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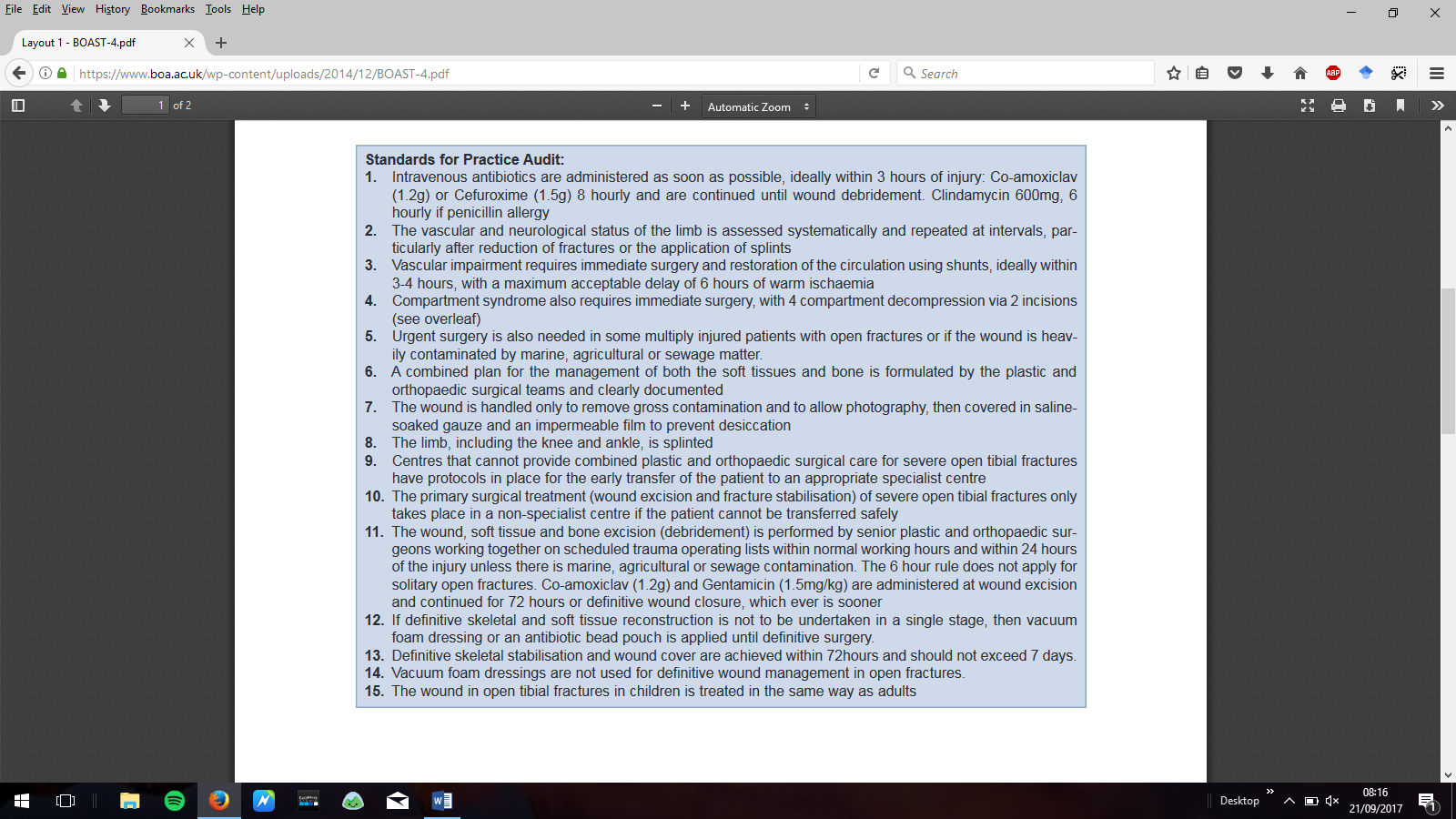
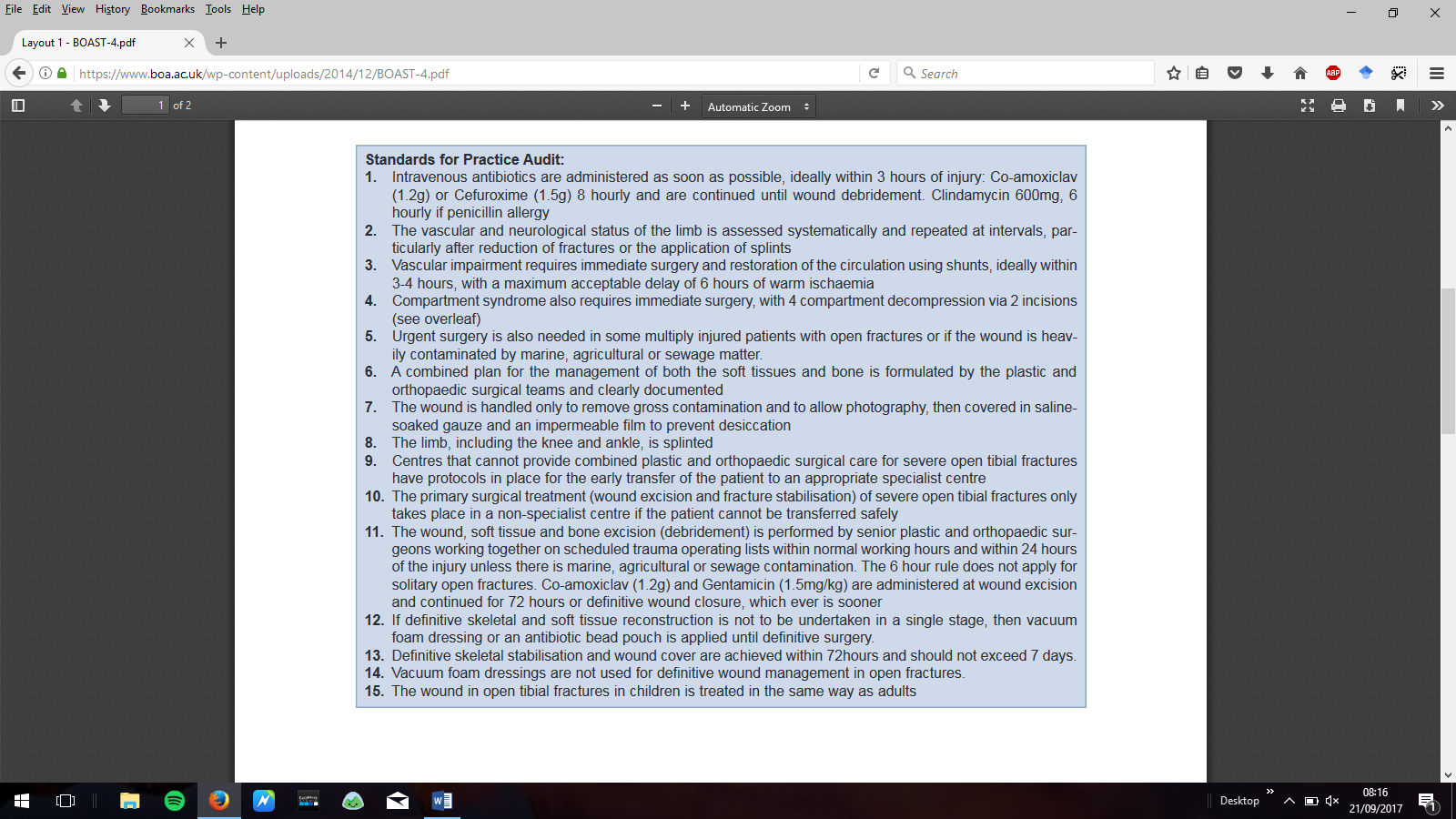
