Burns
Current Awareness Newsletter

October 2015
Outreach

Your Outreach Librarian can help facilitate evidence-based practise for all Burns members of staff, as well as assisting with academic study and research. We can help with literature searching, obtaining journal articles and books, and setting up individual current awareness alerts.

Literature Searching

We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a 1 to 1 session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence.

Critical Appraisal Training

We also offer one-to-one or small group training in literature searching, accessing electronic journals, and critical appraisal/Statistics. These are essential courses that teach how to interpret clinical papers.

For more information, email: katie.barnard@uhbristol.nhs.uk

Books

Books can be searched for using SWIMS our online catalogue at www.swims.nhs.uk. Books and journals that are not available on site or electronically may be requested from other locations. Please email requests to: library@uhbristol.nhs.uk
Contents

1:  Tables of Contents from October’s Burns journals

2:  Latest relevant Systematic Reviews from the Cochrane Library

3:  Quick Exercise

4:  Current Awareness database articles
Tables of Contents from Burns journals

If you require full articles please email: library@uhbristol.nhs.uk

**Burns 2015 (Elsevier)**
September 2015, Volume 41, Issue 6

**Journal of Burn Care & Research (LWW)**
September/October 2015, Volume 36, Issue 5

**Injury Prevention (BMJ)**
October 2015, Volume 21, Issue 5

**Plastic and Reconstructive Surgery (LWW)**
October 2015 - Volume 136 - Issue 4

**Journal of Plastic, Reconstructive & Aesthetic Surgery (Elsevier)**
October 2015 Volume 68, Issue 10

**Archives of Disease in Childhood (BMJ)**
October 2015, Volume 100, Issue 10

**Pediatrics (HighWire)**
October 2015, Volume 136, Issue 4

**Injury (Elsevier)**
October 2015 Volume 46, Issue 10

**Trauma (Sage)**
October 2015, Volume 17, Issue 4
Latest relevant Systematic Reviews from the Cochrane Library

Dressings and securement devices for central venous catheters (CVC)

Quick Exercise

OUTCOME RELIABILITY refers to consistency of the test results on repeat measurements.

Match the definition to the form of reliability:

<table>
<thead>
<tr>
<th>Definition</th>
<th>Form of Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looks at the level of agreement between assessments by one rater of the same material at two or more different times.</td>
<td>Intra-rater reliability</td>
</tr>
<tr>
<td>Refers to the level of agreement between the initial test results and the results of repeated measurements made at a later date.</td>
<td>Test retest reliability</td>
</tr>
<tr>
<td>This measures the level of agreement between assessments made by two or more raters at the same time.</td>
<td>Inter-rater reliability</td>
</tr>
</tbody>
</table>

To find out more about bias in research methodology, sign up for one of our Critical Appraisal training sessions. For more details, email katie.barnard@uhbristol.nhs.uk

Upcoming Lunchtime Drop-in Sessions

The Library and Information Service provides free specialist information skills training for all UHBristol staff and students.

To book a place, email: library@uhbristol.nhs.uk

If you’re unable to attend we also provide one-to-one or small group sessions. Contact library@uhbristol.nhs.uk or katie.barnard@uhbristol.nhs.uk to arrange a session.

<table>
<thead>
<tr>
<th>October (12pm)</th>
<th>Statistics</th>
<th>Literature Searching</th>
<th>Understanding articles</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurs 8th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fri 16th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon 19th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tues 27th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>November (1pm)</th>
<th>Literature Searching</th>
<th>Understanding articles</th>
<th>Statistics</th>
<th>Literature Searching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weds 4th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thurs 12th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fri 20th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon 23rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Current Awareness database articles

If you require full articles please email: library@uhbristol.nhs.uk

Title: Pediatric Toxic Epidermal Necrolysis: Experience of a Tertiary Burn Center

Citation: Pediatric Dermatology, September 2015, vol./is. 32/5(704-709), 0736-8046;1525-1470 (01 Sep 2015)

Author(s): Rizzo J.A., Johnson R., Cartie R.J.

