The Compass

The Journal of the
College of Remote and Offshore Medicine
Foundation

Winter 2026 Volume 9 Issue 1

The Compass

Winter 2026 Volume 9 Issue 1

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Cover photo:

Sandstorm near Douentza, Mali

Photo courtesy of Igor Kovalev

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CEO’s Brief

Leadership transition and governance update for CoROM

John Clark
JD MBA NRP

Dear Faculty, Students, and Members of the CoROM Community,

As we move into 2026, I’m pleased to share an important leadership transition and governance update for the College of Remote and Offshore Medicine (CoROM). This update reflects the College’s continued growth and the maturation of our academic and operational structures.

Leadership Transition

For the past three years, I have served as Executive Dean of CoROM, a role supported by the International Board of Specialty Certification (IBSC) during our formative and growth phases. Together, we have built a strong academic foundation, expanded our international reach, and positioned the College for long-term sustainability.

Effective 1 January 2026, I will transition fully back to my position as Chief Operating Officer of the IBSC. While this will reduce my daily involvement in CoROM’s operations, I will continue to serve as a Founder Board Member and Administrator under Maltese law, ensuring continuity, institutional memory, and regulatory compliance.

As part of a planned transition that aligns with CoROM’s new governance model, I will assume the role of Chief Executive Officer (CEO) of the College. In this capacity, I will provide strategic leadership, ensure alignment between academic and operational priorities, and oversee long-term planning, financial management, and external partnerships. The CEO role sits within CoROM’s executive office and reports directly to the Founders’ Board, maintaining our mission focus and governance integrity.

Operational Leadership

To support this transition, Dr. Eric Bauer will join CoROM as Chief Operating Officer (COO). Dr. Bauer and his team at FlightBridgeED will oversee the day-to-day operational management of the College, including:

Administrative Operations

Financial management (accounts receivable and payable)

Coordination of weekly operational meetings

Serving as the primary contact for faculty questions, referrals, and administrative coordination

This new structure ensures that strategic direction (CEO) and operational execution (COO) are well-defined and fully integrated within CoROM's governance model.

Academic Governance

To further strengthen academic oversight and faculty-led governance, all academic matters will now be managed through the newly formed Academic Council. This Council will serve as the primary body for academic decision-making, curriculum development, and quality assurance.

Academic Council Leadership

Doctoral Programmes: Dr. Ella Corrick

Postgraduate (Master's) Programmes: Dr. Csaba Dioszeghy and Dr. Zuber

Undergraduate (Bachelor's) Programmes: Dr. Tim Mallinson

Governance and Strategic Oversight

Strategic leadership and final institutional oversight remain under the collective authority of the Founders' Board, which includes Dr. Csaba Dioszeghy, Aebhric O'Kelly, and myself. This Board ensures alignment between academic integrity, operational effectiveness, and long-term vision.

Looking Ahead

This transition marks an important milestone in CoROM's journey—signifying growth, clarity, and stability. Our mission, academic standards, and commitment to faculty and student success remain unchanged. This updated structure strengthens our ability to deliver world-class education while clearly distinguishing academic leadership from operational management.

I remain deeply grateful for your continued dedication to CoROM and for the expertise and professionalism you bring to our students and community. I look forward to working with all of you in this new capacity as we guide CoROM into its next phase of development and excellence.

Warm regards,

John Clark

Chief Executive Officer, College of Remote and Offshore Medicine

CoROM Founder Board Member & Administrator

Chief Operating Officer, International Board of Specialty Certification

Editor's Notes

Jason Jarvis
NRP MSc 18D

I had hoped that the 2025 Emergency Cardiac Care updates would provide enough grist for the mill to run a Special Feature in this edition of The Compass. Alas, the gulf between true best practice and the guidelines furnished us from our friends in Belgium at the International Liaison Committee on Resuscitation has approached as close to zero as anything else I have seen in medicine.

Therefore, here is my summary of the ACLS and PALS 2025 changes:

> Infant CPR and foreign-body airway obstruction: no 2-finger technique for chest compressions (use the heel of your hand or use 'thumb-encircling').
>
> Foreign-body airway obstruction in conscious kids and adults: 5 back blows, 5 abdominal thrusts.
>
> Cardioversion of adult VT or SVT: 100 joules.
>
> Cardioversion of adult A-fib/flutter: 200 joules.
>
> Adult post-ROSC care: SpO_2 90-98%, MAP >65, temperature control if obtunded for 36 hours at 32-37.5° C.

I hope readers will enjoy the many features within this edition of The Compass, to include a case report on trachoma, a primer on fever patterns, a field-improvised solution to negative pressure wound therapy, and the vector-borne disease that has been making the rounds throughout the Indian subcontinent.

Jason

2 January 2026

Jason Jarvis is a paramedic and former U.S. Army Special Forces Medic (18D) with years of accumulated experience in countries such as Laos, Burma, Iraq, and Afghanistan.

He is a freelance medical educator who teaches for CoROM, the U.N., the U.S. Department of Defense, Harborview Medical Center, Seattle Children's Hospital, and Cascade Training Solutions.

Jason is a PhD student in Widener University's Health Professions Education program and holds a master's degree in Infectious Diseases from the London School of Hygiene and Tropical Medicine.

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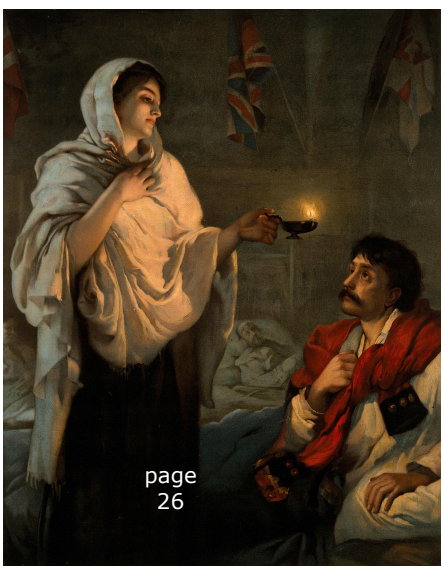

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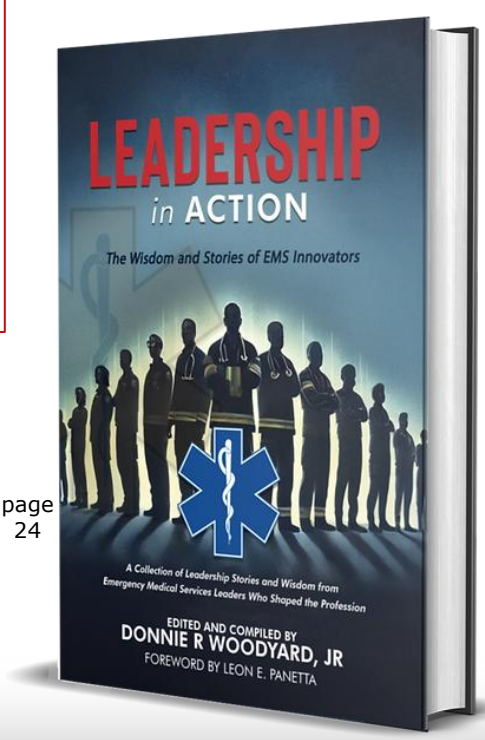

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Case Report

Trachoma

Central Africa, 2025

Glenn Geelhoed
AB, BS, MD, MA, DTMH, MPH, MA, FACS

I do not believe I have written a description of a common highly morbid condition in the tropics that is the single most common cause of blindness in Central Africa: trachoma, a disease whose prevalence is way ahead of 1) cataracts, 2) diabetes, 3) glaucoma. I have extensive experience with this kind of preventable visual impairment in training teams of locals to do "lid eversions" for entropion - the contraction following chlamydia conjunctivitis that turns eyelashes inward to scratch and opacify the cornea.

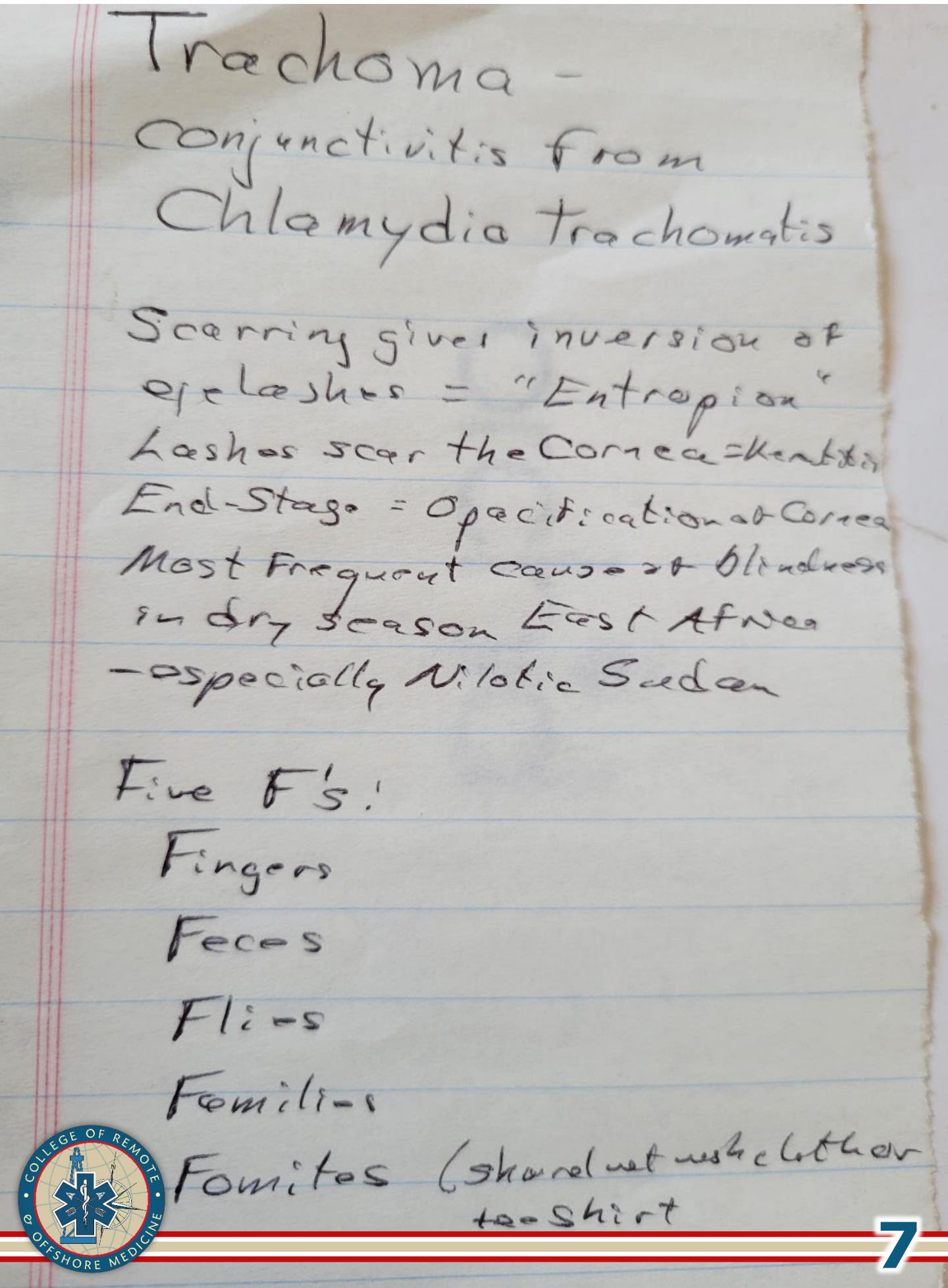
In Sudan, I had encouraged the teams to select patients already blinded on one side and to do the lid eversion on the non-blind eye to prevent them from falling into the darkness of bilateral corneal scarring, resulting in HUNDREDS of such patients retaining monocular vision. The alternative is to extract the eyelashes by pulling or cutting them --the one blessing of abundance in all the South Sudan where I had practiced this is the plethora of spent brass of AK-47 casings littering the ground that, when split longitudinally, can serve as forceps! Since there is nothing wrong with the retina or lens or occipital visual cortex, no approach such as cataractectomy does any good, and the population does not understand why this miracle operation does not fix all forms of blindness. The non-starter operation would be bilateral corneal transplants, and you can figure the long odds of that ever coming to remote Africa.