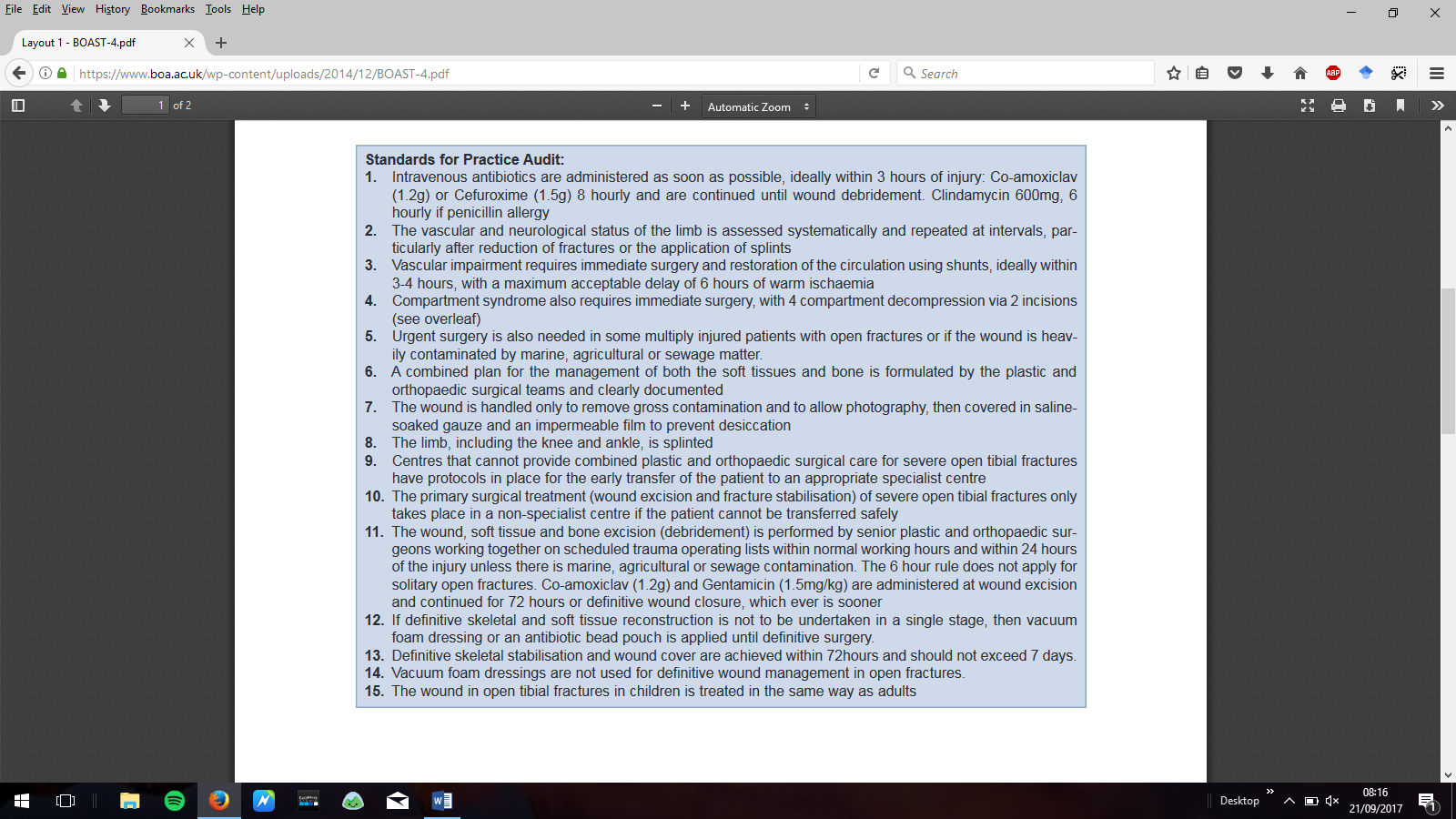