Abstract: Background Pediatric toxic epidermal necrolysis (TEN) is a rare and potentially fatal skin disease with a multitude of causative factors and no consensus on treatment guidelines and, as a result, it has a variety of short- and long-term outcomes. We present the experience of a large specialty burn center to share our diagnostic and treatment principles. Methods A retrospective review from 1989 to 2010 at the Joseph M. Still Burn Center was performed to find patients with a diagnosis of Steven-Johnson syndrome (SJS) or TEN. Information was obtained on demographic and physiologic parameters such as age, race, total body surface area involved, treatments, hospital stay, and need for ventilator support. Results We identified SJS or TEN in 21 patients. Prescription drugs were the most common etiology (in 15 patients), with antibiotics as the most common causative agent. Histology confirmed the clinical diagnosis of TEN in 14 patients. Our treatment plan included a multidisciplinary team, early initiation of intravenous immunoglobulin, bronchoscopy, strict management of electrolyte and fluid balances, and meticulous surgical wound care. Mortality was 9.5%. Conclusion Our experience in treating this rare but devastating disease affords us the opportunity to share the diagnostic dilemmas we faced and the treatment principles we used to treat this unique patient population successfully.

Title: Medical workers' cognition of using 50% nitrous oxide in children with burns: A qualitative study.

Citation: Burns : journal of the International Society for Burn Injuries, Sep 2015, vol. 41, no. 6, p. 1275-1280 (September 2015)

Author(s): Wang, Hai-Xia, Li, Yu-Xiang, Zhou, Ru-Zhen, Zhao, Ji-Jun

Abstract: Pain caused by dressing among children with burns is an issue worth discussing. Medical workers' understanding of pain during dressing in children with burns is correlated with the quality of pain management. Effective pain management is significant to improve anxiety and reduce pain and psychological distress during dressing for children with burns. We aimed to investigate medical workers' understanding of current pain management during dressing among children with burns and their attitudes toward the application of 50% nitrous oxide in pain management. Interviews were conducted with seven doctors and nurses from a burn center in East China. Data were collected by in-depth interviews and qualitative description after full transcription of each interview. Three themes were identified: (1) Medical workers felt sympathy for children with burns and believed that a gap existed between the current and expected situation in pain management. In addition, the prescription of analgesics during dressing for children with burns was not favored. (2) Given the fact that 50% nitrous oxide is effective in pain management for adult patients with burns, medical workers tended to apply it to children with burns during dressing after being provided the literature on the use of 50% nitrous oxide in children. (3) Guidelines for the application of 50% nitrous oxide during dressing for children with burns require further modification. Medical workers deemed the pain management for children with burns unsatisfactory, and they supported the application of 50% nitrous oxide during dressing for children with burns. Meanwhile, they hoped that administrators would also support it. Copyright © 2015 Elsevier Ltd and ISBI. All rights reserved.

Title: 3D photography is a reliable burn wound area assessment tool compared to digital planimetry in very young children.
**Citation:** Burns : journal of the International Society for Burn Injuries, Sep 2015, vol. 41, no. 6, p. 1286-1290 (September 2015)

**Author(s):** Gee Kee, E L, Kimble, R M, Stockton, K A

**Abstract:** Reliability and validity of 3D photography (3D LifeVizTM System) compared to digital planimetry (VisitrakTM) has been established in a compliant cohort of children with acute burns. Further research is required to investigate these assessment tools in children representative of the general pediatric burns population, specifically children under the age of three years. To determine if 3D photography is a reliable wound assessment tool compared to VisitrakTM in children of all ages with acute burns ≤10% TBSA. Ninety-six children (median age 1 year 9 months) who presented to the Royal Children's Hospital Brisbane with an acute burn ≤10% TBSA were recruited into the study. Wounds were measured at the first dressing change using the VisitrakTM system and 3D photography. All measurements were completed by one investigator and level of agreement between wound surface area measurements was calculated. Wound surface area measurements were complete (i.e. participants had measurements from both techniques) for 75 participants. Level of agreement between wound surface area measurements calculated using an intra-class correlation coefficient (ICC) was excellent (ICC 0.96, 95% CI 0.93, 0.97). VisitrakTM tracings could not be completed in 19 participants with 16 aged less than two years. 3D photography could not be completed for one participant. Barriers to completing tracings were: excessive movement, pain, young age or wound location (e.g. face or perineum). This study has confirmed 3D photography as a reliable alternative to digital planimetry in children of all ages with acute burns ≤10% TBSA. In addition, 3D photography is more suitable for very young children given its non-invasive nature. Copyright © 2015 Elsevier Ltd and ISBI. All rights reserved.