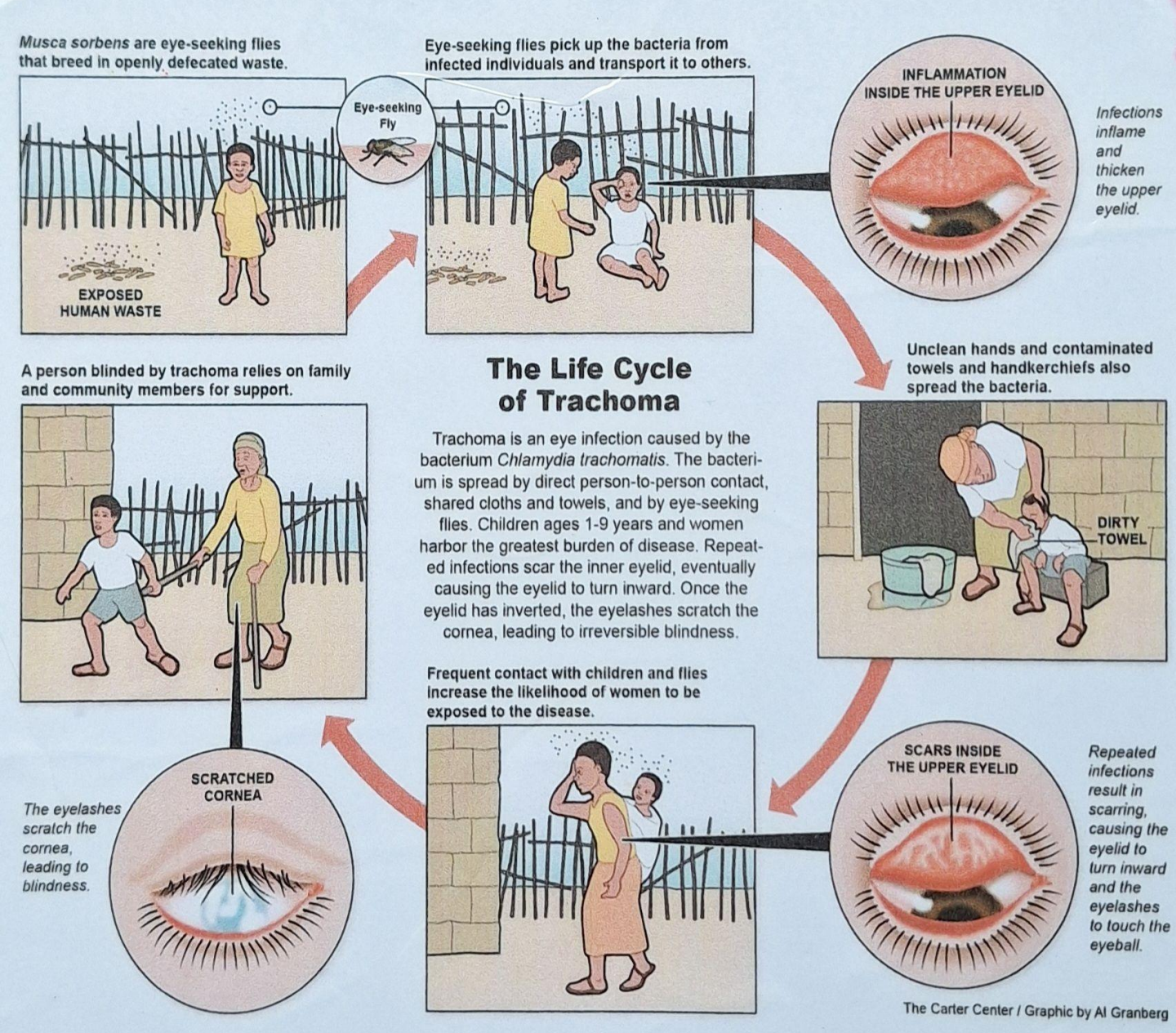
I have put together the early and late stages of trachoma and the simple means of preventing it, as well as the “Five F’s” of recognizing the populations at risk. I am furnishing from a single day's experience the early and late stages and could go into further detail about our once annual dosing of clarithromycin of whole school populations in Ethiopia along with the lid eversion training but will give you this short piece for a start on trachoma in the following transmission while I have both borrowed Power Bank electricity and a Hot Spot Wi-Fi.

An elder came in with a complaint of such long standing that he would not have remembered it except for our free presence. He has had visual impairment since he was a young boy. He has corneal opacification R>L. He still has residual vision in his OS (left eye) but has lost “counts fingers” visual acuity in OD (right eye.) He exhibits the end-stage of trachoma, the scarring stage of inflammation due to the *Chlamydia trachomatis* conjunctivitis.

The next patient was a seven-year-old girl with the minimal acute conjunctivitis of *Chlamydia trachomatis*, the stage in which it can be controlled before the scarring that pulls the eyelashes in to scratch the cornea (entropion). She can be treated with a single annual dose of clarithromycin - a macrolide antibiotic - and if she develops the entropion, she can undergo a lid eversion procedure turning the lashes out or trimming them away from the cornea to prevent scratching and eventual scarring opacification.

Trachoma remains the single most common cause of blindness in East African Nilotic dry season in which the plague of "flies in the eyes" follows the dictum of the "Five F's." (see attached—from the brief tutorial for our non-indigenous trainees who will not leave this information residual in this region).





Musca sorbens, the eye-seeking fly.
Image credit: Wikipedia

Dr. Glenn Geelhoed received his BS and AB cum laude from Calvin College and MD cum laude from the University of Michigan. He completed his surgical internship and residency through Harvard University at Peter Bent Brigham Hospital and Boston Children's Hospital Medical Center. To assist in developing further volunteer surgical services in underserved areas of the developing world, Glenn completed master's degrees in international affairs, epidemiology, health promotion and disease prevention, anthropology, and a philosophy degree in human sciences.

He still works as a professor of surgery at George Washington University Medical Center in Washington D.C. and is a member of numerous medical, surgical, and international academic societies. Glenn is an avid game hunter and runner. He has completed more than 135 marathons across the globe. He is also a widely published author accredited with several books and more than 500 published journal articles and chapters in books. He has two sons and five grandchildren.

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Clinical Pearls

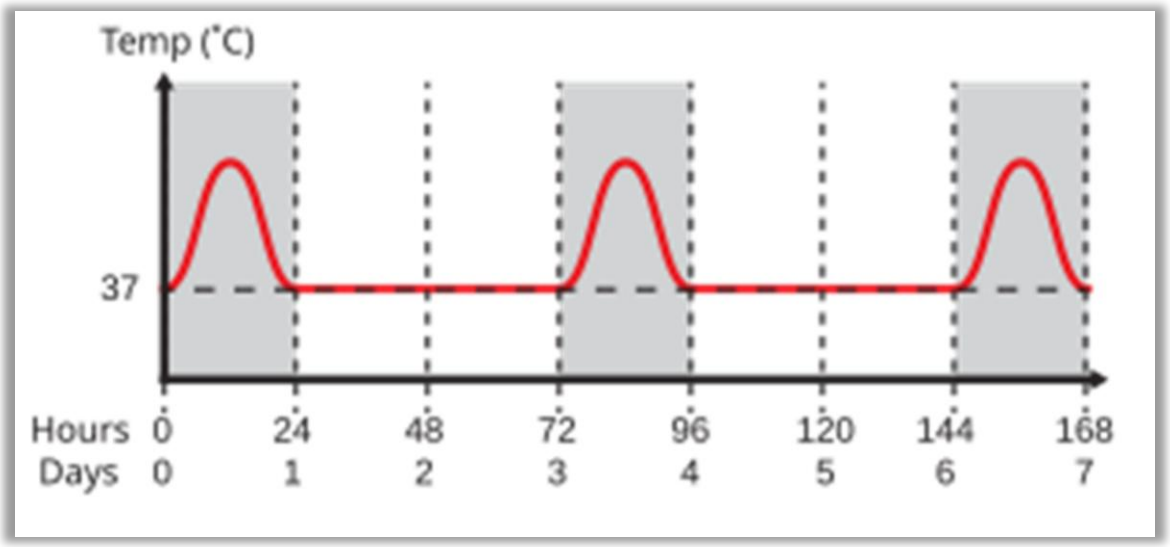
Fever patterns

Tom Mallinson
BSc (Hons) MBChB
PGCHE DipMSK (FSEM)
MRCGP (2020) MCPara
MCoROM DFSEM (UK) FHEA
FFRRHHEd FAWM FRGS

Quartan

Fever spike every 4th day

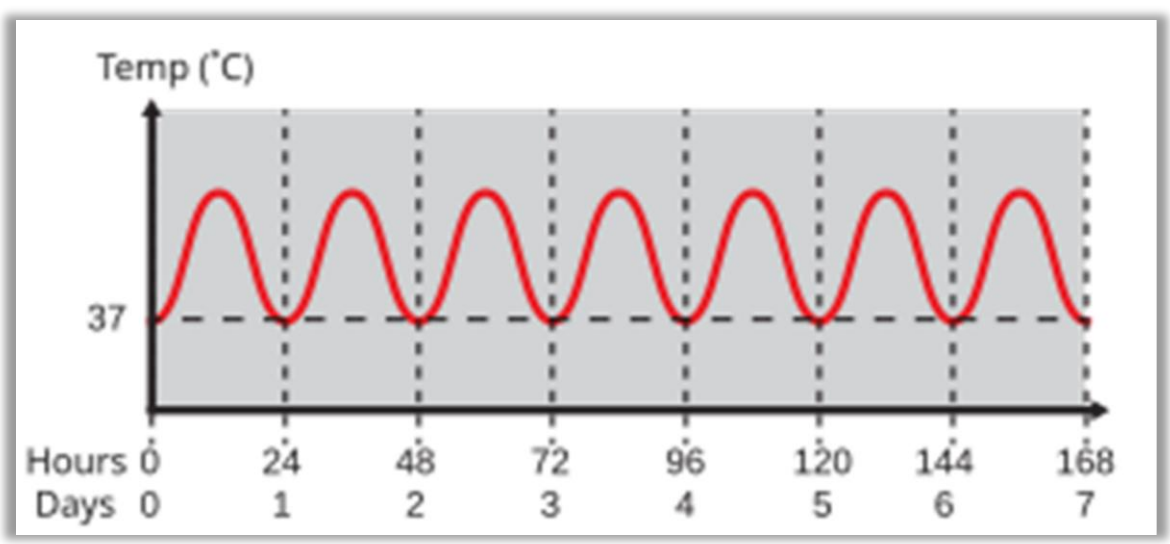
Consider *Plasmodium malariae* species malaria



Quotidian

Daily fever spike

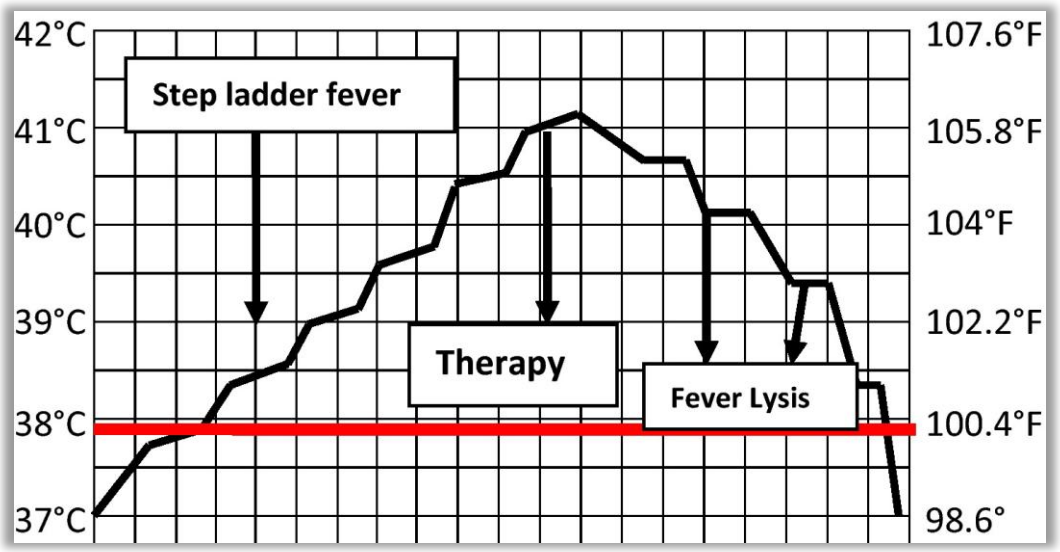
DDx: abscess, cytomegalovirus, *Pseudomonas*, *Plasmodium knowlesi* malaria, two asynchronous *Plasmodium falciparum* malaria populations