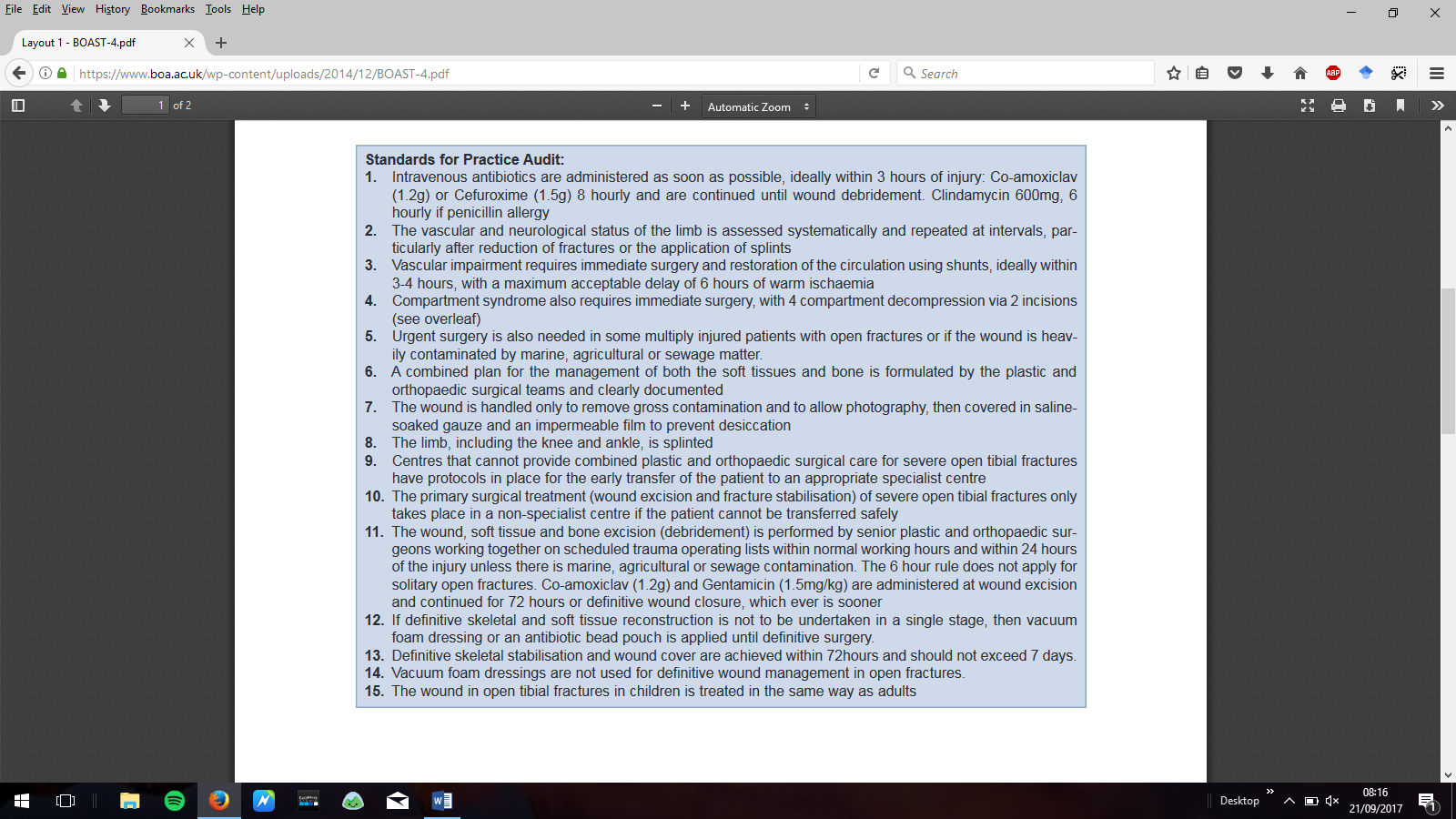
