

NTRAP BURNS PANEL—LITERATURE REVIEW

Review Articles

01. The Burn Survivor Perspective

Acton A, Badger K, O’Leary J. (2017). Journal of Burn Care & Research, 38(3), e591-e592.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28346300>

No abstract

02. Burn State of the Science: Fluid Resuscitation

Cartotto R, Greenhalgh DG, Cancio C. (2017). Journal of Burn Care & Research, 38(3), e596-e604.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28328669>

Recognition of fluid creep has driven a large amount of the scientific investigation in the area of acute fluid resuscitation for burn patients. The role of colloids in ameliorating fluid creep is controversial, despite the fact that a fluid-sparing effect of colloids has been recognized for some time. All but one of the available prospective studies using colloids are more than a decade old, and a modern randomized controlled trial (RCT) comparing crystalloids to colloids is long overdue. While urinary output continues to be the main endpoint for fluid titration, there has been a moderate amount of interest in the use of transpulmonary thermodilution to guide fluid resuscitation. [Outcomes of related studies are inconsistent.] Improvements in clinical outcome have not been convincingly demonstrated, and concerns persist surrounding the possibility of induction of an osmotic diuresis, leading to intravascular volume depletion. An RCT is urgently required to evaluate high-dose vitamin C as an adjunct to crystalloid resuscitation compared with the use of crystalloids alone.

03. Inhalation Injury: State of the Science 2016

Foster KN, Holmes IV JH. (2017). Journal of Burn Care & Research, 38(3), 137-141.

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URL: <https://www.ncbi.nlm.nih.gov/pubmed/28328666>

This article summarizes research conducted over the last decade in the field of inhalation injury in thermally injured patients. This includes brief summaries of the findings of the 2006 State of the Science meeting with regard to inhalation injury, and of the subsequent 2007 Inhalation Injury Consensus Conference. The reviewed studies are categorized into five general areas: diagnosis and grading; mechanical ventilation; systemic and inhalation therapy; mechanistic alterations; and outcomes.

04. Summary of the 2012 ABA Burn Quality Consensus Conference

Gibran N et al. (2013). Journal of Burn Care & Research, 34(4), 361-385.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/23835626>

No abstract

05. Importance of Measuring Outcomes After Burns: Why They Matter

Gibran NS. (2017). Journal of Burn Care & Research, 38(3), e589-e590.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28338516>

No abstract

06. Community Reintegration

Holavanahalli RK, Badger K, Acton A. (2017). Journal of Burn Care & Research, 38(3), e632-e634.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28368917>

No abstract

07. Pain and Pruritus Postburn Injury

Nedelec B, Carrougher GJ. (2017). Journal of Burn Care & Research, 38(3), 142-145.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28328657>

No abstract

08. Agreement on what to measure in randomised controlled trials in burn care: study protocol for the development of a core outcome set

Young A, Brookes S, Rumsey N, Blazeby J. (2017). BMJ Open, 7(6), e017267.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28669969>

In 2004, nearly 11 million severely burn-injured patients required medical care worldwide. Burns cause prolonged hospitalisation and long-term disability. Although mortality has been reduced, morbidity remains significant. Burn care is costly and decision-making is challenging. A range of procedures are performed at different times after injury; new technology is emerging and alternate care pathways are regularly introduced. Data to guide evidence-based decision-making are lacking. Researchers use different outcomes to assess recovery, so it is not possible to combine trial information to draw meaningful conclusions. Early recovery measures include length of hospital stay, healing time and treatment complications. Longer-term outcomes include issues with function, cosmesis and psychological health. Reporting an agreed set of the most important outcomes (core outcome set (COS)) in randomised controlled trials (RCTs) will allow effective evidence synthesis to support clinical decisions. Patient input will ensure relevance.

09. Functional Outcomes Following Burn Injury

Ryan CM, Parry I, Richard R. (2017). Journal of Burn Care & Research, 38(3), e614-e617.