Stepladder

Gradual rise in temperature with plateaus

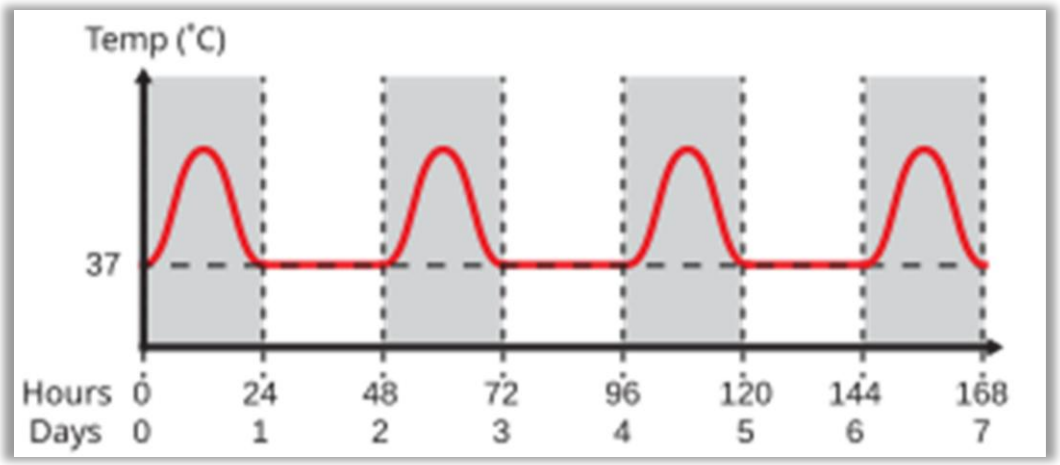
Consider typhoid



Tertian

Fever spike every 3rd day

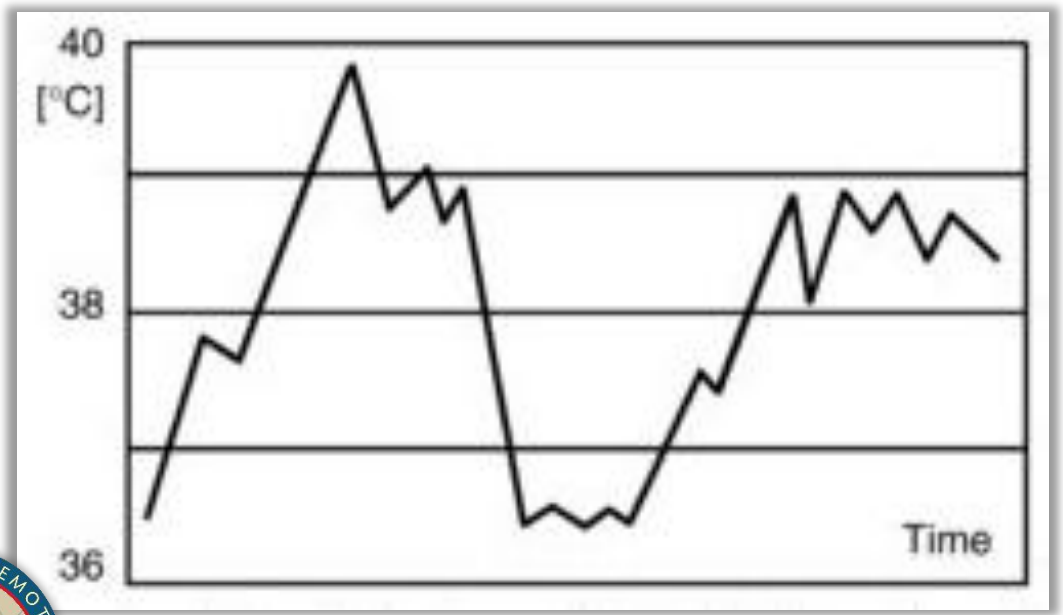
DDx: *Plasmodium vivax* malaria, single *Plasmodium falciparum* malaria population, *Plasmodium ovale* malaria



Undulant

Fever that comes and goes, perhaps more often in the evening

Consider brucellosis (also known as Malta fever)



Trends in Traumatology

Jason Jarvis
NR-Paramedic
MSc 18D

Joint position statement on TXA

Despite the compelling results of the landmark CRASH-2 and MATTERS studies on tranexamic acid (TXA) for the treatment of traumatic bleeding, the drug was met with lukewarm enthusiasm in the recently-published "Tranexamic acid in trauma: A joint position statement and resource document of NAEMSP, ACEP, and ACS-COT.[1]"

Tranexamic acid in trauma: A joint position statement and resource document of NAEMSP, ACEP, and ACS-COT

Whitney J. Barrett, MD, Kevin A. Kaucher, PharmD, BCCCP, Ross E. Orpet, MD, Eric M. Campion, MD, Jeffrey M. Goodloe, MD, Peter E. Fischer, MD, MS, NRP, Christopher B. Colwell, MD, *and* **John W. Lyng, MD, NRP**, *Albuquerque, New Mexico*

Rising slowly from post-war Japan and through the mire of global institutional inertia, TXA waited 47 long years to be counted among the WHO's list of essential medicines in 2009. Beyond the studies listed above, current research goals aim at establishing a definitive TXA protocol for pediatric trauma, as well as the option to administer the drug intramuscularly.

From the article's introduction: "In an effort to explore these topics, National Association of Emergency Medical Services Physicians (NAEMSP), American College of Surgeons—Committee on Trauma (ACS-COT), and American College of Emergency Physicians (ACEP) collaborated to conduct a structured review of the literature to develop evidence-based recommendations."[1]

ABSTRACT

Prehospital use of tranexamic acid (TXA) has grown substantially over the past decade despite contradictory evidence supporting its widespread use. Since the previous guidance document on the prehospital use of TXA for injured patients was published by the National Association of EMS Physicians, the American College of Surgeons Committee on Trauma, and the American College of Emergency Physicians in 2016, new research has investigated outcomes of patients who receive TXA in the prehospital setting. To provide updated evidence-based guidance on the use of intravenous TXA for injured patients in the emergency medical services (EMS) setting, we performed a structured literature review and developed the following recommendations supported by the evidence summarized in the accompanying resource document. The National Association of EMS Physicians, the American College of Surgeons Committee on Trauma, and the American College of Emergency Physicians recommends:

- Prehospital TXA administration may reduce mortality in adult trauma patients with hemorrhagic shock when administered after lifesaving interventions.
- Prehospital TXA administration appears safe, with low risk of thromboembolic events or seizure.
- The ideal dose, rate, and route of prehospital administration of TXA for adult trauma patients with hemorrhagic shock has not been determined. Current evidence suggests EMS agencies may administer either a 1-g intravenous/intraosseous dose (followed by a hospital-based 1-g infusion over 8 hours) or a 2-g intravenous/intraosseous dose as an infusion or slow push.
- Prehospital TXA administration, if used for adult trauma patients, should be given to those with clinical signs of hemorrhagic shock and no later than 3 hours post-injury. There is no evidence to date to suggest improved clinical outcomes from TXA initiation beyond this time or in those without clinically significant bleeding.
- The role of prehospital TXA in pediatric trauma patients with clinical signs of hemorrhagic shock has not been studied, and standardized dosing has not been established. If used, it should be given within 3 hours of injury.
- Prehospital TXA administration, if used, should be clearly communicated to receiving health care professionals to promote appropriate monitoring and to avoid duplicate administration(s).
- A multidisciplinary team, led by EMS physicians, that includes EMS clinicians, emergency physicians, and trauma surgeons should be responsible for developing a quality improvement program to assess prehospital TXA administration for protocol compliance and identification of clinical complications. (*J Trauma Acute Care Surg.* 2025;99: 357–363. Copyright © 2025 The Author(s). Published by Wolters Kluwer Health, Inc. on behalf of the American Association for the Surgery of Trauma.)

1 Barrett WJ, Kaucher KA, Orpet RE, et al. Tranexamic acid in trauma: A joint position statement and resource document of NAEMSP, ACEP, and ACS-COT. *J Trauma Acute Care Surg*. 2025;99(3):357-363. doi:10.1097/TA.0000000000004727

“Tranexamic acid has been widely adopted in civilian EMS systems and appears safe, but the beneficial effect of prehospital TXA for adult trauma patients with hemorrhagic shock remains uncertain despite earlier excitement about improving outcomes. In aggregate, evidence from a mix of military and civilian studies appears to show potential benefits in reducing early mortality when TXA is administered less than 3 hours from the time of injury. Considering the conflicting and uncertain evidence, there is a need for high-quality studies to further define the role TXA for prehospital trauma. In the absence of clear evidence, local individual EMS agencies and trauma systems must determine the feasibility of incorporating TXA into their prehospital traumatic hemorrhagic shock protocols, balancing potential clinical out comes benefits with resource costs of implementation, education, training, and quality improvement programs.”[1]

1 Barrett WJ, Kaucher KA, Orpet RE, et al. Tranexamic acid in trauma: A joint position statement and resource document of NAEMSP, ACEP, and ACS-COT. *J Trauma Acute Care Surg*. 2025;99(3):357-363. doi:10.1097/TA.0000000000004727

Improvised Medicine

Negative pressure wound therapy

Aebhric O'Kelly
M.Psy DTN FRSM FAWM

Negative pressure wound therapy (NPWT) has become fundamental to contemporary wound management due to its capacity to promote granulation tissue formation, reduce oedema, and control exudate. However, commercial NPWT systems are frequently unavailable or prohibitively expensive in austere, conflict-affected, or resource-limited environments. As a result, improvised wound vacuum systems constructed from readily available materials, such as suction tubing, occlusive dressings, syringes, and wall suction tubing, have emerged as practical alternatives.

The physiological mechanisms underlying improvised NPWT are equivalent to those of commercial devices: controlled negative pressure applied to the wound bed facilitates tissue deformation, enhances local perfusion, and diminishes the bacterial burden. Construction typically involves meticulous wound debridement and irrigation, followed by placement of a gauze, insertion of a fenestrated tubing, and establishment of an airtight occlusive seal. Negative pressure is frequently generated using manual suction devices, such as Toomey syringes, with target pressures of 75-125 mmHg, consistent with established commercial parameters.

Recent field reports and observational studies, including investigations from conflict-affected regions of sub-Saharan Africa, demonstrate that improvised systems can achieve clinically significant outcomes when appropriately implemented, particularly in traumatic and contaminated wounds requiring delayed closure. A 2024 case series examining ballistic injuries managed with improvised NPWT in the Democratic Republic of Congo reported favourable wound progression and infection control, corroborating earlier findings from humanitarian and disaster medicine literature.

Despite these encouraging findings, improvised NPWTs have limitations, including variability in pressure maintenance, difficulty maintaining airtight seals, and increased nursing workload. The evidence base remains predominantly observational, with limited randomised controlled trials. Nevertheless, in prolonged field care, disaster response, and low-resource settings, improvised NPWT represents a valuable, evidence-informed intervention. Future research should prioritise standardising techniques, pressure-monitoring methodologies, and outcome reporting to strengthen the scientific foundation of this practice.