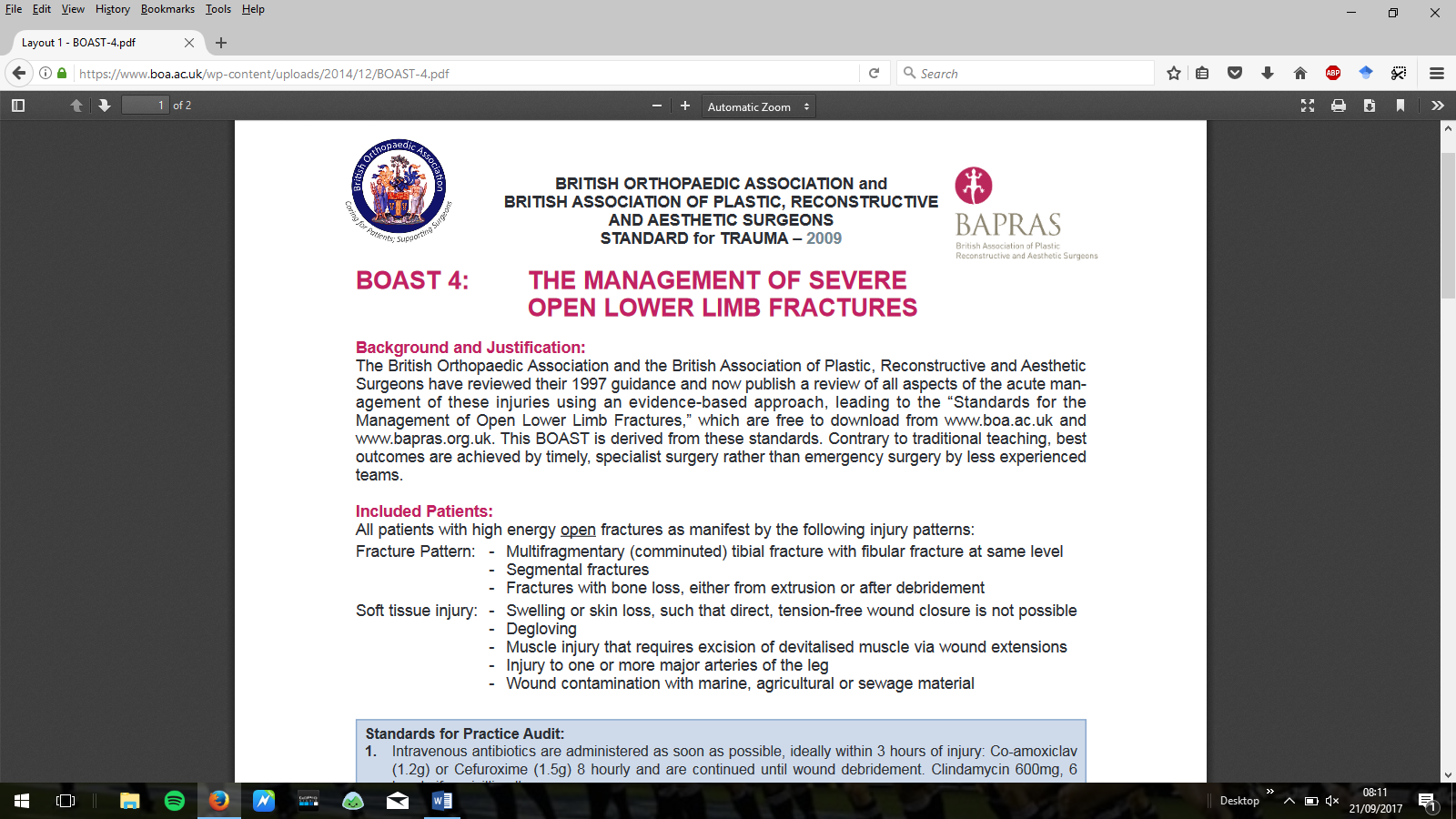
**Birmingham Orthopaedic Network**