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URL: <https://www.ncbi.nlm.nih.gov/pubmed/28328664>

Major advances in functional recovery following burn injury over the last ten years include the development of conceptual framework for disability assessment and its application to burn recovery, the description of the long-term outcomes in the burn population, and progress in basic science research leading to new treatments that improve long-term functional outcomes. Future tasks and challenges include the development of common data elements and standards for burn recovery in order to measure and optimize the path toward functional recovery. The development of patient-reported outcome measures with benchmarks for recovery over time has the potential to improve patient-provider communication and quality of patient-centered care. The study of burn recovery should include an examination of resiliency along with the study of disabilities following burn injury. Better understanding of the mechanisms, impact and modulation of hypermetabolism and inflammation following burn injury is essential to improve functional recovery. Continued basic science and clinical research must focus on scar modulation and skin replacements and address recalcitrant

problems such as heterotopic ossification. Health tracking technologies should be leveraged to understand and optimize physical therapy interventions.

10. Burn Wound Healing and Tissue Engineering

Singer AJ, Boyce ST. (2017). *Journal of Burn Care & Research*, 38(3), e605-e613.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28328668>

In 2016 the American Burn Association held a State of the Science conference to help identify burn research priorities for the next decade. The current paper summarizes the work of the sub-committee on Burn Wound Healing and Tissue Engineering. We first present the priorities in wound healing research over the next 10 years. We then summarize the current state of the science related to burn wound healing and tissue engineering including determination of burn depth, limiting burn injury progression, eschar removal, management of microbial contamination and wound infection, measuring wound closure, accelerating wound healing and durable wound closure, and skin substitutes and tissue engineering. Finally, a summary of the round table discussion is presented.

11. Scar Management Following Burn Injury

Tredget EE, Shupp JW, Schneider JC. (2017). *Journal of Burn Care & Research*, 38(3), 146-147.

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URL: <https://www.ncbi.nlm.nih.gov/pubmed/28338518>

At the 2016 State of the Science meeting, clinicians and burn survivors met to discuss the advances in scar prevention, evaluation and treatment. While emerging evidence exists to support pressure garment treatment of scars and the use of silicone gel, further research is necessary to better delineate indications duration and efficacy of established therapies and to develop and test badly needed new treatments. More accurate and objective assessment of burn depth would assist in the prevention and identification of wounds requiring customized surgery. Laser treatment of scar while rapidly gaining popularity, still lacks high quality evidence as to its efficacy. The psychological impact of burn scars on the recovering patient is poorly appreciated and increased interaction with our patients is needed to more fully understand and address the impact on health-related quality of life of their burn scars.

12. Burn Survivor Focus Group

Wiechman S, Holavanahalli. (2017). *Journal of Burn Care & Research*, 38(3), e593-e595.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28346299>

No abstract

13. History and Advancement of Burn Treatments

Liu HF, Zhang F, Lineaweaver WC. (2017). *Annals of Plastic Surgery*, 78(2 Suppl 1), S2-S8.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28079548>

Advances in burn care have accelerated within the last 50 years. The principal modalities of and approaches to burn treatment include dressings, antimicrobials, fluid resuscitation, burn wound excision, skin grafting, and use of skin substitutes. This review presents a historical outline of these approaches, their current status, and prospects for the future of burn care.

14. Burn Wound Healing and Treatment: Review and Advancements

Rowan MP, Cancio LC, Elster EA, Burmeister DM, Rose LF, Natesan S, Chan RK, Christy RJ, Chung KK. (2015). *Critical Care*, 19(243).

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URL: <https://www.ncbi.nlm.nih.gov/pubmed/26067660>

Burns are a prevalent and burdensome critical care problem. The priorities of specialized facilities focus on stabilizing the patient, preventing infection, and optimizing functional recovery. Research on burns has generated sustained interest over the past few decades, and several important advancements have resulted in more effective patient stabilization and decreased mortality, especially among young patients and those with burns of intermediate extent. However, for the intensivist, challenges often exist that complicate patient support and stabilization. Furthermore, burn wounds are complex and can present unique difficulties that require late intervention or life-long rehabilitation. In addition to improvements in patient stabilization and care, research in burn wound care has yielded advancements that will continue to improve functional recovery. This article reviews recent advancements in the care of burn patients with a focus on the pathophysiology and treatment of burn wounds.