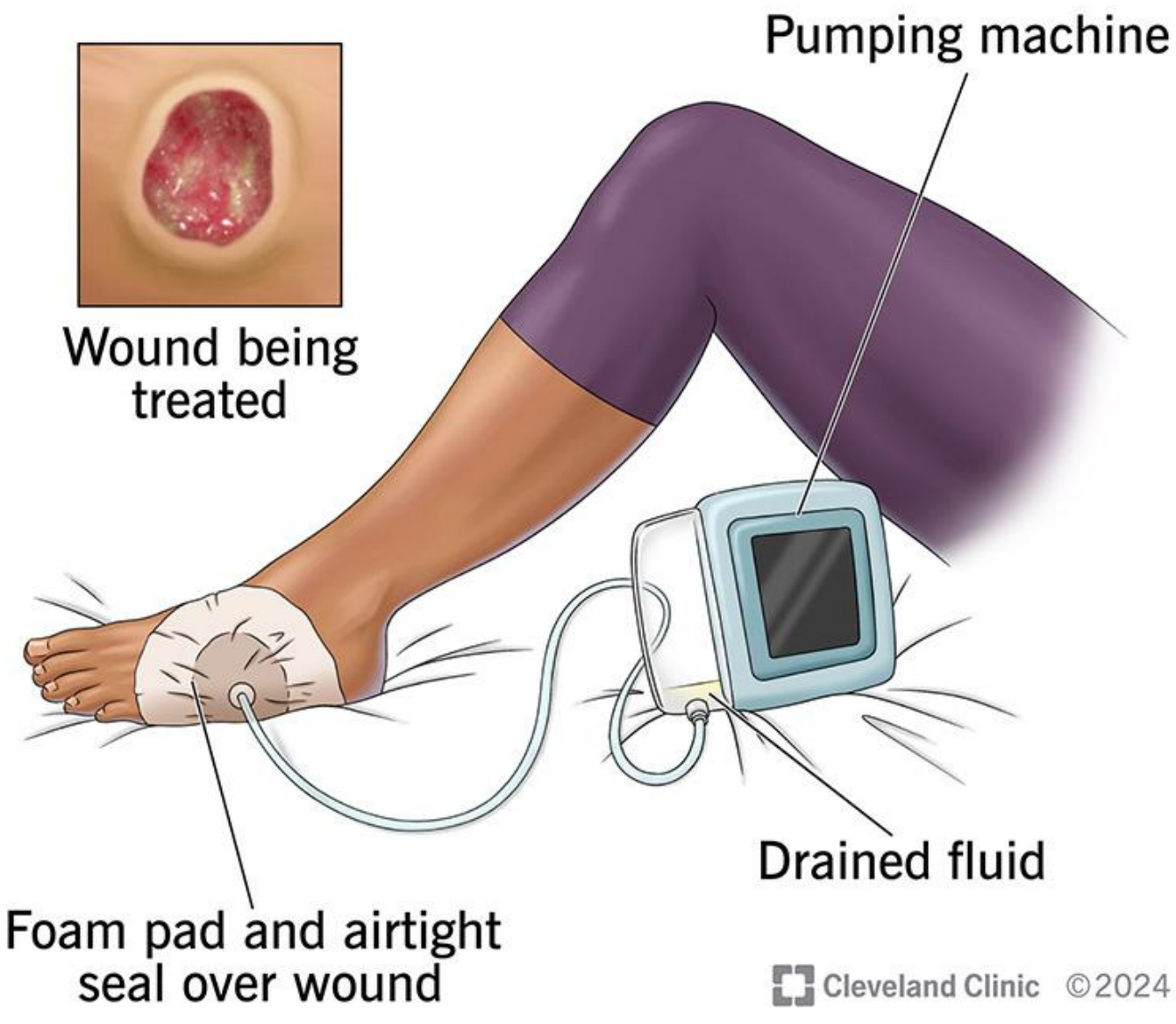
References

Morykwas MJ, Argenta LC, Shelton-Brown EI, McGuirt W. Vacuum-assisted closure: a new method for wound control and treatment. *Ann Plast Surg*. 1997;38(6):553–562.

Venturi ML, Attinger CE, Mesbahi AN, Hess CL, Graw KS. *Mechanisms and clinical applications of the vacuum-assisted closure (VAC) device: a review.* American Journal of Clinical Dermatology (2005).

Apelqvist J, Willy C, Fagerdahl A-M, et al. *EWMA Document: Negative Pressure Wound Therapy (NPWT): overview, challenges and perspectives.* Journal of Wound Care (2017) (EWMA supplement).

Joint Trauma System (JTS). Acute Traumatic Wound Management in the Prolonged Field Care Setting (CPG ID: 62). Joint Trauma System Clinical Practice Guideline, 24 July 2017. Available at: https://jts.health.mil/assets/docs/cpgs/Wound_Management_PFC_24_Jul_2017_ID62.pdf (accessed 28 December 2025)



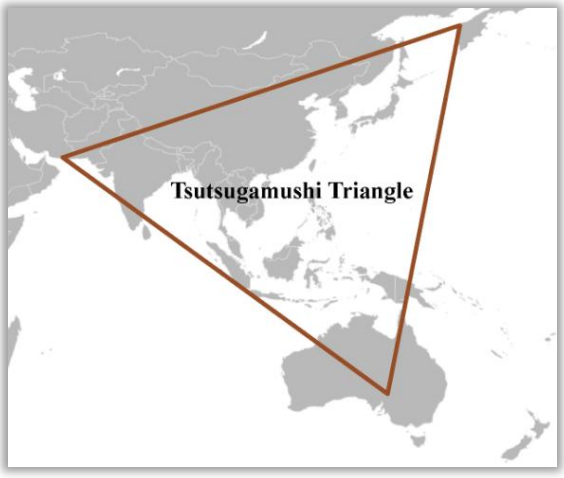
Tropical Medicine Update

Jason Jarvis
NR-Paramedic
MSc 18D

Scrub typhus in the Indian subcontinent

The Indian subcontinent has seen an uptick in cases of scrub typhus, with no less than 8 entries logged in ProMed since Oct 1, 2025 (screenshot below).

Scrub typhus, caused by *Orientia tsutsugamushi*, occurs mainly in the so-called 'Tsutsugamushi Triangle,' depicted to the right.



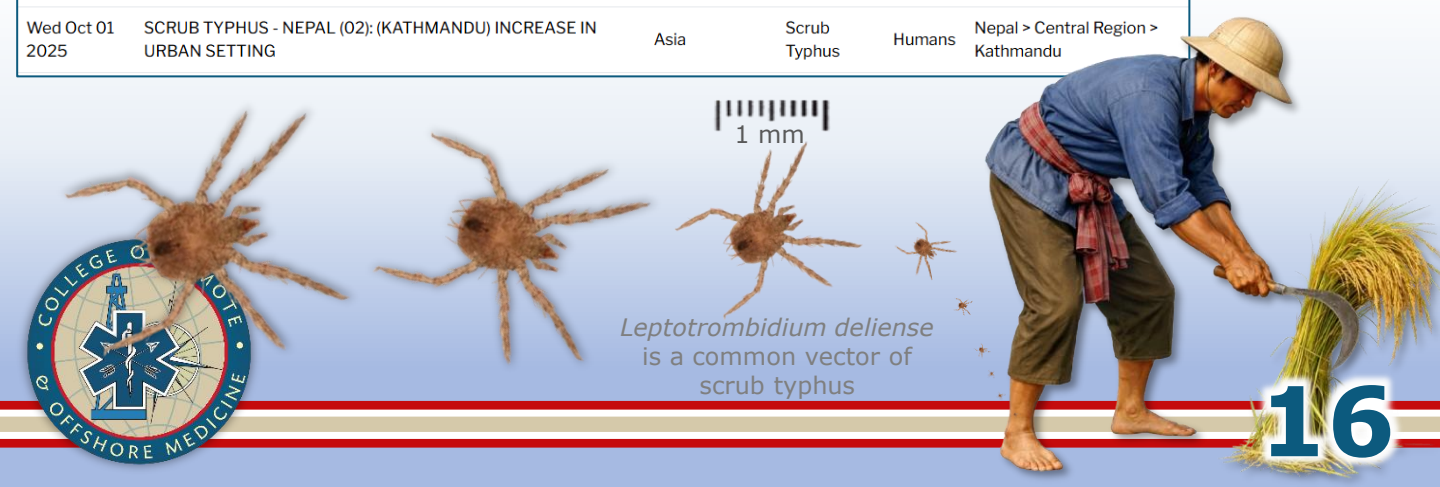
This rickettsial disease is vectored to humans via the bite of infected larval-stage harvest mites, better known colloquially as chiggers.

Scrub typhus incubates for 7-10 days, followed by a disease course lasting 2-3 weeks. Symptomology includes fever, black eschar at the bite site, headache, lymphadenopathy, centrifugal rash, and possibly altered mental status. Illnesses may be relatively mild and self-limited, or severe and lethal.

Prevention of scrub typhus within the Tsutsugamushi Triangle includes avoidance of ground-level foliage, especially piles of dead leaves in which mites thrive. Insect repellent should be used, and clothing should be treated with 0.5% permethrin prior to countryside excursions. Indirect fluorescent antibody (IFA) remains the gold standard for diagnosis of the disease. The treatment-of-choice is doxycycline; azithromycin or rifampin are alternative drugs.

Date	Title	Region (Continent)	Diseases	Species	Location
Thu Dec 25 2025	SCRUB TYPHUS - NEPAL (04): ONGOING SPREAD	Asia	Scrub Typhus	Humans	Nepal > Bagmati Province > Kathmandu
Thu Dec 11 2025	SCRUB TYPHUS - INDIA (07): (ANDHRA PRADESH) MORE DEATHS	Asia	Scrub Typhus	Humans	India > Andhra Pradesh
Sun Dec 07 2025	SCRUB TYPHUS - INDIA (06): (ANDHRA PRADESH)	Asia	Scrub Typhus	Humans	India > Andhra Pradesh > Kurnool
Fri Dec 05 2025	SCRUB TYPHUS - INDIA (05): (ANDHRA PRADESH) FATAL	Asia	Scrub Typhus	Humans	India > Andhra Pradesh > Palnadu
Fri Dec 05 2025	NOVEL RICKETTSIA - USA: DOG, RICKETTSIA FINNYI, ZOONOTIC POTENTIAL, ALERT	North America	Rickettsia	Dogs	United States
Fri Dec 05 2025	SCRUB TYPHUS - USA: (NORTH CAROLINA) ANTIBODY POSITIVE PATIENTS	North America	Scrub Typhus	Humans	United States > North Carolina > string
Tue Nov 11 2025	SCRUB TYPHUS - INDIA (03): (KERALA) ex DUBAI, FURTHER DOCUMENTATION OF WIDER ORIENTIA RANGE	Asia	Scrub Typhus	Humans	India > Kerala | United Arab Emirates > Dubai
Wed Oct 22 2025	SCRUB TYPHUS - NEPAL (03): (GANDAKI) INCREASED CASES	Asia	Scrub Typhus	Humans	Nepal > Gandaki Pradesh
Sat Oct 18 2025	SCRUB TYPHUS - INDIA (04): (MAHARASHTRA) FATAL	Asia	Scrub Typhus	Humans	India > Mahārāshtra > Yavatmal
Wed Oct 01 2025	SCRUB TYPHUS - NEPAL (02): (KATHMANDU) INCREASE IN URBAN SETTING	Asia	Scrub Typhus	Humans	Nepal > Central Region > Kathmandu

ISID ProMED INTERNATIONAL SOCIETY FOR INFECTIOUS DISEASES



Leptotrombidium deliense is a common vector of scrub typhus

Eschar-associated Rickettsioses

What is an eschar?

An eschar is a lesion that occurs at the site where rickettsial pathogens are inoculated by a feeding tick or mite. The eschar forms within a few days (median 5 days) after the bite and may take several weeks to heal completely. Early eschars can look like small vesicles or an erythematous plaque (figure A). Eventually, most eschars will develop into a central, 0.5–3.0 cm ulcer. This ulcer is covered by a brown-black crust and typically surrounded by an annular red halo (figure B). The healed lesion typically appears as a small, depressed scar (figure C).

Eschars are an early clinical feature of many rickettsial diseases.

Early stages of eschar

Classic eschar

Healed eschar

Rickettsial diseases commonly associated with an eschar

In the United States:

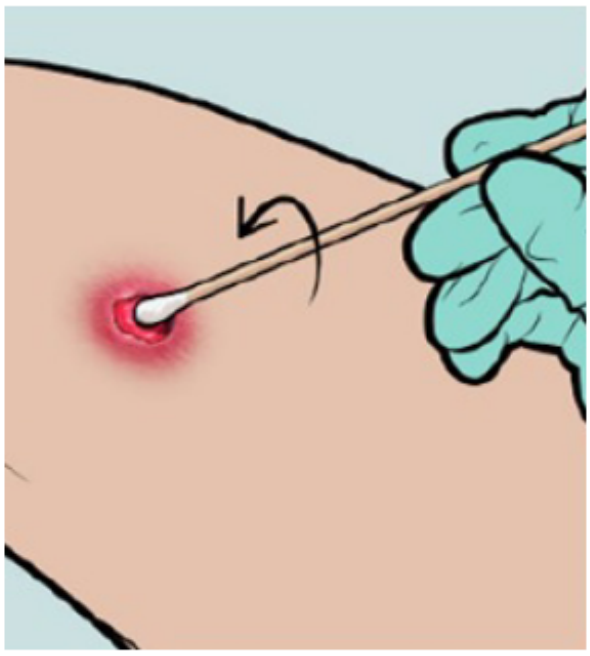
- *Rickettsia parkeri rickettsiosis*, caused by *Rickettsia parkeri*
- Pacific Coast tick fever, caused by *Rickettsia* species 364D
- Rickettsialpox, caused by *Rickettsia akari*

Imported rickettsial diseases:

- African tick bite fever, caused by *Rickettsia africae*
- Mediterranean spotted fever, caused by *Rickettsia conorii*
- Scrub typhus, caused by *Orientia tsutsugamushi*

CS 350092-B 06/11/2024

Use eschars as a diagnostic sample:



- Eschars can contain large amounts of rickettsial DNA.
- PCR of eschar biopsies or vigorous swabs of eschar areas may provide confirmatory evidence in the early stages of the disease, often before seroconversion has occurred.
- The eschar swab procedure is generally preferred over eschar biopsy by clinicians and patients because it is easy and non-invasive.
- However, an eschar swab does not allow for immunohistochemical or cell culture evaluation.
- Obtain specimen before or within 72 hours of initiation of a tetracycline-class antibiotic, e.g., doxycycline or, if occurring outside of this established time frame, patients must be symptomatic at the time of collection.
- Antibiotic treatment should never be delayed to obtain an eschar specimen.