---

**Title:** The safety of general anaesthesia in paediatric patients undergoing the application of Biobrane for small scalds

**Citation:** Burns, September 2015, vol./is. 41/6(1221-1226), 0305-4179;1879-1409 (01 Sep 2015)

**Author(s):** Warwicker S.J., Lobo C.A., Dailami N., Young A.E.

**Abstract:** Background Each year more than 5000 children present to English and Welsh hospitals for the management of scalds; 60% of these are small scalds of less than 10% body surface area. There are no agreed UK care pathways for this injury. One method of management is to use a biosynthetic wound dressing after thorough wound cleaning. In children, this usually utilises general anaesthesia. This study investigates the incidence of adverse events during anaesthesia for the application of biosynthetic dressings in children with small-area scalds. Methods The medical records of 500 consecutive admissions to a tertiary care paediatric burn centre between July 1st 2007 and June 30th 2012 were analysed. The primary outcome was any patient-related adverse event incurred as a result of the general anaesthesia. Secondary outcomes included delays in discharge and any recovery sequelae to the adverse events. Results There were 21 (4.2%) documented adverse events associated with 500 episodes of anaesthesia. Of these, the majority (52%) were documented as self-resolving laryngospasm. All episodes were temporary with no recovery sequelae and did not delay discharge from the post-anaesthetic recovery area. Conclusions The use of general anaesthesia in this setting for the application of biosynthetic dressings in children with small-area scalds has a low incidence of anaesthesia-related complications with no associated long-term sequelae. This incidence is similar to that quoted for adverse events related to anaesthesia for other procedures and is lower than that reported for procedures using sedation.

---

**Title:** Photograph-based diagnosis of burns in patients with dark-skin types: The importance of case and assessor characteristics

**Citation:** Burns, September 2015, vol./is. 41/6(1253-1260), 0305-4179;1879-1409 (01 Sep 2015)

**Author(s):** Boissin C., Laflamme L., Wallis L., Fleming J., Hasselberg M.
Abstract: Aim This study assessed whether photographs of burns on patients with dark-skin types could be used for accurate diagnosing and if the accuracy was affected by physicians' clinical background or case characteristics. Method 21 South-African cases (Fitzpatrick grades 4-6) of varying complexity were photographed using a camera phone and uploaded on a web-survey. Respondents were asked to assess wound depth (3 categories) and size (in percentage). A sample of 24 burn surgeons and emergency physicians was recruited in South-Africa, USA and Sweden. Measurements of accuracy (using percentage agreement with bedside diagnosis), inter- (n = 24), and intra-rater (n = 6) reliability (using percentage agreement and kappa) were computed for all cases aggregated and by case characteristic. Results Overall diagnostic accuracy was 67.5% and 66.0% for burn size and depth, respectively. It was comparable between burn surgeons and emergency physicians and between countries of practice. However, the standard deviations were smaller, showing higher similarities in diagnoses for burn surgeons and South-African clinicians compared to emergency physicians and clinicians from other countries. Case characteristics (child/adult, simple/complex wound, partial/full thickness) affected the results for burn size but not for depth. Inter- and intra-rater reliability for burn depth was 55% and 77%. Conclusion Size and depth of burns on patients with dark-skin types could be assessed at least as well using photographs as at bedside with 67.5% and 66.0% average accuracy rates. Case characteristics significantly affected the accuracy for burn size, but medical specialty and country of practice seldom did in a statistically significant manner.

Title: The long-term health-related quality of life in children treated for burns as infants 5-9 years earlier

Citation: Burns, September 2015, vol./is. 41/6(1186-1192), 0305-4179;1879-1409 (01 Sep 2015)

Author(s): Laitakari E., Koljonen V., Pyorala S., Rintala R., Roine R.P., Sintonen H.