15. Review of Burn Research for the Year 2013

Sen S, Palmieri T, Greenhalgh D. (2014). *Journal of Burn Care & Research*, 35(5), 362-368.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/25094008>

The diverse medical disciplines that are involved in the care of burn patients is reflected in the robust and varied scientific and clinical research of burn injury. In the calendar year of 2013, over 1000 articles were published in peer-reviewed journals in the area of burn injury. This review summarizes select, interesting, and potentially influential articles in areas of critical care, epidemiology, infection, inhalation injury, nutrition and metabolism, pain and pruritus, psychology, reconstruction and rehabilitation, and wounds.

16. Review of Burn Research for the Year 2014

Sen S, Palmieri T, Greenhalgh D. (2015). *Journal of Burn Care & Research*, 36(6), 587-594.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/26204384>

Management of burn injuries requires treatments and interventions from many disciplines. Worldwide, burn patients suffer from physical and psychological challenges that impact their lives socially and economically. In this review, we will highlight a handful of the numerous articles published in multiple areas of burn care. The areas of burn care addressed in the article are: epidemiology; burn resuscitation, critical care, and infection; nutrition and metabolism; pain and rehabilitation; prevention and firefighter safety; psychology; and reconstruction and wounds.

17. Education in Burns: Lessons from the Past and Objectives for the Future

Tevlin R, Dillon L, Clover AJP. (2017). *Burns*, 43(6), 1141-1148.

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URL: <https://www.ncbi.nlm.nih.gov/pubmed/28408146>

Burns are devastating to the individual and society, representing a huge biomedical burden. Improved education in burns has however ignited a revolution in high-income countries-burn mortality is reducing. Education in burns is far-reaching. For the purpose of this concise review, we focus on four categories: education of both (1) emergency and (2) specialist physicians, and the general population, both at a (3) societal and (4) individual level. Tragically, the global burns picture is bleak with burns representing a neglected but solvable health crisis. Ninety-five percent of burns occur in low-income countries, causing enormous suffering, death and disability. Here, we examine the literature

detailing burn education with a focus on past lessons, current trends and future objectives. We have identified key educational objectives to revolutionise burn care on a global perspective. Now is the time to build on promising educational strides to reduce the global burns burden.

18. On the Horizon: Research Priorities in Burns for the Next Decade

Wolf SE, Tompkins RG, Herndon DN. (2014). *Surgical Clinics of North America*, 94(4), 917-930.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/25085097>

This review demonstrates that many advances have been made in burn care that have made dramatic differences in mortality, clinical outcomes, and quality of life in burn survivors; however, much work remains. In reality, the current standard of care is insufficient, and we cannot be satisfied with the status quo. We must strive for the following goals: no deaths due to burn, no scarring, and no pain. These particular goals have only begun to be confronted.

19. Burn Rehabilitation and Research: Proceedings of a Consensus Summit

Richard R, Baryza MJ, Carr JA, Dewey WS, Dougherty ME, Forbes-Duchart L, Franzen BJ, Healey T, Lester ME, Li SK, Moore M, Nakamura D, Nedelec B, Niszcak J, Parry IS, Quick CD, Serghiou M, Ward RS, Ware L, Young A. (2009). *Journal of Burn Care & Research*, 30(4), 543-573.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/19506486>

Burn rehabilitation is an essential component of successful patient care. In May 2008, a group of burn rehabilitation clinicians met to discuss the status and future needs of burn rehabilitation. Fifteen topic areas pertinent to clinical burn rehabilitation were addressed. Consensus positions and suggested future research directions regarding the physical aspects of burn rehabilitation are shared.

