

5
High-Impact

Featured in

The Lancet • JBJS • Lancet Infectious Diseases • WHO EMHJ

Executive Summary

FAJR Scientific—now FAJR Global—has established itself as a leading voice in conflict zone healthcare through a growing portfolio of peer-reviewed publications. Since 2022, our research teams have published 18 unique papers documenting our medical missions, clinical innovations, and policy recommendations, achieving placements in some of medicine's most prestigious journals.

Our research spans orthopedic surgery, infectious disease, maternal health, digital health, bioethics, and humanitarian policy. This body of work not only advances medical knowledge but establishes FAJR's scientific credibility with funding organizations, government partners, and the broader medical community.

Key research achievements include the FAJR Methodology for humanitarian surgical missions published in JBJS, documentation of the maternal and neonatal health crisis in The Lancet, and critical analyses of antimicrobial resistance patterns in The Lancet Infectious Diseases.

Research Themes

Conflict Zone Surgery • Infection Control • Maternal & Neonatal Health • Trauma
Epidemiology • Digital Health • Medical Ethics • Antimicrobial Resistance

Complete Publication List

01 Transforming Global Orthopaedic Missions Through Adversity, Lessons Learned, and Sustainable Planning Using Quality Assurance Principles: The FAJR Methodology

Journal of Bone and Joint Surgery (2024) • 106(14):1338-1349 ★ **HIGH IMPACT**

Hasan AI, Wajahath M, Nasser E, Nasser M, Saleh KJ; the FAJR Scientific Research Collaborative

This landmark paper presents the FAJR Methodology—a comprehensive quality assurance framework developed through FAJR Scientific's medical missions. Drawing on lessons learned from surgical missions to Gaza and the West Bank, the paper outlines sustainable planning principles for orthopedic humanitarian missions, addressing challenges such as resource limitations, infrastructure damage, and high patient volumes.

doi: 10.2106/JBJS.23.01272

02 Will there be a future for newborns in Gaza?

The Lancet (2024) • 404(10464):1725-1726 ★ **HIGH IMPACT**

Irfan B, Abu Shammala A, Saleh K

Published in *The Lancet*, this correspondence documents the humanitarian catastrophe affecting maternal and neonatal health in Gaza. Drawing from firsthand observations during FAJR medical missions, the authors describe the near-total collapse of healthcare infrastructure leading to preventable maternal and neonatal deaths, calling for immediate international intervention.

doi: 10.1016/S0140-6736(24)02249-9

03 There are dementia patients in Gaza too

Journal of Alzheimer's Disease (2024) • 102(2):317-320

Irfan B, Abu Shammala A, Alshaer N, Nasser E, Wajahath M, Hamawy A, Tahir M, et al.

This editorial highlights the devastating impact of the ongoing military assault on Gaza's dementia patients—a vulnerable population whose fragile care systems have completely collapsed. Through harrowing accounts of displacement and medication shortages, the piece documents how patients with Alzheimer's disease have been left without essential medical support.

doi: 10.1177/13872877241290368

04 Infection control in conflict zones: Practical insights from recent medical missions to Gaza

Journal of Hospital Infection (2024) • 152:177-179

Irfan B, Sultan MJ, Khawaja H, Wajahath M, Nasser E, Hasan A, Fawaz M, Nasser M, Saleh K

This paper provides practical guidance on infection control strategies developed during FAJR Scientific's medical missions to Gaza. The authors describe the challenges of maintaining infection control standards in an environment lacking sterile equipment, adequate water access, and functioning healthcare services.

doi: 10.1016/j.jhin.2024.06.014

05 Management of Fracture-Related Infection in Conflict Zones: Lessons Learned from Medical Missions to Gaza

Antibiotics (2024) • 13(11):1020

Nasser E, Alshaer N, Wajahath M, Irfan B, Tahir M, Nasser M, Saleh KJ

This retrospective study reviews the management of fracture-related infections (FRIs) during FAJR's medical missions to Gaza from April to July 2024. Among 135 patients treated for war-related fractures, 30% were identified with suspected FRIs, primarily following explosive injuries. The study highlights the critical need for comprehensive infection prevention approaches.

doi: 10.3390/antibiotics13111020

06 Prevention of births in Gaza: Where lies the future?

International Journal of Gynecology & Obstetrics (2025) • 169(2):841-842

Irfan B, Abu Shammala A, Saleh KJ

This study documents the devastating impact of Gaza's healthcare collapse on maternal health. The authors reveal widespread preventable deaths, stillbirths, miscarriages, and severe pregnancy complications resulting from systematic destruction of healthcare infrastructure and attacks on medical facilities.

doi: 10.1002/ijgo.16092

07 Combating infections under siege: Healthcare challenges amidst the military assault in Gaza

World Medical & Health Policy (2025) • 17:188-213

Irfan B, Lulu I, Hamawy A, Abu Shammala A, Kullab S, Khawaja H, Alshaer N, et al.