Management of Open Lower Limb Fracture Regional Audit Protocol

**Aims:** Understanding of the epidemiology and management of open fractures.

**Objectives:**

* Prospective identification of patients for inclusion.
* Emergency management strategy compliance.
* Surgical management strategy compliance.



**Format**

Simultaneous local audit, following identical protocol for evaluation of national standards, across the West Midlands region.

**Methods**

Data Collection Period: 0800hrs Monday October 16th – 0800hrs Monday November 13th 2017

Data Collection Tool: Standardised, locked Excel spreadsheet. Collection of no patient identifiable data.

**Local Registration**

Institutions providing data will be requested to register the audit (template provided) through their local procedures to maintain governance integrity. Identification of a lead clinician at each hospital may be required.

**Analysis**

Following completion of the prospective data collection period, analysis of the submitted data will identify percentage compliance regionally. Local analysis will provide individual institution level compliance for each patient against each standard.

**Presentation**

Following analysis, data summary and comparative analysis will be made available to all contributing institutions. Local presentation is recommended, to identify precise matters of potential improvement locally. In addition the presentation of the regional epidemiology and audit standards achievement at the biannual orthopaedic meeting, Naughton Dunn Club, is proposed for wider dissemination. Individual trusts may request a comparative analysis of their local standards against the regional standard.

**Recommendations**

Subsequent recommendations for change of practice will be made, in consultation with individual institutions, to identify improvements in clinical management. Repetition of the audit will be aimed to be conducted in a 6 month period.

**Costs**

No local costs should be incurred through the routine collection of audit data for national standards. BOAST 4 standards are nationally recorded and reportable through the Trauma Audit Research Network (TARN).

**CLINICAL AUDIT PROJECT PROPOSAL**

**Your Details:** Audit lead

|  |  |  |
| --- | --- | --- |
| **Name** | **Division: Surgery** | |
| **Position / Job Title:** | **Specialty: Trauma and Orthopaedics** | |
| **Email:** | | **Tel: Bleep:** |

|  |
| --- |
| **Title:** Management of Severe Lower Limb Open Fractures |

**Project Team:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Job Title** | **Specialty** | **Role within Project (data collection, Supervisor etc)** |
| SpR | T&O Registrar | T&O | Project lead |
|  |  |  |  |
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**Participation Details:** see note 2

|  |  |  |  |
| --- | --- | --- | --- |
| **What areas will this audit impact on?** | **Who in this area have you discussed and agreed this audit with?** | | |
| Name | Job Title | Date Agreed |
|
| Trauma and Orthopaedics | *Named Consultant* |  |  |
|  |  |  |  |

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| **Background:**  Many challenges exist in the management of severe open fractures, which have historically tested surgeons’ ability and resourcefulness. Complications are difficult to avoid and can be serious, frequently life changing for the patient. Co-ordinated inter-specialty care provided by experienced orthopaedic and plastic surgeons, can improve patients’ likelihood of a successful outcome. A key factor for achieving organised care is timely and effective communication between teams to evaluate reconstructive options and generate the most appropriate definitive surgical plan. A number of key decision making steps must be made during the patient’s initial or primary operative intervention, therefore a comprehensive understanding of the issues facing each specialty is vital. |

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| Aims: Understanding of the epidemiology and management of open fractures. (Collaborative Regional Clinical Audit Project)  Objectives:   * Prospective identification of patients for inclusion. * Emergency management strategy compliance. * Surgical management strategy compliance |

**STANDARDS**

Clinical audit measures clinical care provided against criteria identified from evidence of best practice (often incorporated into local or national guidelines/protocols). You should ensure staff delivering this care agree that these audit standards represent best practice, to avoid later debate about what the results show and whether practice needs changing.

**If criteria refer to detail given in other standards (e.g. local protocols/guidelines), please attach a copy of these standards or provide a website reference**

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| --- | --- | --- | --- | --- | --- | --- |
| Criteria | | Target  (%) | Exceptions | Source & Strength\*  of Evidence | | Instructions for where to find data |
| 1 | Intravenous antibiotics are administered as soon as possible, ideally within 3 hours of injury: Co-amoxiclav  (1.2g) or Cefuroxime (1.5g) 8 hourly and are continued until wound debridement. Clindamycin 600mg, 6  hourly if penicillin allergy | 100% | Adherence to institutional antimicrobial policy (must be submitted with data) | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Emergency department documentation / drug chart |
| 2 | The wound is handled only to remove gross contamination and to allow photography, then covered in saline-soaked gauze and an impermeable film to prevent desiccation | 100% | nil | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Clinical patient records |
| 3 | The limb, including the knee and ankle, is splinted | 100% | Ipsilateral femoral requiring skeletal traction (fracture classification must be submitted) | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Clinical records / radiological investigations |
| 4 | Centres that cannot provide combined plastic and orthopaedic surgical care for severe open tibial fractures have protocols in place for the early transfer of the patient to an appropriate specialist centre | 100% | nil | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Departmental protocols |
| 5 | The primary surgical treatment (wound excision and fracture stabilisation) of severe open tibial fractures only takes place in a non-specialist centre if the patient cannot be transferred safely | 100% | nil | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Operative records |
| 6 | The wound, soft tissue and bone excision (debridement) is performed by senior plastic and orthopaedic surgeons working together on scheduled trauma operating lists within normal working hours and within 24 hours | 100% | (\* vascular injury, marine, agricultural or sewage contamination to be documented) | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Emergency department documentation & Operative records |
| 7 | Definitive skeletal stabilisation and wound cover are achieved within 72hours and should not exceed 7 days | 100% | nil | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Operative records |
| 8 | Vacuum foam dressings are not used for definitive wound management in open fractures | 100% | nil | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | Operative records |
| 9 | The wound in open tibial fractures in children is treated in the same way as adults | 100% | Children <2 years old | https://www.boa.ac.uk/wp-content/uploads/2014/12/BOAST-4.pdf | C | - |