20. Evidence-Based Prevent Catheter-Associated Urinary Tract Infections Guidelines and Burn-Injured Patients: A Pilot Study

Christ-Libertin C, Black S, Latacki T, Bair T. (2015). *Journal of Burn Care & Research*, 36(1), e1-e6.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/25501781>

The objective of this pilot study was to describe effectiveness of an evidence-based guideline designed to prevent catheter-associated urinary tract infection (CA-UTI) in reducing CA-UTI in the burn-injured patient population. The study used a pre- and post-bundle implementation comparison design. Inclusion criteria included burn-injured patients of all ages with an indwelling urinary catheter. Patient demographic data were collected by medical record review when informed of a CA-UTI. The Rosswurm-Larrabee Model six-step process model guided implementation of practice change. The sample included eight burn-injured patients (7-88 years). Catheter day range was 1 to 27 days. Each patient had a clear indication for an indwelling urinary catheter; the need for accurate urinary output measurement in a critically injured patient. Four patients had a catheter placed twice during the stay. Nurses reported using a bladder scanner to assess bladder volume for post-operative patients with urinary retention avoiding use of an indwelling urinary catheter in some cases. Integration of evidence-based guidelines in practice resulted in a reduced CA-UTI rate, reduced catheter days, increased days between CA-UTI, and outperformance of the national benchmark statistic. In 2013, the burn unit reduced catheter days by about 75% and reduced infection incidence by >90% in three quarters after implementation of the practice changes. The unit was able to sustain a CA-UTI rate of zero for 248 days.

21. The development and impact of heterotopic ossification in burns: a review of four decades of research.

Kornhaber, R., et al., *Scars Burn Heal*, 2017. 3: p. 2059513117695659.

PDF: [Get PDF HERE](#)

URL:

<https://www.ncbi.nlm.nih.gov/pubmed/?term=The+development+and+impact+of+heterotopic+ossification+in+burns%3A+a+review+of+four+decades+of+research>

Heterotopic ossification (HO) is the formation of lamellar bone within connective and other tissue where bone should not form and is a rare complication after burn injury. However, it leads to severe pain and distress, marked reduction in joint range of motion (ROM), impaired function and increased hospital length of stay. The pathophysiology, incidence and risk factors of HO remain poorly understood in burns and other traumas and the management, controversial. The aim of this comprehensive review, therefore, was to synthesise the available evidence on the development and treatment of HO after acute burn injury...The findings from this review indicate that multicentre data pooling is needed to understand the optimum pathway to prevention, identification and treatment of HO in acute burn patients.

22. One world one burn rehabilitation standard.

Serghiou, M.A., et al., Burns, 2016. **42**(5): p. 1047-1058.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/27161089>

According to the World Health Organization (WHO) burns are a huge global health problem resulting in death and devastation to those who survive large burns as they are faced with significant functional limitations that prevent purposeful and productive living. Members of the International Society for Burn Injuries (ISBI) Rehabilitation Committee conducted a needs assessment survey in order to characterize how burn rehabilitation is implemented worldwide and how the international burn rehabilitation community can help improve burn rehabilitation in identified geographic locations which need assistance in rehabilitating burn survivors successfully. The results of this survey indicated that poor and in some cases resource limited environments (RLEs) around the world seem to lack the financial, educational and material resources to conduct burn rehabilitation successfully. It appears that there are vast discrepancies in the areas of education, training and capacity to conduct research to improve the care of burn survivors as evidenced by the variation in responses between the RLEs and developed countries around the globe. In some cases, the problem is not knowledge, skill and ability to practice burn rehabilitation, but rather having the resources to do so due to financial difficulties.

23. The need for effective literature searching for burns research: A timely reminder.

Kornhaber, R.A., et al., Burns, 2016. **42**(5): p. 1157-1158.