This comprehensive paper examines infection control efforts under extreme constraints during medical missions conducted by FAJR Scientific, PAMA, and Doctors Without Borders. The paper documents the spread of hepatitis, meningitis, and polio, with severe impacts on Gaza's pediatric population.

doi: 10.1002/wmh3.642

08 Trauma by the Numbers: A Cross-Sectional Analysis and Categorization of Trauma Cases in the Gaza War

International Journal of Public Health (2025) • 70:1607877

Wajahath M, Nasser E, Nayfeh T, Irfan B, Balasundaram R, Nasser M, Saleh KJ

This cross-sectional study categorizes and analyzes trauma cases from the Gaza war to identify injury patterns. Conducted at European Gaza Hospital, FAJR's surgical team classified injuries as primary (53%), secondary (14%), and tertiary (33%). Primary injuries predominantly affected males aged 30-39.

doi: 10.3389/ijph.2025.1607877

09 Digital health in humanitarian crises: A case study of Gaza and the West Bank

DIGITAL HEALTH (2025)

Ali S, Irfan B, Abdeljaber W, Nasser E, Wajahath M, Nasser M, Saleh KJ

This qualitative case study examines how healthcare providers used digital health technology during FAJR Scientific's medical missions in Palestine from April through October 2024. The findings highlight how attacks on hospitals have destroyed electronic archives, rupturing the digital backbone on which future Palestinian public health depends.

doi: 10.1177/20552076251365010

10 Multidrug-resistant bacteria amid health-system collapse in Gaza

The Lancet Infectious Diseases (2025) ★ HIGH IMPACT

Abu Dalal H, Irfan B, Elmanama A

This correspondence in *The Lancet Infectious Diseases* addresses the critical public health emergency of antimicrobial resistance in Gaza. The collapse of health systems has created conditions ideal for the emergence and spread of multidrug-resistant bacteria, compounding the challenges faced by healthcare providers.

doi: 10.1016/S1473-3099(25)00467-0

11 Utilization of a Multi-Tissue Extracellular Matrix in Complex Wound Care in Gaza: A Case Series

Antibiotics (2025) • 14(9):885

Irfan B, Hamawy A, Musallam R, Abudagga R, Khan S, Alshaer N, Tabash M, Ghali A, Saleh K, Tahir M

This case series examines the feasibility and outcomes of using multi-tissue extracellular matrix (ECM) powder as an adjunct to standard wound care in a conflict zone. The study involved 15 patients with high-energy soft tissue injuries from ballistic and blast trauma, with 80% having exposed bone or tendon.

doi: 10.3390/antibiotics14090885

12 Don't shoot the messenger: The role of journalists in Gaza's health sector

Eastern Mediterranean Health Journal (WHO) (2025) • 31(2):99-100

Ghali A, Nasser E, Nasser T, Elaydi A, Irfan B, Nasser M, Saleh K

Published in WHO's *Eastern Mediterranean Health Journal*, this paper examines the critical role journalists play in documenting and communicating the healthcare crisis in Gaza. The paper addresses the dangers faced by journalists covering the health sector and their vital contribution to accountability.

doi: 10.26719/2025.31.2.99

13 Medical research ethics in active war and conflict zones: the case of Gaza

Medicine, Conflict and Survival (2025) • 41(3)

Irfan B, Alser O, Zughburg MR, Ibsaish A, Raheeli M, Venugopala K, Tarab B, Ghali A, Abu Shammala A

This paper addresses the complex ethical challenges of conducting medical research in active war zones, using Gaza as a case study. The authors examine issues including informed consent under duress, data protection in unstable environments, and the balance between research and urgent clinical care.

doi: 10.1080/13623699.2025.2543234

14 Paediatric medical evacuations from Gaza have been obstructed and are increasingly difficult

Medicine, Conflict and Survival (2025) • 41(2):99-107

Irfan B, Clarisse A, Smith J, Tahir M, Nasser E, Wajahath M, Tarab B, Lulu I, Alshaer N, Nasser M, Saleh KJ

This paper documents how evacuating pediatric patients from Gaza for essential—and often lifesaving—medical and surgical care has become a near-impossible task. The authors describe the systematic obstruction of medical evacuations and the impact on children requiring specialized care.

doi: 10.1080/13623699.2025.2491044

15 Concerns Regarding Methodology and Interpretation in 'Analysis of Scientific Publications on the Gaza-Israeli Conflict'

Bioethics (2025)