Clinicians interested in submitting eschar swabs or biopsy samples to CDC for diagnostic testing should contact their local or state public health department to coordinate specimen submission to CDC.

Sample Collection and Storage:

Swab specimen of eschar, using a dry, sterile cotton swab (include eschar scab when available). Place swab in sterile specimen container without any medium. Keep specimen at a refrigerated temperature (2-8 °C) up to 7 days after draw. If storing over 7 days, freeze at -20 °C or lower up to 2 months, or -70 °C or lower up to 1 year.

For more information:

For more information on how to collect an eschar swab, visit:
https://www.cdc.gov/vector-borne-diseases/media/pdfs/2024/06/FS_Collection-Submission-Eschar-Swab-Specimens-Rickettsial-Disease-508.pdf

For more information on eschar-associated rickettsioses, visit:
https://www.cdc.gov/other-spotted-fever/hcp/clinical-signs/index.html

For more information on scrub typhus, visit:
https://www.cdc.gov/typhus/about/scrub.html?CDC_AAref_Val=https://www.cdc.gov/typhus/scrub/index.html

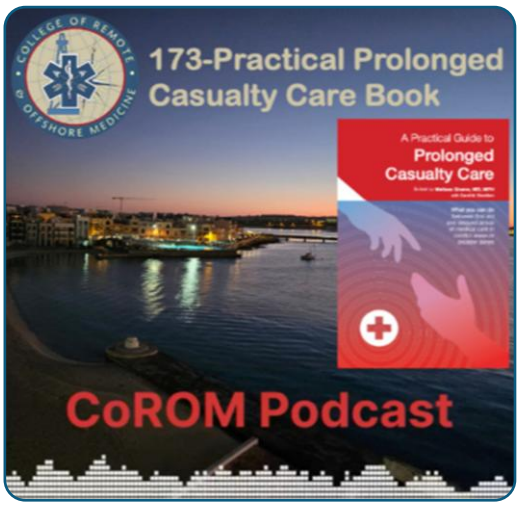
Visit cdc.gov/other-spotted-fever/site.html for more information.

For questions, contact CDC's Rickettsial Zoonoses Branch at rzbrefdxlab@cdc.gov or rzbepidiag@cdc.gov.

The CoROM Cast

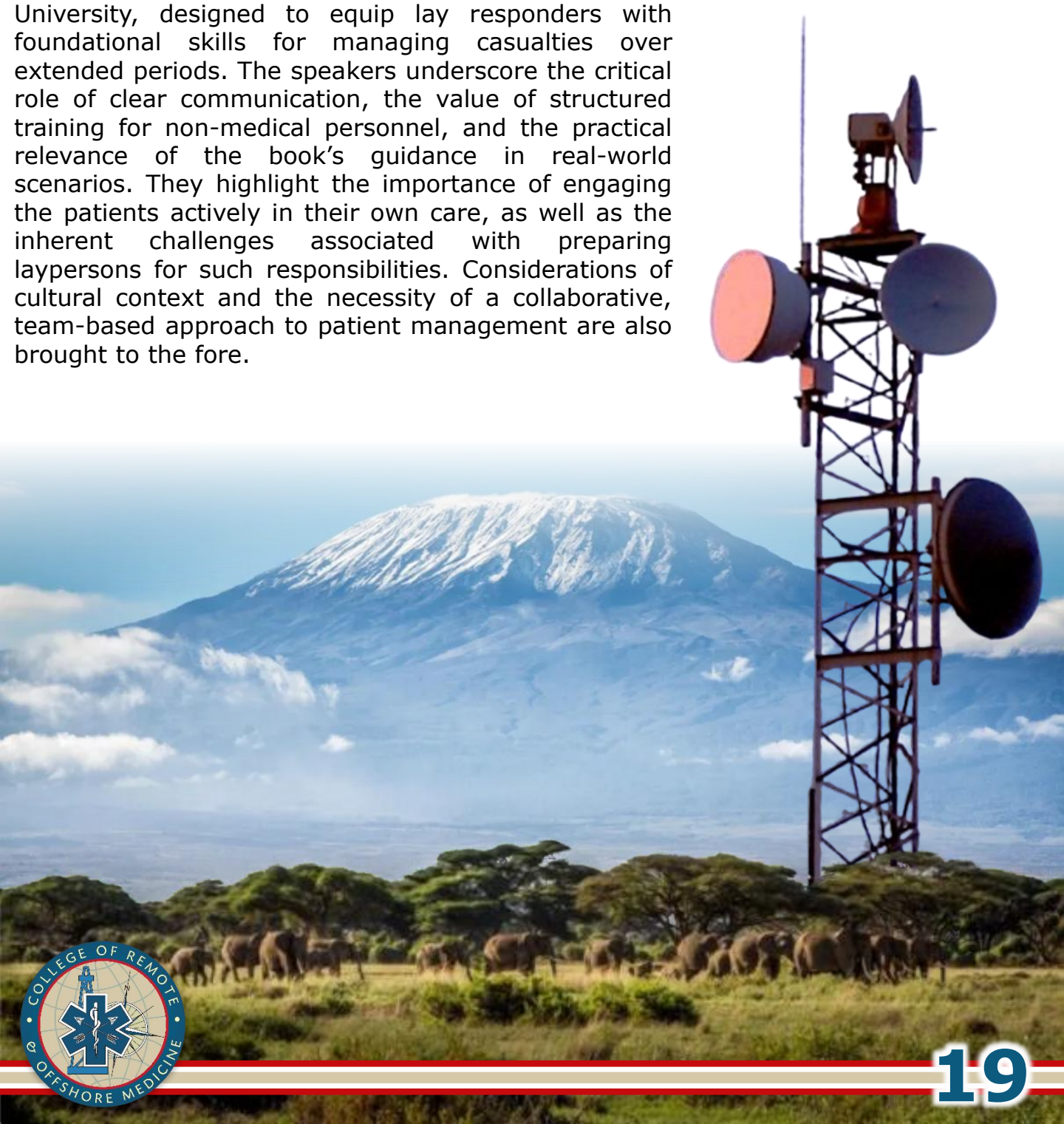
Episode 173

Practical prolonged casualty care



https://open.spotify.com/episode/6AuG2lKo8ZjBufurMe0iny

This week, Aebhric O'Kelly is joined by Bill Vasios and Rhod Jordan, who recorded during the November 2025 CoROM Conversations. They discuss Practical Prolonged Casualty Care, a PDF from the U.S. Military University, designed to equip lay responders with foundational skills for managing casualties over extended periods. The speakers underscore the critical role of clear communication, the value of structured training for non-medical personnel, and the practical relevance of the book's guidance in real-world scenarios. They highlight the importance of engaging the patients actively in their own care, as well as the inherent challenges associated with preparing laypersons for such responsibilities. Considerations of cultural context and the necessity of a collaborative, team-based approach to patient management are also brought to the fore.



Audio Files

A selection of medical podcasts

Anesthesia Updates
8 September 2025

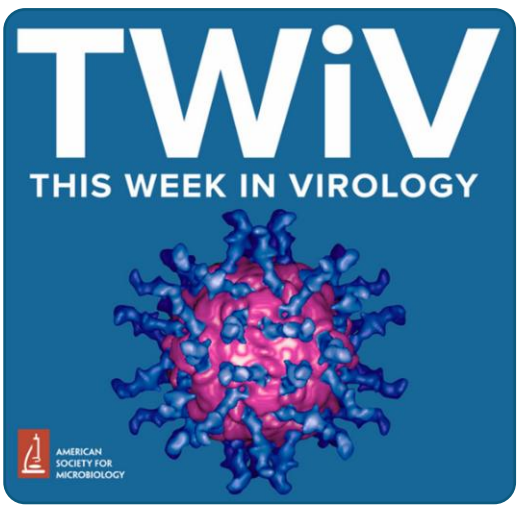
AI in anesthesia: hype, reality, and what comes next

https://open.spotify.com/episode/51TWuElUbhtqA73eBgFc65

Prolonged Field Care
23 October 2025

Walking blood bank

https://open.spotify.com/episode/7322g9E4k6CUA4PCFuAZv7



This Week in Virology
23 November 2025

EBV and lupus have not escaped our notice

https://open.spotify.com/episode/6nhp92vEr9uR3PllYCjJcz

Envisioning Information

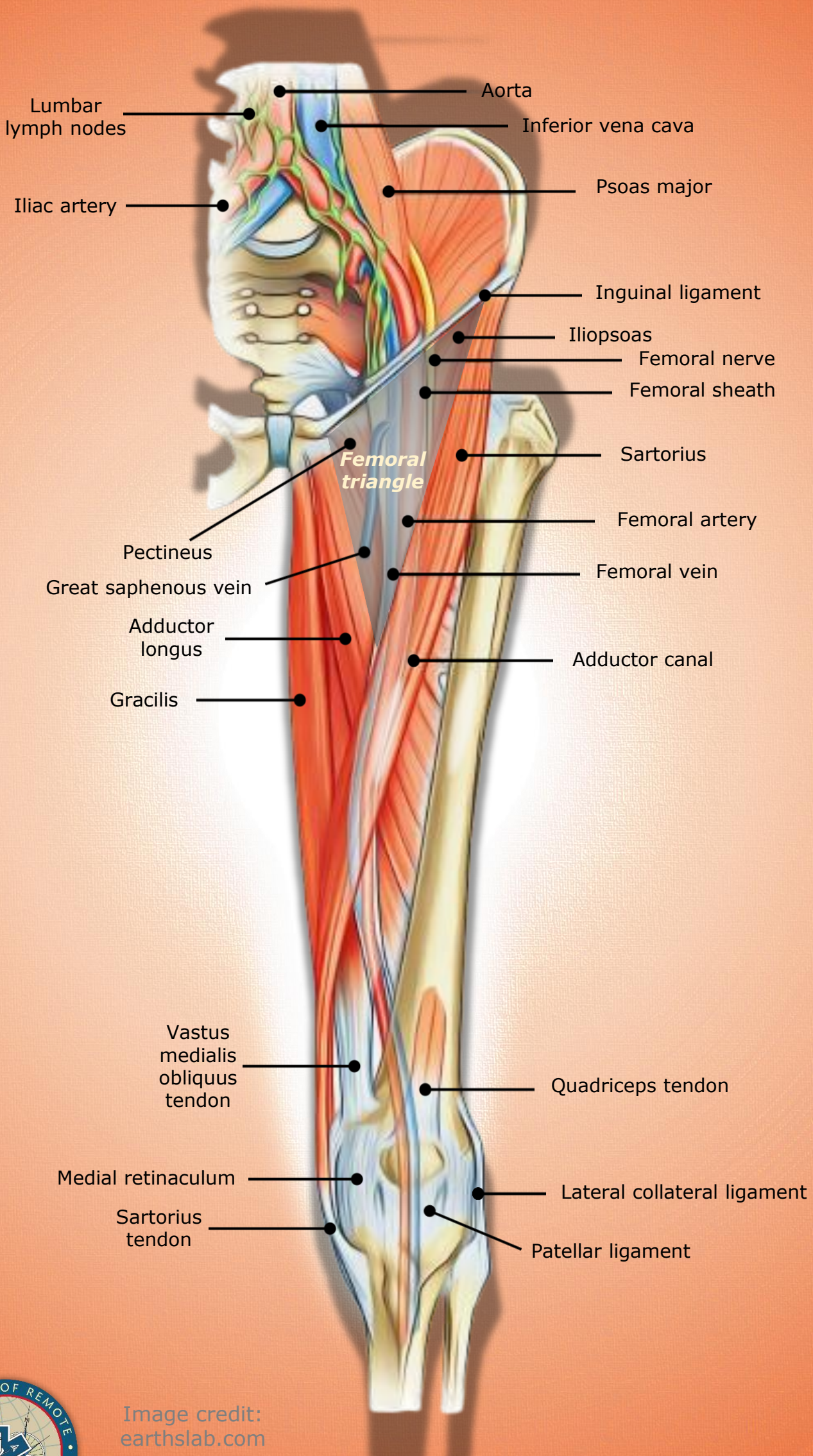


Image credit:
earthslab.com

Journal Watch

Deceased donor blood transfusion in emergency resuscitation: A scoping review of historical evidence for military and mass casualty applications

Transfusion

Wang JC, Remondelli MH, Rhee J, et al. Deceased donor blood transfusion in emergency resuscitation: A scoping review of historical evidence for military and mass casualty applications. *Transfusion*. 2025;65(10):1936-1953. doi:10.1111/trf.18366

EXCERPT FROM THE INTRODUCTION

Historically, the concept of utilizing deceased donor blood transfusions during times of war is not novel. In 1938, during the Spanish Civil War, Dr. Reginald Saxton described investigating this method when conventional donor supplies and logistical support were critically depleted. Pioneering further work in this area began in the early 20th century by Russian surgeon Sergei Yudin, who demonstrated the feasibility of using blood collected from recently deceased donors for human transfusion. Soviet hospitals utilized the technique for both emergency and routine transfusions, even though researchers observed that cadaveric blood undergoes spontaneous post-mortem saturation with fibrinolytic enzymes. As a result, Soviet literature often referred to cadaveric, or deceased donor blood as "fibrinolysed" blood. The use of deceased donor blood saturated with fibrinolytic and inflammatory products presented the potential of unfavorable outcomes with its use, especially in cases of trauma. Though the use of deceased donor blood was superseded in Western medicine by advances in modern blood banking from living donors in the 1960s, this strategy remains a notable chapter in the history of transfusion medicine. Examining the historical application of deceased donor transfusions, the methods employed, as well as the reported clinical observations would be informative regarding its utility in augmenting current strategies.