PDF: [Get PDF HERE](#)

URL:

<https://www.ncbi.nlm.nih.gov/pubmed/?term=The+need+for+effective+literature+searching+for+burns+research%3A+A+timely+reminder.>

There is a continued upswing in the number of studies designed to promote higher level of evidence published in BURNS. However, it is our further observation that the standard of search strategies and reporting could be improved...Developing search strategies using appropriate databases, indexed and Medical Subject Headings (MeSH) and employing Boolean logic will facilitate capturing relevant burns research. A useful resource for designing search strategies has been released by Yale School of Medicine <http://library.medicine.yale.edu/tutorials/996>. In addition to improving the quality and focus of assimilated literature, systematic search strategies are enhanced through the application of standardised risk-of-bias checklists. As a starting point, we suggest exploring those available from the Cochrane Collaboration, Strengthening the Reporting of Observational Studies in Epidemiology

(STROBE), Consolidated Standards of Reporting Trials (CONSORT), Critical Appraisal Skills Programme (CASP) www.casp-uk.net or Consensus based Standards for the selection of health status Measurement Instrument (COSMIN)...

24. Long term outcomes data for the Burns Registry of Australia and New Zealand: Is it feasible?

Gabbe, B.J., et al., Burns, 2015. **41**(8): p. 1732-1740.

PDF: [Get PDF HERE](#)

URL:

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Long+term+outcomes+data+for+the+Burns+Registry+of+Australia+and+New+Zealand%3A+Is+it+feasible%3F>

Incorporating routine and standardised collection of long term outcomes following burn into burn registries would improve the capacity to quantify burn burden and evaluate care...

Five Burns Registry of Australia and New Zealand (BRANZ) centres participated in this prospective, longitudinal study. The low participation rates, high loss to follow-up and responder bias observed indicate that greater consideration needs to be given to alternative models for follow-up, including tailoring the follow-up protocol to burn severity or type.

25. Burn rehabilitation and research: proceedings of a consensus summit.

Richard, R., et al., J Burn Care Res, 2009. **30**(4): p. 543-73.

PDF: [Get PDF HERE](#)

URL:

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Burn+rehabilitation+and+research%3A+proceedings+of+a+consensus+summit.>

Burn rehabilitation is an essential component of successful patient care. In May 2008, a group of burn rehabilitation clinicians met to discuss the status and future needs of burn rehabilitation. Fifteen topic areas pertinent to clinical burn rehabilitation were addressed. Consensus positions and suggested future research directions regarding the physical aspects of burn rehabilitation are shared.

26. A clarion to recommit and reaffirm burn rehabilitation.

Richard, R.L., et al., J Burn Care Res, 2008. **29**(3): p. 425-32.

PDF: [Get PDF HERE](#)

URL:

<https://www.ncbi.nlm.nih.gov/pubmed/?term=A+clarion+to+recommit+and+reaffirm+burn+rehabilitation.>

Burn rehabilitation has been a part of burn care and treatment for many years. Yet, despite of its longevity, the rehabilitation outcome of patients with severe burns is less than optimal and appears to have leveled off. Patient survival from burn injury is at an all-time high. Burn rehabilitation must progress to the point where physical outcomes parallel survival statistics in terms of improved patient well-being. This position article is a treatise on burn rehabilitation and the state of burn rehabilitation patient outcomes. It describes burn rehabilitation interventions in brief and why a need is felt to bring this issue to the forefront. The article discusses areas for change and the challenges facing burn rehabilitation. Finally, the relegation and acceptance of this responsibility are addressed.

Burn Clinical Practice Guidelines

27. ISBI Practice Guidelines for Burn Care

ISBI Practice Guidelines Committee. (2016). Burns, 42(5), 953-1021.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/27542292>

No abstract

28. ISBI Practice Guidelines for Burn Care, Part 2

ISBI Practice Guidelines Committee. (2018). *Burns*, 44(7), 1617-1706.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/30343831>

No abstract

29. History and Advancement of Burn Treatments

Zuo KJ, Medina A, Tredget EE. (2017). *Annals of Plastic Surgery*, 139(1), 120e-138e.