Abstract: The long-term outcome after infant burn was queried 5-9 years after the initial accident. All participants had been treated for burn in Children's Hospital, Helsinki, Finland, before the age of 1 year. We hypothesized that the health-related quality of life (HRQoL) in young burn survivors may be impaired compared to healthy age matched peers. The health-related quality of life of 126 infant burned patients with a mean total body surface area (TBSA) of 3.5% was queried with the standardized and validated 17D questionnaire. The HRQoL of the respondents was compared to that of a representative sample of the general age-standardized population. A total of 44 (35%) children with a mean age of 7 years responded, and 64% of them were male. The median time from trauma was 6.3 years. Burn related features, age at burn time, burn size and site, and the treatment given were similar in the respondents group and all children approached. The mean HRQoL score of the respondents was better than that of the control population (p < 0.05). Comparison of the 17D profiles of the patients having been treated as inpatients or outpatients showed that those treated on an outpatient basis had better scores on the dimensions of speech, breathing, and friends (p < 0.05). The 17D profiles of patients with scalds or contact burns were similar. The perceived and expressed long-term HRQoL in the burned children was good, and on some dimensions (sleeping, learning, discomfort and symptoms, breathing, depression, and appearance) even better, than that of the control population.

Title: Evaluating an outreach service for paediatric burns follow up

Citation: Burns, September 2015, vol./is. 41/6(1193-1198), 0305-4179;1879-1409 (01 Sep 2015)

Author(s): Cubitt J.J., Chesney A., Brown L., Nguyen D.Q.

Abstract: Complications following paediatric burns are well documented and care needs to be taken to ensure the appropriate follow up of these patients. Historically this has meant follow up into adulthood however this is often not necessary. The centralisation of burns services in the UK means that patients and their parents may have to travel significant distances to receive this follow up care. To optimise our burns service we have introduced a burns outreach service to enable the patients to be treated closer to home. The aim of this study is to investigate the impact of the introduction of the burns outreach service and within this environment define the optimum length of time needed to follow up these patients. A retrospective analysis was carried out of 100 consecutive paediatric burns patients who underwent surgical management of their burn. During the follow up period there were 43 complications in 32 patients (32%). These included adverse scarring (either
hypertrophic or keloid), delayed healing (taking >1 month to heal) and contractures (utilising either splinting or surgical correction). Fifty-nine percent of these complications occurred within 6 months of injury and all occurred within 18 months. Size of burn was directly correlated to the risk of developing a complication. The outreach service reduced the distance the patient needs to travel for follow up by more than 50%. There was also a significant financial benefit for the service as the follow up clinics were on average 50% cheaper with burns outreach than burns physician. Burns outreach is a feasible service that not only benefits the patients but also is cheaper for the burns service. The optimum length of follow up for paediatric burns in 18 months, after which if there have not been any complications they can be discharged.

Title: Use of Modified StatlockTM Device for Securing an Endotracheal Tube in Facial Burn-Like Conditions.

Citation: A & A Case Reports, Sep 2015, vol. 5, no. 5, p. 69-71 (September 1, 2015)

Author(s): Berens, Richard J, Scott, John P

Abstract: The StatlockTM is an IV stabilization device developed by Bard Access Systems, Inc. We describe the use of a modified Statlock with tracheostomy ties to provide a secure anchor for an endotracheal tube in a child with toxic epidermal necrolysis. We review the benefits and drawbacks of previously described devices in patients with similar conditions (burns, epidermolysis bullosa, Stevens Johnson syndrome). We demonstrate creation of this system with readily available supplies to provide an accessible and stable airway in patients with facial injury precluding adhesive use.

Title: The comparison of C-proteasome activity in the plasma of children after burn injury, mild head injury and blunt abdominal trauma.

Citation: Advances in Medical Sciences, Sep 2015, vol. 60, no. 2, p. 253-258 (September 2015)

Author(s): Matuszczak, Ewa, Tylicka, Marzena, Dębek, Wojciech, Hermanowicz, Adam, Ostrowska, Halina

Abstract: We aimed to evaluate and compare the changes in circulating 20S proteasome activity in the plasma of children suffering from blunt abdominal trauma, thermal injury and mild head injury. The study population comprised 40 patients with burns, 35 children admitted due to mild head injury, and 30 children suffering from blunt abdominal trauma, who were admitted to Pediatric Surgery Department of Medical University of Bialystok Poland, between 2010 and 2014, and their parents gave informed consent, were included into the study. Patients were aged 9 months to 17 years (median=5.73±1.91y). The girls to boys ratio was nearly 1:2 (34 girls and 106 boys). Plasma proteasome activity was assessed using Suc-Leu-Leu-Val-Tyr-AMC peptide substrate, 2-6h, 12-16h, and 48h after the injury. 20 healthy children admitted for planned inguinal hernia repair served as controls. In our series of patients, the C-proteasome activity was much higher 12-16h after burns, than after mild head injuries, or blunt abdominal injuries, and the difference was statistically significant (p<0.05). Circulating 20S proteasome is probably released from damaged tissues in response to the injury and is a biomarker of tissue damage - more severe in the group of burnt patients in comparison to the patients with mild head injury and blunt abdominal trauma. Therefore detection of 20S proteasome may represent a novel marker of immunological activity and cellular degradation in trauma patients. Copyright © 2015 Medical University of Bialystok. Published by Elsevier Urban & Partner Sp. z o.o. All rights reserved.