In-flight medical events on commercial airline flights

JAMA

Alves PM, Kumar KR, Devlin J, Nerwich N, Rotta AT. In-Flight Medical Events on Commercial Airline Flights. *JAMA Netw Open*. 2025;8(9):e2533934. Published 2025 Sep 2. doi:10.1001/jamanetworkopen.2025.33934

DESIGN

This cohort study included 77 790 in-flight medical events reported to a global ground-based medical support center from January 1, 2022, through December 31, 2023. All passengers experiencing an in-flight medical event across 84 participating airlines during the study period were included. Data were collected from consultations initiated by flight crew via radio or satellite communication with a dedicated ground-based physician. No demographic or clinical exclusions were applied.

RESULTS

Among 77 790 in-flight medical events, the overall incidence was 39 events per 1 million enplanements, with 1 event per 212 flights, or 17 events per billion revenue passenger kilometers. The median (IQR) age of affected passengers (42 316 females [54.4%]) was 43 (27-61) years. Aircraft diversion occurred in 1.7% of cases, most frequently due to neurologic (41%) and cardiovascular (27%) conditions. Suspected stroke (adjusted OR [AOR], 20.35; 95% CI, 12.98-31.91) and acute cardiac emergencies (AOR, 8.16; 95% CI, 6.38-10.42) were the factors associated with the highest odds of diversion. The involvement of a physician volunteer was also associated with increased odds of diversion (AOR, 7.86; 95% CI, 4.49-13.78).

Journal Watch

Impact of extreme temperatures on hemostatic gauze using thromboelastography

Wilderness & Environmental Medicine

Ockenfels BA, Jordan MR, DesRosiers T, Stuart S. Impact of Extreme Temperatures on Hemostatic Gauze Using Thromboelastography. *Wilderness Environ Med*. Published online September 24, 2025. doi:10.1177/10806032251376307

ABSTRACT

Introduction: Hemorrhage control in austere environments is challenging, particularly for wounds that are not amenable to tourniquets. Hemostatic gauzes are crucial in such settings, but their efficacy may be compromised by suboptimal storage conditions, including extreme temperatures, where discoloration has been observed. This study evaluated the impact of extreme temperature exposure on the efficacy of hemostatic gauze using thromboelastography. **Methods:** Blood from 30 healthy adults was diluted by 30% with hetastarch to mimic trauma-induced coagulopathy. Kerlix and QuikClot Combat Gauze stored for 3 weeks in cold (-10°C), hot (70°C), and room-temperature (22°C) environments were compared in the thromboelastography parameters of *R* (time to initiation of clot formation), *K* (clot amplification), *α* angle (clot formation rate), and *MA* (maximum amplitude of clot). **Results:** Compared with whole blood, diluted blood had weaker clots with slower clot-formation kinetics (*MA*=58 vs 43 mm, *P*<0.0001; *K*=2.6 vs 4.0 min, *P*<0.0001; *α* angle=55 vs 47 degrees, *P*<0.0003) but faster clot initiation times (*R*=8.7 vs 7.1 min, *P*<0.0001). Addition of either gauze shortened clot initiation times (Kerlix: 7.1 vs 5.0 min, *P*<0.0001; QuikClot Combat Gauze: 7.1 vs 2.7 min, *P*<0.0001), with QuikClot Combat Gauze significantly shortening *R* compared with Kerlix. Reductions in *R* values were consistent across temperature extremes (*P*<0.05). The other parameters were consistently unaffected (*P*>0.05). **Conclusions:** This in vitro laboratory study demonstrated that hemostatic gauze retained its ability to initiate clotting in vitro even after prolonged exposure to temperature extremes.

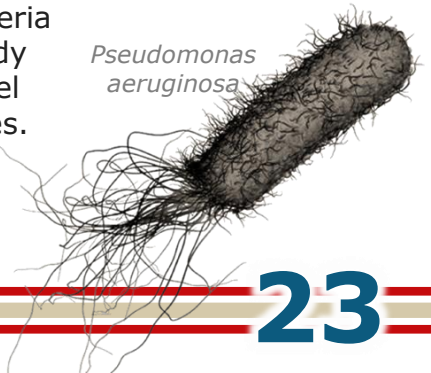
War impact on antimicrobial resistance and bacteriological profile of wound infections in Ukraine

Communications Medicine

Holubnycha VM, Kholodylo OV. War impact on antimicrobial resistance and bacteriological profile of wound infections in Ukraine. *Commun Med (Lond)*. 2025;5(1):394. Published 2025 Sep 24. doi:10.1038/s43856-025-01056-6

ABSTRACT

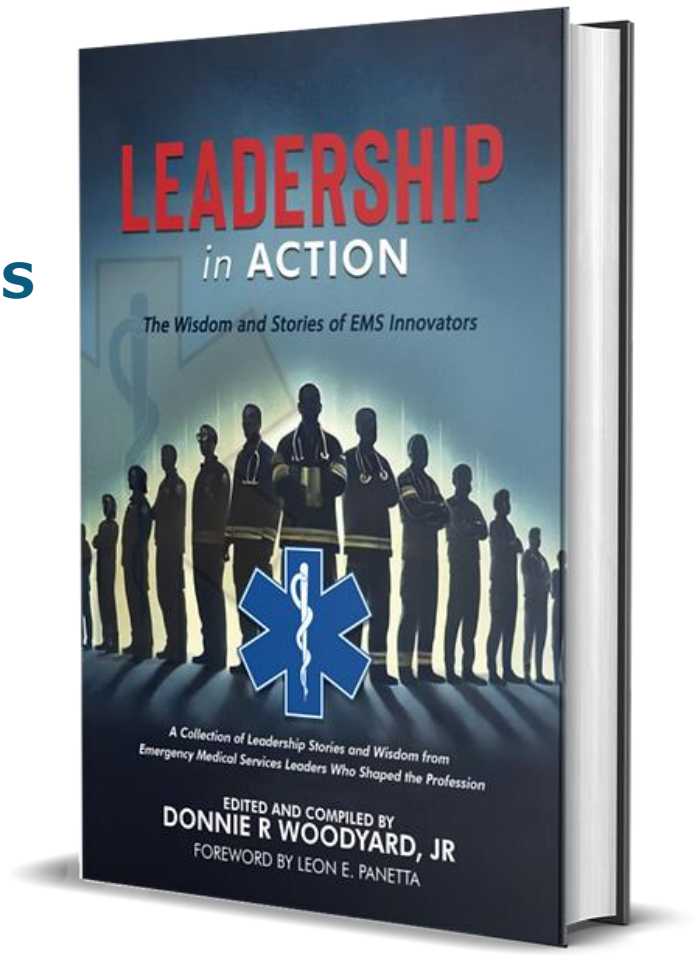
Background: Infections and antimicrobial resistance are among the main public health issues in the countries affected by war. This study evaluates war's impact on wound microbiome and antimicrobial resistance distribution among patients treated in Ukrainian civilian hospitals. **Methods:** The patients with combat wounds were treated in the civilian hospitals located in the Northeast of Ukraine from January to April 2024. The wound samples were examined. The isolated microorganisms were identified with further investigation of antimicrobial resistance profiles. **Results:** Here we show the data obtained from the examination of seventy-three wounded soldiers. Wound infections are associated with severe trauma and the middle age of patients. Bacteria were isolated in 56.16% samples with a predominance of gram-negative bacilli. The most frequent isolates are A. baumannii (36%), E. faecalis (12%), and B. cereus (12%). The frequency of multidrug resistance is 84.6%. Each isolated species has a certain sensitivity profile to antibiotics. The number of multidrug-resistant strains among gram-negative bacteria is higher than among gram-positive ones. **Conclusions:** This study shows the dominance of gram-negative bacilli in military personnel with a higher frequency of multidrug-resistant isolates. These complicate the healing process and promote the spread of multidrug-resistant strains within healthcare settings.



Pseudomonas aeruginosa

Book Review

Leadership in Action: The Wisdom and Stories of EMS Innovators



By Donnie R. Woodyard & Leon Panetta

Review by John Clark

Overview

"Leadership in Action: The Wisdom and Stories of EMS Innovators" is a significant contribution to emergency medical services (EMS) literature. This book offers a rare and comprehensive collection of leadership insights from the field's most influential figures. Edited and curated by Donnie Woodyard Jr., with the foreword by former U.S. Defense Secretary and CIA Director Leon Panetta, it brings together the experiences of over 40 EMS leaders who have shaped the profession at local, state, national, and international levels.

What Makes This Book Special

The book's greatest strength is its authentic, ground-level perspective on leadership within the high-stakes world of EMS. Instead of offering abstract theoretical frameworks, Woodyard has compiled real-world wisdom from practitioners who have navigated the unique challenges of EMS leadership—from making life-and-death decisions under pressure to implementing systemic changes across complex healthcare systems.

The inclusion of Leon Panetta's perspective adds a valuable dimension, offering insights from someone who has led at the highest levels of government and understands the intersection of public service, crisis management, and organizational leadership. This cross-pollination between EMS leadership and broader public service creates a richer understanding of effective leadership in high-pressure environments.

Content and Structure
The book skillfully balances personal narratives with practical leadership principles. Each contributor shares hard-earned lessons from their career, creating a mosaic of experiences that collectively illustrate the evolution of EMS as a profession. The stories range from operational challenges in the field to strategic vision-setting at the organizational level, providing readers with insights applicable across different career stages and leadership roles.

Woodyard's curation is particularly effective; the book avoids becoming a disjointed collection of anecdotes by maintaining thematic coherence around core leadership principles, while still allowing each contributor's unique voice to shine through.

Strengths
- **Authenticity:** The real-world nature of these stories gives the book a credibility that purely academic treatments of leadership often lack. These are lessons learned in ambulances, emergency departments, and boardrooms where the stakes are genuinely life and death.
- **Diversity of Perspectives:** With over 40 contributors representing different aspects of EMS—from field operations to policy development—the book provides a comprehensive view of leadership challenges across the profession.
- **Practical Application:** Readers receive actionable insights they can immediately apply in their own leadership roles, rather than abstract theories.
- **Historical Value:** The book serves as both a leadership guide and a historical document, capturing the wisdom of leaders who have guided EMS through its evolution into a sophisticated healthcare profession.

Who Should Read This Book
This book is essential reading for current and aspiring EMS leaders at all levels. However, its value extends beyond the EMS community. Healthcare administrators, public safety officials, and anyone interested in crisis leadership will find valuable insights. The principles discussed—decision-making under pressure, building resilient teams, and leading organizational change—are universally applicable to high-stakes environments.

Final Verdict
"Leadership in Action" admirably fulfills its goal of preserving and sharing the collective wisdom of EMS leadership pioneers. It functions both as a reference guide for specific leadership challenges and as an inspirational read for those committed to serving others in emergency situations. While it may not revolutionize leadership theory, it provides something equally valuable: practical wisdom from those who have done the work and led with distinction in one of society's most demanding professions.