Ghali A, Shaikh Y, Elaydi A, Irfan B, Qasim TS, Saleh K

This letter in *Bioethics* critically examines methodological concerns in a previously published analysis of scientific publications related to the Gaza-Israeli conflict. The authors identify potential biases in study selection, interpretation of findings, and framing of conclusions.

doi: 10.1111/bioe.13425

16 Genetic Polymorphisms Associated with Perioperative Joint Infection following Total Joint Arthroplasty

Antibiotics (2022) • 11(9)

Hijazi A, Hasan A, Pearl A, Memon R, Debeau M, Roldan M, Awad ME, Abdul-Kabir E, Saleh KJ

This systematic review and meta-analysis examines genetic polymorphisms associated with perioperative joint infection following total joint arthroplasty. The study synthesizes evidence on genetic risk factors that may predispose patients to prosthetic joint infections.

doi: 10.3390/antibiotics11091200

17 Current Guidelines and Practice Recommendations to Prevent Hospital-Acquired Conditions After Major Orthopaedic Surgeries

JBJS Reviews (2022) • 10(3) ★ **HIGH IMPACT**

Crespi Z, Hasan AI, Pearl A, Ismail A, Awad ME, Irfan FB, Jaffar M, Patel P, Saleh KJ

Published in *JBJS Reviews*, this comprehensive review synthesizes current guidelines and practice recommendations for preventing hospital-acquired conditions following major orthopedic surgeries, including VTE prophylaxis, surgical site infection prevention, and fall prevention strategies.

doi: 10.2106/JBJS.RVW.21.00157

18 Towards Standardized, Safe, and Efficacious Screening Approaches to Patients with Lower Extremity Peripheral Arterial Disease

Surgeries (2024) • 5(4):997-1009

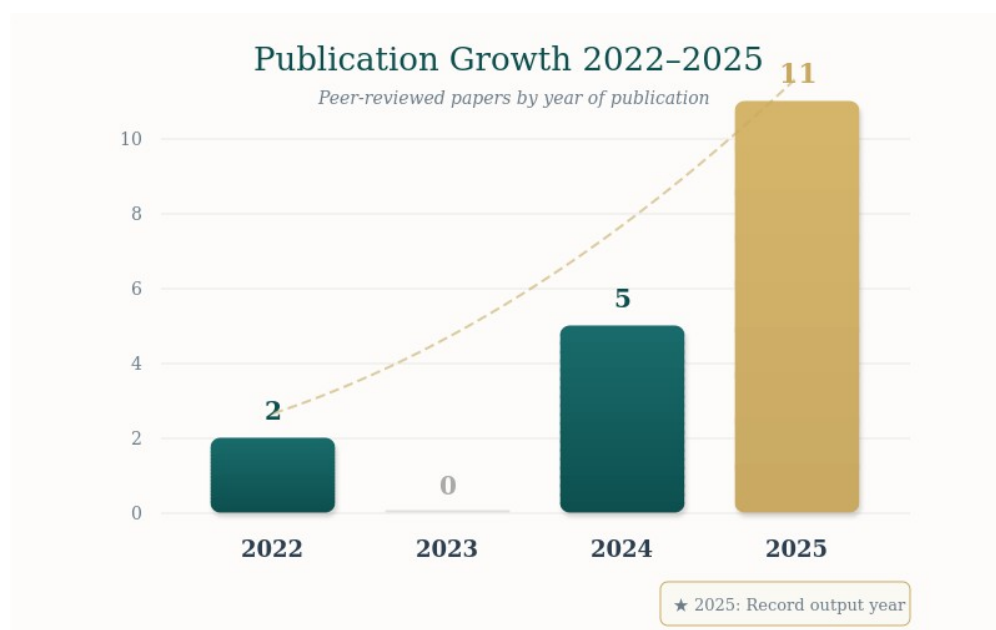
Pearl A, O'Neil K, Jaafil S, Khoury Z, Hasan A, Saleh K

This paper addresses the important intersection of peripheral arterial disease (PAD) and lower extremity arthroplasty. The authors propose standardized screening approaches for identifying and managing PAD in patients undergoing knee and hip replacement surgery.

doi: 10.3390/surgeries5040080

Methodology

This comprehensive bibliography was compiled through systematic searches of PubMed, Google Scholar, ResearchGate, and publisher databases including JBJs, Lancet, SAGE, Wiley, MDPI, and Taylor & Francis.



Search Criteria

FAJR Scientific Research Collaborative • Bilal Irfan + Khaled Saleh • Muaaz Wajahath + Khaled Saleh • Elias Nasser • Ahmad Hasan MD (Detroit Medical Center) • Mohammed Tahir • Nour Alshaer

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