Full Text: Available from ProQuest in Advances in Medical Sciences

Title: Oral commissure burns in children

Citation: Operative Techniques in Otolaryngology - Head and Neck Surgery, September 2015, vol./is. 26/3(136-142), 1043-1810;1557-9395 (01 Sep 2015)

Author(s): Garritano F.G., Carr M.M.
Abstract: Pediatric oral commissure burns present a therapeutic and reconstructive challenge. Although these injuries are fairly common in young children, there exists some controversy on the appropriate timing and nature of the repair that should be performed. Some authors advocate early surgical intervention, whereas others advocate a far more conservative approach that uses prolonged splinting techniques in the hope of avoiding the need for reconstructive surgery. In the event that reconstructive surgery becomes necessary, there exists a wide range of reconstructive techniques that are described in the literature, from simple excision and skin grafting to complex local flap reconstruction using adjacent or distant tissue. In this article, we present an overview of the nature of pediatric oral commissure burns, identify special concerns in pediatric burn patient, discuss the potential role for oral commissure splinting, and finally review a number of different surgical reconstructive techniques that have been proposed in the literature.

Title: Preliminary results in single-step wound closure procedure of full-thickness facial burns in children by using the collagen-elastin matrix and review of pediatric facial burns.

Citation: Burns : journal of the International Society for Burn Injuries, Sep 2015, vol. 41, no. 6, p. 1268-1274 (September 2015)

Author(s): Demircan, Mehmet, Cicek, Tugrul, Yetis, Muhammed Ikbal

Abstract: Management of full-thickness facial burns remains one of the greatest challenges. Controversy exists among surgeons regarding the use of early excision for facial burns. Unfortunately, delayed excision of deeper burns often results in more scarring and subsequent reconstruction becomes more difficult. A collagen-elastin matrix is used to improve the quality of the reconstructed skin, to reduce scarring and to prevent wound contraction. It serves as a foundation for split thickness skin graft and enhances short and long-term results. We report the usage of a collagen-elastin matrix during single-step wound closure technique of severe full-thickness facial burns in 15 children with large burned body surface area, and also we review the literature about pediatric facial burns. There were 15 pediatric patients with severe facial burns, 8 girls and 7 boys ranging in age from 10 months to 12 years, mean age 7 years and 6 months old. The facial burn surface area (FBSA) among the patients includes seven patients with 100%, five with 75%, and three with 50%. The average total body surface area (TBSA) for the patients was 72%, ranging between 50 and 90%. 5 of the patients’ admissions were late, more than four days after burns while the rest of the patients were admitted within the first four days (acute admission time). The burns were caused by flame in eight of the patients, bomb blast in four, and scalding in three. All patients were treated by the simultaneous application of the collagen-elastin matrix and an unmeshed split thickness skin graft at Turgut Özal Medical Center, Pediatric Burn Center, Malatya, Turkey. After the treatment only two patients needed a second operation for revision of the grafts. All grafts transplanted to the face survived. The average Vancouver scar scales (VSS) were 2.55±1.42, ranging between one and six, in the first 10 of 15 patients at the end of 6 months postoperatively. VSS measurements of the last 5 patients were not taken since the 6 months postoperative period was not over. In regard to early results, graft quality was close to normal skin in terms of vascularity, elasticity, pliability, texture and color. Esthetic and functional results have been encouraging. This study shows us that the collagen-elastin matrix as a dermal substitute is a useful adjunct, which may result in quick healing with satisfying esthetic and functional results. It also may enhance short and long-term results in after burn facial wound closure in children.

Copyright © 2015 Elsevier Ltd and ISBI. All rights reserved.

Title: Quality of Life of Young Adult Survivors of Pediatric Burns Using World Health Organization Disability Assessment Scale II and Burn Specific Health Scale-Brief: A Comparison.