The collaboration between Woodyard and Panetta creates a unique bridge between EMS-specific leadership and broader public service leadership, making this a standout contribution to both the EMS literature and the broader leadership canon. For a profession that has sometimes struggled to document and share its institutional knowledge, this book represents an important step toward preserving the lessons learned by its most influential leaders.

On the Shoulders of Giants

Florence Nightingale
1820 - 1910

"When she started out there was no such thing as nursing," says Caroline Worthington, director of the Florence Nightingale Museum…"The Dickens character Sarah Gamp, who was more interested in drinking gin than looking after her patients, was only a mild exaggeration. Hospitals were places of last resort where the floors were laid with straw to soak up the blood.

Florence transformed nursing when she got back [from the Crimea]. She had access to people in high places and she used it to get things done. Florence was stubborn, opinionated and forthright but she had to be those things in order to achieve all that she did."

- Simon Edge

The Lady with the Lamp,
depicting Nightingale in Scutari, Turkey

Artist credit: Henrietta Rae

Image credit: Wikipedia

Test Yourself

ECG

Identify the rhythm.

A. Ventricular trigeminy

B. Ventricular quadrigeminy

C. Second-degree type II atrioventricular block

D. Multifocal premature ventricular contractions

Clinical Calculation

You are preparing to add 18 mL of amiodarone to a 500 mL bag of D_5W. The concentration of the amiodarone is 150 mg per 3 mL.

What concentration of amiodarone will you have once it has been mixed in the D_5W?

Species Identification

During a deployment to Syria, one of your interpreters excretes an intestinal worm measuring 12 meters in length. The worm is segmented and flat, with what appears to be a ~1 cm head on one end. Your examination of the head and a body segment reveal the images below. With what worm was this person parasitized?

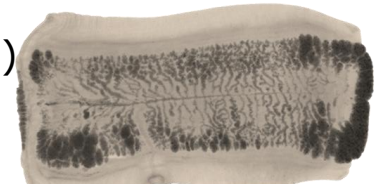
A. *Taenia solium* (pork tapeworm)

B. *Taenia saginata* (beef tapeworm)

C. *Diphyllobothrium latum* (fish tapeworm)

D. *Echinococcus granulosus* (dog tapeworm)

Head (plus partial segment) length: 2 cm



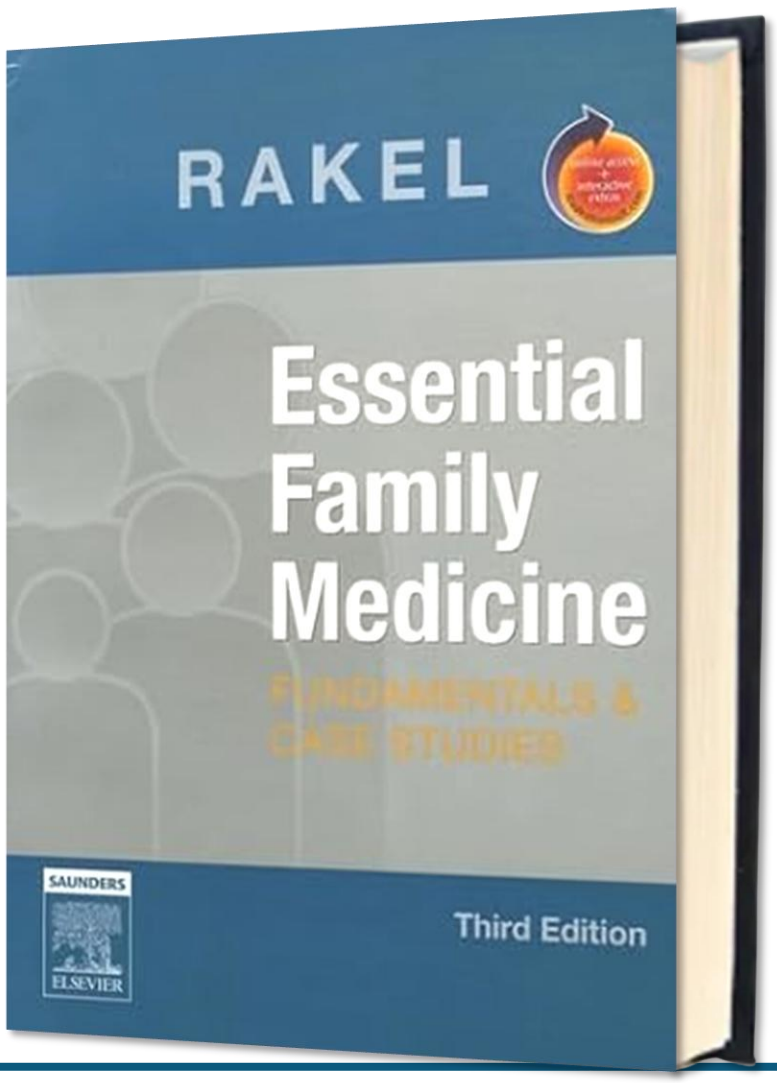
Body segment length: 2 cm

Answers will appear in the Spring 2026 Compass

Answers to "Test Yourself" from the previous issue:
ECG: D. 1st degree atrioventricular block
Clinical calculation: 77.4 mL of 8.4% $NaHCO_3$ (sodium bicarb)
Species identification: B. Gaboon viper

Resources

Essential Family Medicine, 3rd edition



LifePak 35

available at stryker.com

LIFEPAK® 35

monitor/defibrillator

About CoROM

The College of Remote and Offshore Medicine Foundation is an academic not-for-profit organisation for healthcare professionals working in the remote, offshore, military and security industries.

The College was founded in 2016 and is governed by a Board of Regents supported by a faculty of medical professionals from four continents. The College is a Higher Education Institution registered with the Malta Further and Higher Education Authority. License No. 2018-022.

CoROM focuses on the improvement of medical training and the practice of healthcare for those working in remote, austere and resource-poor environments.

What does CoROM specialise in?

Tropical Medicine

We provide clinical research and academic training in Tropical Medicine for medical professionals located worldwide.

CoROM provides the Tropical Medicine module for the NATO Special Operations Combat Medic (NSOCM) course at the International Special Training Centre in Pfullendorf, Germany.

Austere Medicine and Prolonged Field Care

The tyranny of distance requires that medical professionals working in Africa, Asia and the Middle East must have the ability to provide best practice medicine for extended periods of time.

CoROM focuses on the practice of medicine with limited resources and the ability to improvise whilst providing excellent medical care.

Austere Critical Care

The ability to provide care for critically ill casualties must be available regardless of location and resources.

CoROM provides Critical Care Transport curriculum and expands into the provision of critical care in less-than-ideal environments.

Who is CoROM working with?

UNITED NATIONS

Wilderness Medical Society

ТАКТИЧНА МЕДИЦИНА ПІВНІЧ
TACTICAL MEDICINE NORTH

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air ambulance
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HEALING
TEACHING

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RS(+)
Sjøredningsskolen

Calendar

SEATTLE
MFSLR 15 January

GERMANY
APUS 22-23 February

MALTA

Medicine in the Mediterranean	30 Jan-1 Feb 2026
AREMT	2-7 Feb
TTEMS	9-13 Feb
APUS	14-15 Feb
ICARE	16-20 Feb
AREMT	23-28 March
RPP104	27 April-16 May
AREMT	7-12 Sept
TTEMS	14-18 Sept
APUS	19-20 Sept
ICARE	21-25 Sept

NORTH CAROLINA
SOMSA Conference 27 April - 1 May
Tactical Medicine Review (Clark, Holmstrøm, Birks, Moront)
Improvised Medicine (O'Kelly, Moront, Shertz, Loos)
Austere Clinical Laboratory Diagnosis (O'Kelly)

TANZANIA
Clinical Tropical Medicine Dates TBD

Degree Programmes

Bachelor of Science Remote Paramedic Practice
Master of Science in Austere Critical Care
Master of Global Health Leadership and Practice
Doctor of Health Studies

Advanced Certificate & Diploma Courses

Diploma Remote Paramedic
Higher Diploma of Remote Paramedic Practice
PG Diploma in Austere Critical Care
PG Cert Tropical Medicine & Hygiene
Award in Tropical & Expedition Medicine

Online Courses

Critical Care Transport
Basics of Resource Limited Critical Care
Aeromedical Retrieval Medicine for Extreme Altitude
Pharmacology for the Remote Medic
Minor Illnesses Course
Minor Emergencies Course
Tactical Medicine Review

Clinical Placements

Kilimanjaro Christian Medical Center (KCMC), Tanzania
Remote clinics, Northern Tanzania
Ternopil State Medical University, Ukraine
Kibosho District Hospital, Kilimanjaro
Ghana National Ambulance Service

LEGEND

ACC	Acute Critical Care
AEC	Austere Emergency Care
ACLS	Advanced Cardiac Life Support
AHA	American Heart Association
APUS	Austere and Prehospital Ultrasound
AREMT	Award in Remote Emergency Medical Technician
ATTEMS	Advanced Tropical, Travel and Expedition Medical Skills
FiCC	Foundations in Critical Care (RPP203)
IBSC	International Board of Specialty Certifications
MFSLR	Mastering Fundamentals of Skin Laceration Repair
PALS	Paediatric Advanced Life Support
PARSIC	Prehospital Airway and Rapid Sequence Induction course
PG Cert	Postgraduate certificate
RMLS	Remote Medical Life Support
RPP104	Fundamentals of Paramedic Practice (in-classroom)
SOMSA	Special Operations Medical Association Scientific Assembly
TTEMS	Tropical, Travel and Expedition Medical Skills

For more information about training with CoROM, please visit corom.edu.mt

GLOBAL rescue

Quick Guide: Global Rescue Membership for the CoROM Family

Why You Need It

CoROM has partnered with Global Rescue to offer comprehensive travel protection that goes beyond ordinary insurance, giving you access to real-time support, medical evacuation, and field rescue — even from the most challenging environments. We've selected this offering because our CoROM family is likely to travel for remote clinical rotations, humanitarian projects, adventure tourism, electives, international training or even work. Global Rescue offers a low-cost, no stress solution. From our main page, click the red box or go directly to: https://partner.globalrescue.com/collegeofremoteoffshoremedicine/index.htm

What's Included in the Membership

24/7/365 Traveler Assistance & Advisory — Real-time help for health-care access, local healthcare systems, visa/passport issues, translation, and more.

Worldwide Field Rescue — If illness or injury strikes and you cannot get to care on your own, Global Rescue will deploy a rescue team to transport you to the nearest capable medical facility.

Medical Evacuation & Repatriation — If you require hospitalization far from home, Global Rescue will transport you to your home-hospital of choice (if more than 100 miles away) at no additional cost.

Destination Reports & Event Alerts — Up-to-date advisories on health, security, and travel conditions in 215+ countries and principalities.

Situations When It's Critical

Clinical rotations or fieldwork in **remote, resource-limited, or unstable regions**

International travel or humanitarian deployments

Backcountry expeditions, high-altitude work, or travel with unpredictable logistics

Any scenario where local medical infrastructure may be insufficient, or evacuation may be needed

How to Enroll (and Why It Matters)

Use the **official Global Rescue link** on the CoROM website so we receive appropriate credit for your membership, ensuring the sustainability of our partnership.
https://partner.globalrescue.com/collegeofremoteoffshoremedicine/index.html

Choose a membership plan based on the length and nature of your travel (short-term, annual, etc.).

Before You Travel — Simple Steps to Take

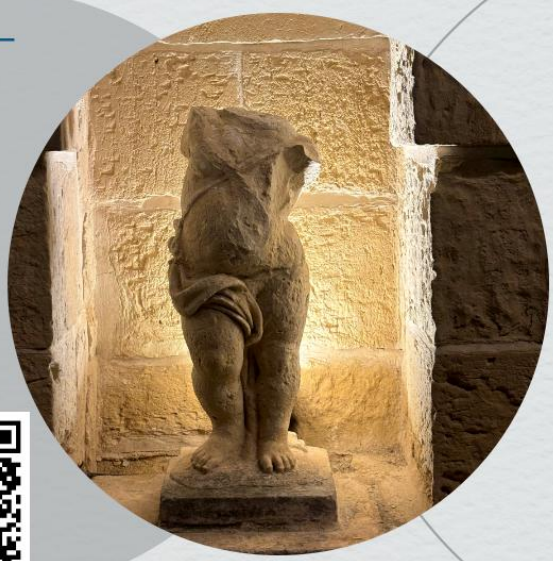
✓ Confirm your membership is active
✓ Save the Global Rescue contact number (**+1-617-459-4200**) or install the My Global Rescue app on your phone or satellite device.
✓ Review the health and security profile of your destination
✓ Keep membership details readily accessible in case of emergency

Peace of Mind Matters

Global Rescue isn't just another travel add-on — it's a safety net, a rapid-response team, and your backup abroad. This membership is more than recommended – it's essential.