PDF: [Get PDF HERE](#)

URL: <https://www.ncbi.nlm.nih.gov/pubmed/28027250>

LEARNING OBJECTIVES:

After studying this article, the participant should be able to: 1. Explain the epidemiology of severe burn injury in the context of socioeconomic status, gender, age, and burn cause. 2. Describe challenges with burn depth evaluation and novel methods of adjunctive assessment. 3. Summarize the survival and functional outcomes of severe burn injury. 4. State strategies of fluid resuscitation, endpoints to guide fluid titration, and sequelae of over-resuscitation. 5. Recognize preventative measures of sepsis. 6. Explain intraoperative strategies to improve patient outcomes, including hemostasis, restrictive transfusion, temperature regulation, skin substitutes, and Meek skin grafting. 7. Translate updates in the pathophysiology of hypertrophic scarring into novel methods of clinical management. 8. Discuss the potential role of free tissue transfer in primary and secondary burn reconstruction.

SUMMARY:

Management of burn-injured patients is a challenging and unique field for plastic surgeons. Significant advances over the past decade have occurred in resuscitation, burn wound management, sepsis, and reconstruction that have improved outcomes and quality of life after thermal injury. However, as patients with larger burns are resuscitated, an increased risk of nosocomial infections, sepsis, compartment syndromes, and venous thromboembolic phenomena have required adjustments in care to maintain quality of life after injury. This article outlines a number of recent developments in burn care that illustrate the evolution of the field to assist plastic surgeons involved in burn care.

30. Guidelines for Burn Care Under Austere Conditions: Surgical and Nonsurgical Wound Management

Cancio LC, Barillo DJ, Kearns RD, Holmes IV JH, Conlon KM, Matherly AF, Cairns BA, Hickerson WL, Palmieri T. (2017). *Journal of Burn Care & Research*, 38(4), 203-214.

PDF: [Get PDF HERE](#)

URL: <https://academic.oup.com/jbcr/article/38/4/203/4554850>

No abstract

31. Guidelines for Burn Care Under Austere Conditions: Introduction to Burn Disaster, Airway and Ventilator Management, and Fluid Resuscitation

Kearns RD, Conlon KM, Matherly AF, Chung KK, Bebartá VS, Hansen JJ, Cancio LC, Peck M, Palmieri TL. (2016). *Journal of Burn Care & Research*, 37(5), e427-e439.

PDF: [Get PDF HERE](#)

URL: <https://academic.oup.com/jbcr/article/37/5/e427/4563466>

No abstract

32. Surgical Management of the Burn Wound and Use of Skin Substitutes: An Expert Panel White Paper

Kagan RJ, Peck MD, Ahrenholz DH, Hickerson WL, Holmes IV J, Korentager R, Kraatz J, Pollock K, Kotoski G. (2013). Journal of Burn Care & Research, 34(2), e60-79.

PDF: [Get PDF HERE](#)

URL: <https://academic.oup.com/jbcr/article-abstract/34/2/e60/4565891?redirectedFrom=fulltext>

No abstract

33. American Burn Association Practice Guidelines for Prevention, Diagnosis, and Treatment of Ventilator-Associated Pneumonia (VAP) in Burn Patients

Mosier MJ, Pham TN. (2009). Journal of Burn Care & Research, 30(6), 910-928.

PDF: [Get PDF HERE](#)

URL: <https://academic.oup.com/jbcr/article-abstract/30/6/910/4598387?redirectedFrom=fulltext>

The purpose of this guideline is to review the available published literature on ventilator-associated pneumonia (VAP) as it pertains to the burn patient. It provides an evidence-based recommendation for the prevention, diagnosis, and treatment of VAP in adult burn patients. This guideline is designed to assist all healthcare providers caring for adult burn patients with suspected VAP. Summary recommendations were made using the following grading scale: grade A--supported by at least one well-designed prospective trial with clear-cut results; grade B--supported by several small prospective trials with a similar conclusion; and grade C--supported by a single small prospective trial, retrospective analyses, cases studies, and expert opinions based on investigators' practices.

34. Clinical Guidelines in the Management of Burn Injury: A Review and Recommendations From the Organization and Delivery of Burn Care Committee

Foster K. (2014). Journal of Burn Care & Research, 35(4), 271-283.

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URL: <https://academic.oup.com/jbcr/article-abstract/35/4/271/4582031?redirectedFrom=fulltext>

No abstract

35. American Burn Association Practice Guidelines Burn Shock Resuscitation

Pham TN, Cancio LC, Gibran NS, American Burn Association. (2008). Journal of Burn Care & Research, 29(1), 257-266.