Citation: Journal of burn care & research : official publication of the American Burn Association, Sep 2015, vol. 36, no. 5, p. 521-533 (2015 Sep-Oct)

Author(s): Murphy, Mary Elizabeth, Holzer, Charles E, Richardson, Lisa M, Epperson, Kathryn, Ojeda, Sylvia, Martinez, Erin M, Suman, Oscar E, Herndon, David N, Meyer, Walter J
Abstract: The objective was to determine long-term psychological distress and quality of life (QOL) in young adult survivors of pediatric burns using the World Health Organization Disability Assessment Scale II (WHODAS) and the Burn Specific Health Scale-Brief (BSHS-B). Fifty burn survivors 2.5 to 12.5 years postburn (16-21.5 years old; 56% male, 82% Hispanic) completed the WHODAS and BSHS-B. The WHODAS measures health and disability and the BSHS-B measures psychosocial and physical difficulties. Scores were calculated for each instrument, and then grouped by years postburn, TBSA, sex, burn age, and survey age to compare the effects of each. Next, the instruments were compared with each other. The WHODAS disability score mean was 14.4 ± 2.1. BSHS-B domain scores ranged from 3 to 3.7. In general, as TBSA burned increased, QOL decreased. Female burn survivors, survivors burned prior to school entry, and adolescents who had yet to transition into adulthood reported better QOL than their counterparts. In all domains except Participation, the WHODAS consistently identified more individuals with lower QOL than the BSHS-B. Young adult burn survivors’ QOL features more disability than their nonburned counterparts, but score in the upper 25% for QOL on the BSHS-B. This analysis revealed the need for long-term psychosocial intervention for survivors with larger TBSA, males, those burned after school entry, and those transitioning into adulthood. Both instruments are useful tools for assessing burn survivors’ QOL and both should be given as they discern different individuals. However, the WHODAS is more sensitive than the BSHS-B in identifying QOL issues.

Title: Discrepancy in Initial Pediatric Burn Estimates and Its Impact on Fluid Resuscitation.

Citation: Journal of burn care & research : official publication of the American Burn Association, Sep 2015, vol. 36, no. 5, p. 574-579 (2015 Sep-Oct)


Abstract: One of the fundamental aspects of initial burn care is the ability to accurately measure the TBSA of injured tissue. Discrepancies between initial estimates of burn size and actual TBSA (determined at the burn unit) have long been reported. These inconsistencies have the potential for unnecessary patient transfer and inappropriate fluid administration which may result in morbidity. In an effort to study these inconsistencies and their impact on initial care, we evaluated the differences between initial TBSA estimates and its impact on fluid resuscitation at an American Burn Association-verified pediatric burn center. A prospective observational study of 50 consecutive burn patients admitted to Shriner’s Hospital for Children in Boston, Massachusetts, between October 2011 and April 2012 was performed. Data collected included age, mechanism of burn injury, type of referral center, referring hospital TBSA, and volume of fluid administration as well as admission TBSA and volume of fluid administration. Determination of over or under resuscitation was based on comparing the amount of fluids received at the referral center to that received at the pediatric burn center. A total of 50 patients were admitted during the 7-month study period. The average age was 4.1 years old (25 days-16 years) and the average TBSA was 2.5% (0.25-55%). There were significant differences in the TBSA calculations between referring centers and the pediatric burn center. Overestimation of scald and contact burn size (P < .05) was noted with no difference in flame burn size estimation. Community referrals were more likely than tertiary centers to overestimate TBSA (P < .05 vs P = .29). Overall, 59% of study patients were administered more fluid at the referring hospital than would have been expected by the burn size calculated at our facility. Inconsistencies with the estimation of TBSA burn between referring hospitals and tertiary referral centers remains a problem in pediatric patients and may lead to inappropriate resuscitation. This study highlights the continued need for educational outreach programs and for the provision of novel resources to initial burn providers. Additional support through online resources (eg, Lund-Browder diagram) and remotely assisting providers during their TBSA measurements are potential options which may help to improve the initial care of burn patients.
Library Opening Times

Staffed times 8.00 am—17.00 pm
Monday to Friday

Swipe Access 7.00 am—23.00pm
7 days a week

Level 5,
Education Centre
University Hospitals Bristol

Contact the Burns Outreach librarian:
katie.barnard@uhbristol.nhs.uk