Don't lose your head - register now for MiM26!

The Medicine in the Mediterranean Conference is where you will discover unparalleled insights and connect with leading experts in remote and austere medicine in a one-of-a-kind gathering.



30 January - 1 February 2026
Sliema, Malta

More info: https://corom.edu.mt/medicine-in-the-mediterranean-2026

Learn more at IBSCertifications.org

Dr. Mallinson is an experienced Paramedic, Rural Generalist (MRCGP), Prehospital Doctor and the Co-Director of Prehospital Care and responder for BASICS Scotland. @MallinsonT

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Volunteers Wanted

M2H
WWW.MISSIONTOHEAL.ORG

Mission to Heal goes where medical need is greatest. We visit remote regions to teach basic surgical skills to local healthcare practitioners so they can care for their community year-round. Due to our educational approach, we need a variety of expertise on these missions. We welcome the following specialists to volunteer with us:

Nurse Anesthetists
Tropical Medicine Specialists
Obstetricians & Gynecologists
Optometrists & Ophthalmologists
Dentists & Oral Surgeons
General Surgeons
OR Nurses
Triage Nurses
Medical & Dental Students
Residents

As you can see, it's a wide-ranging list – but it's not all inclusive. If you have a specialty that's not listed here, but would love to volunteer with us, there is still a place for you!
Why volunteer?

- Get a transformational learning experience where you learn just as much as you teach.
- Experience a culture outside of your own.
- Experience how healthcare is practiced in other countries.
- Use your expertise to benefit the less fortunate.

As one of our volunteers said to us, "We want to volunteer with you because you actually *do*."

Useful links:
Volunteer with Mission to Heal - https://missiontoheal.org/apply/
Volunteer FAQ's - https://missiontoheal.org/faqs/
Our approach to missions - https://missiontoheal.org/approach/
Volunteer reflections - https://missiontoheal.org/blog/
Questions about M2H missions – samuel.jangala@missiontoheal.org

2026 Missions:

Uganda I	April 10-18
Uganda II	June 12-20
Uganda III & IV	August 7-22

FASTCAN 26

SEPTEMBER 2026 — VANCOUVER, BC

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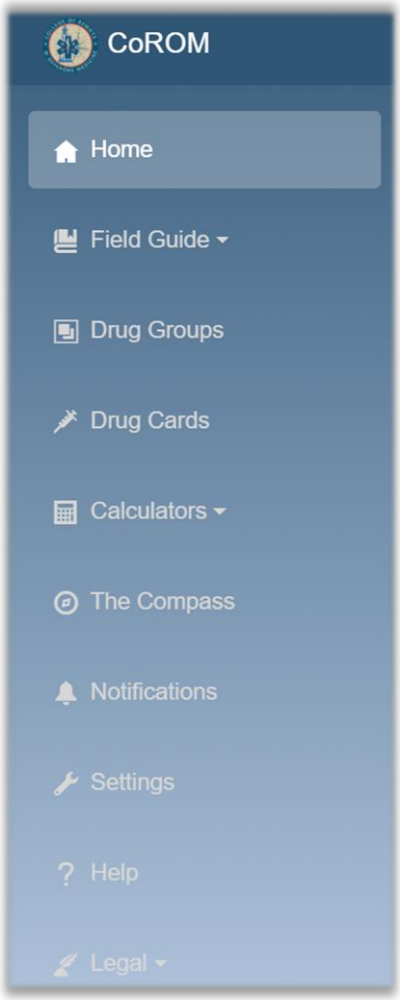
Remote & Austere Medicine Field Guide for Practitioners

Aebhric O'Kelly
PhD(c) FAWM FRSPH CCP-C TP-C
Executive Dean, CoROM

Jason Jarvis
18D MSc(c) NRP TP-C
Tropical Medicine Lead

College of Remote and Offshore Medicine Foundation
www.CoROM.org

2nd Edition ©2020



Contents:

Spleno-renal pouch

Use convex probe

Technique *[suggest curve array]*
Position the probe's long axis beneath the costal margin on the left lateral aspect of the patient's abdomen.

What to look for
The presence of fluid as a dark sliver between the solid spleen and kidney organs is indicative of free fluid (e.g. blood) in the abdomen.

Normal appearance of spleen and adjacent kidney ; no black sliver visible at organ interface

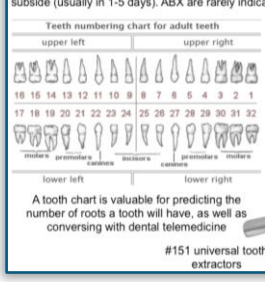
Indications for Tooth Extraction

A tooth that is riddled with cavities (caries) and lacks any sensation will need to be extracted.

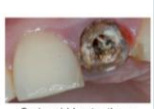
Extraction Sequence

1) Consult a dentist or dental reference
2) Anaesthetize the tooth/teeth using local anaesthetic with epinephrine
3) Use a periosteal elevator to break gum away from tooth
4) Use a straight elevator to pry the tooth loose in its socket
5) Extract tooth using the appropriate extraction forceps (*do not twist a multi-root tooth*)
6) Inspect to ensure all of the root was removed
7) Give codeine and paracetamol for pain
8) Apply gauze pressure to socket for 60 minutes
9) Instruct patient not to rinse for 12 hours

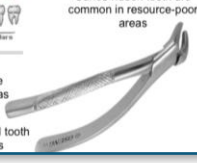
***Dry socket** (localized osteitis) may result in loss of the blood clot in the socket. This condition will develop over 3-5 days and is very painful, with foul taste and odour in the mouth. Treatment consists of irrigation and packing of eugenol-soaked (1-2 drops) iodoform gauze into the socket and PO NSAIDs. Change gauze daily until s/sx subside (usually in 1-5 days). ABX are rarely indicated.



A tooth chart is valuable for predicting the number of roots a tooth will have, as well as conversing with dental telemedicine



Caries-ridden teeth are common in resource-poor areas



#151 universal tooth extractors

Labour and Delivery Emergencies

Breech Birth: An umbrella term for a baby that is not delivering head-first.
Complete breech: Buttocks and feet set to deliver first
Footling breech: One or both feet are pointed down and will deliver first
Frank breech: Buttocks set to deliver first (feet near fetal head)

Complete breech *Footling breech* *Frank breech*

Amniotic Fluid Embolism: A rare complication of labour, in which amniotic fluid is pulled into the venous circulation of the uterus and lodges in the maternal pulmonary arteries, causing cardiac arrest.

Uterine Rupture: The uterus may rupture during labour if there is a weak spot on the uterus from scarring or from previous pregnancies.

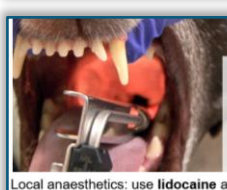
Placenta Accreta: A deeply-implanted placenta that does not detach during the 3rd stage of childbirth. This results in uncontrolled haemorrhage.

Prolapsed Umbilical Cord: This occurs when the cord precedes the fetus exiting the uterus. If the cord becomes compressed, the fetus will become hypoxic.

Nuchal Cord: The umbilical cord is wrapped around the fetus's neck.

Shoulder Dystocia: This is a condition in which the fetus's shoulder becomes stuck in the birth canal after the head has partially or fully delivered.

Postpartum Haemorrhage: Defined as blood loss of more than 500mL following delivery.



Intubation: use a 9-12 mm ETT and a size 4 Miller blade.

Position dog in prone position for improved access to glottis.

Local anaesthetics: use **lidocaine** as you would on a human patient; use staples instead of sutures if available; keep dog from licking wound.

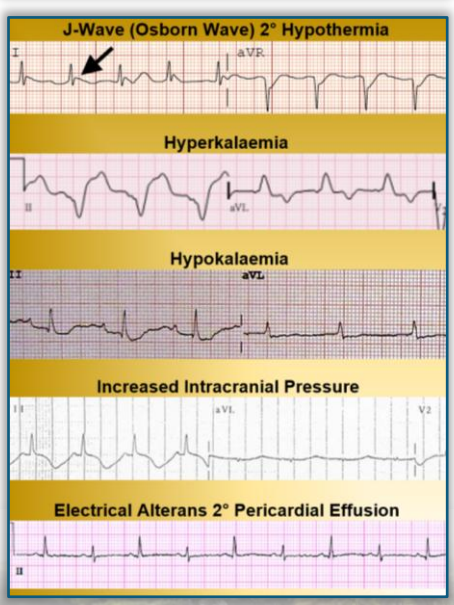
Ear infections are very common. To clean a dog's L-shaped ear canal, apply a slightly acidic solution into the ear, massage base of ear for 30 seconds, then allow dog to shake clear; repeat PRN, and do not put ear-cleaning devices into dog's ear

Ear allergic reactions are also common: treat by cleaning ear as above, and give corticosteroids

Ear infections: S/Sx: scratching ear, discharge, loss of balance, walking in circles. Tx: amoxicillin 5-10mg/pound q12-24h x10 days

Rat poisoning is the most common accidental poisoning
- Rat poisoning is an anticoagulant
- S/sx usually seen 3-5 days post-exposure: difficulty breathing, anorexia, blood in stool; most common cause of death is bleeding into the thorax
- If caught early, induce vomiting, or perform gastric lavage, or give activated charcoal
- Treatment: vitamin K1

Dog ears accumulate debris and bacteria, and should be regularly cleaned using a slightly acidic solution, such as diluted vinegar



Onchocerciasis (River blindness)

Causative organism: Filarial nematode *Onchocerca volvulus*
Vector: *Simulium* genus black fly
Life cycle: Larval entry at black fly bite – maturation in SC tissue – microfilariae released into skin, connective tissue, blood, sputum – black fly ingests microfilariae
Endemic in: Sub-Saharan Africa, Yemen, Mexico, Central America, Amazonia
Prevalence: 18 million infected, 270k blind, 750k visually impaired
Annual deaths: None
Incubation period: 9 months – 2 years after inoculation
S/Sx: Asymptomatic palpable nodules (containing adult worms), intensely pruritic dermatitis, lymphadenopathy, anterior eye lesions, "hanging groin", and "leopard skin" on legs
Ddx: Loa loa (African eye worm), cysticercosis, tumor, dermatitis
Dx: Microfilariae found in skin-snips or seen in eye during slit-lamp exam
Prevention: Avoidance of black fly bites
Prophylaxis: Ivermectin MDA annually or semi-annually
Tx: Ivermectin
Pearl: Check for loa loa coinfection prior to giving ivermectin

The burden of onchocerciasis: children leading blind adults in Africa

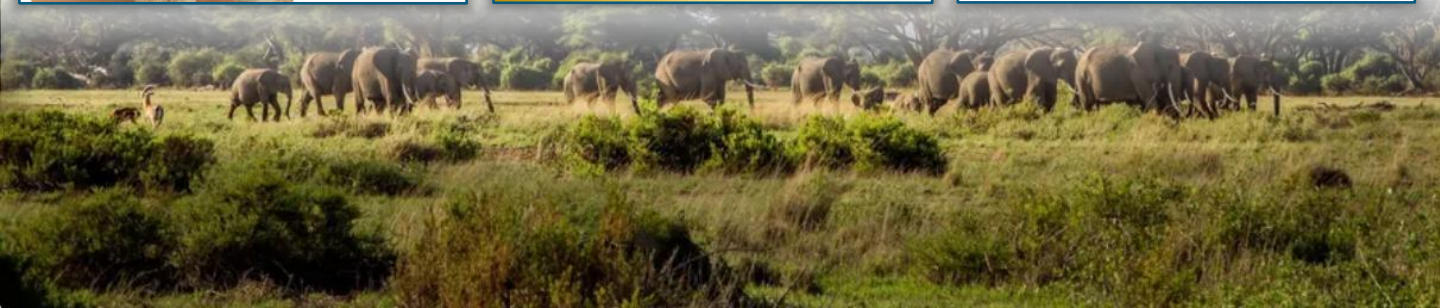
By Otis Historical Archives Nat'l Museum of Health & Medicine

Simulium damnosum black fly vector

Treatment
Ivermectin

"Leopard skin" dermatitis

WHO



Coming Soon!

Remote & Austere Medicine Field Guide for Practitioners

Edited by Jason Jarvis and Aebhric O'Kelly

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THIRD EDITION