PDF: [Get PDF HERE](#)

URL: <https://academic.oup.com/jbcr/article-abstract/29/1/257/4602183?redirectedFrom=fulltext>

No abstract

36. Practice Guidelines for the Management of Pain

Faucher L, Furukawa K. (2006). Journal of Burn Care & Research, 27(5), 659-658.

PDF: [Get PDF HERE](#)

URL: <https://academic.oup.com/jbcr/article-abstract/27/5/659/4605455?redirectedFrom=fulltext>

No abstract

37. Practice Guidelines for the Management of Electrical Injuries

Arnoldo B, Klein M, Gibran NS. (2006). Journal of Burn Care & Research, 27(4), 439-447.

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URL: <https://academic.oup.com/jbcr/article-abstract/27/4/439/4605406?redirectedFrom=fulltext>

No abstract

38. Practice Guidelines for Deep Venous Thrombosis Prophylaxis in Burns

Faucher LD, Conlon KM. (2007). Journal of Burn Care & Research, 28(5), 661-663.

PDF: [Get PDF HERE](#)

URL: <https://academic.oup.com/jbcr/article-abstract/28/5/661/4636818?redirectedFrom=fulltext>

Measures to prevent deep venous thrombosis (DVT), including low-dose subcutaneous heparin, low molecular weight heparin, or sequential compression devices, may be considered in high-risk patients, specifically those with a previous history of thromboembolic disease, and in patients with significant burns of the lower extremities. The purpose of this guideline is to review the principles of prophylaxis for DVT in burn patients and to present a reasonable approach for the treatment of patients during burn resuscitation. This guideline is designed to aid those physicians who are responsible for the triage and initial management of burn patients. DVT in the burn patient is a more common event than previously reported, with incidence ranging from 1% to 23% in the few available series. The suspected risk of bleeding using low-dose heparin has deterred most burn surgeons from using heparin routinely in all burn patients. Much remains unknown, however, regarding the real risks and benefits of this complication and its treatment. A Medline search of all English language citations from 1966 through 2006 was undertaken using the key words "deep vein thrombosis" and "deep venous thrombosis" with "burns." This produced 18 references. The addition of the key words "pulmonary embolism" with "burns" produced a total of 82 references, of which 7 were felt to be relevant to this topic based on evidentiary classification of the data. There are no prospective, randomized, controlled studies evaluating the effectiveness of any prophylactic preventive measures against DVT in burn patients. The apparently low incidence of this condition in burn patients would appear to preclude its evaluation in a single-center study, and no multicenter studies have been conducted.

39. Occupational Therapy and Physiotherapy for the Patient with Burns: Principles and Management Guidelines

Simons M, King S, Edgar D, ANZBA. (2003). Journal of Burn Care & Research, 24(5), 323-335.

PDF: *Document unavailable for download*

URL: <https://academic.oup.com/jbcr/article-abstract/24/5/323/4733779?redirectedFrom=fulltext>

Clinical practice guidelines are a tool to assist with clinical decision making. They provide information about the care for a condition and make recommendations based on research evidence, which can be adapted locally. A focus group within the Allied Health Interest Group of the Australian and New Zealand Burn Association has compiled the "Occupational Therapy and Physiotherapy for the Patient with Burns-Principles and Management Guidelines." These guidelines are designed as a practical guide to the relevant clinical knowledge and therapy intervention techniques required for

effective patient management. Content areas include respiratory management, edema management, splinting and positioning, physical function (mobility, function, exercise), scar management, and psychosocial and mutual elements. The document has undergone extensive review by members of the Australian and New Zealand Burn Association to ensure clarity, internal consistency, and acceptability. The guidelines have been endorsed by the Australian and New Zealand Burn Association. An abridged version of the guidelines is included in this article, with the full document available from www.anzba.org.au.

Military Priorities

40. The Top 10 R&D priorities for battlefield surgical care

Martin, M. et al. 2019 Journal of Trauma and Acute Care Surgery

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