**\*Strength of Evidence**

**A** At least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation

**B** Availability of well-conducted clinical studies but no randomised clinical trials on the topic of the recommendation

**C** Expert committee reports or opinions and/or clinical experience of respected authorities. Absence of directly applicable clinical studies of good quality

**D** Recommended good practice based on clinical experience (local consensus)

###### You should ask an appropriate senior clinician or manager to sign overleaf in support of your project, however you are advised to wait until the design of your project has been finalised, following discussion with the appropriate member of the clinical audit team

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| **Methodology:**  **Data Collection Method:**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Casenote review |  | Prospective data collection | x | Data from existing database(s) |  | Patient/  staff questionnaire |  |   Further details  or other method:  **Please attach your data collection form to proposal paperwork before final submission for approval**  **Audit Sample:**  Sample selection criteria: All patients with high energy open tibial fractures  Time period audited:Start date: 0800hrs 16/10/2017End date: 0800hrs 16/11/2017  Number/estimated number of cases to be audited: 1-2 (local) 10-20 (regional) |
| **Deadlines:**  Proposed start of data collection 16/10/17  Proposed date for presentation of results: November 2017 Forum: Local M+M meeting / Regional Meeting  Proposed finish date: December 2017 i.e. after report / final documentation (including action plan) produced  Will you be leaving your current post in the near future? No (February 2018)  If Yes, please give leaving date:  If your project will not be finished by then, please identify and provide the name and job title of another member of staff who is willing to take over when you go: N/A |

Appendix A

* Hospital: Hospital Abbreviation [see below]
* Hospital ID: For local purposes only
* Age: To nearest whole year
* Sex: Male / Female
* Time & Date of Injury
* Trauma Type: Blunt / Penetrating
* Mechanism:
  + RTC, Pedestrian RTC, Motorcycle RTC, Fall >2m, Fall<2m, Stabbing, Shooting, Industrial, Other (specify).
* Allergies: NKDA / Specific Antibiotic
* Pre-Hospital Abx (time, medication & dose)
* Emergency Dept Abx (time, medication & dose)
* Continued Abx (medication, dose & duration)
* Wound Care Option: Nil, Gauze, Non-Adherent Dressing, Tegaderm Alt, PICO TNP, Other (specify)
* Splintage: Nil, Plaster, Splint, Ex Fix
* Transfer Protocol Available: Yes / No
* Transfer Out (receiving centre): Hospital Abbreviation [see below]
* Time & Date of Transfer
* Unsafe for Transfer (Reason): Haemodynamic Instability, Staffing Issue, Other (specify)
* Time & Date of Debridement
* Orthoplastic Team: Yes / No
* Method of Temporary Fixation: Nil, Plaster, Ex Fix, ORIF, IMN, Other (specify)
* Method of Temporary Cover: Nil, Antibiotic Beads, TNP, Non-Adherent Dressing, Other (specify)
* Time & Date of Definitive Fixation
* Method of Definitive Fixation: Nil, Plaster, Ex Fix, ORIF, IMN, Other (specify)
* Time & Date of Definitive Cover
* Method of Definitive Cover: Nil, TNP, Skin Graft, Flap, Other (specify)

Hospital Abbreviations

* Telford: TEL
* Shrewsbury: SHE
* Stafford: STA
* Coventry: UHC
* George Elliot: GE
* Evesham: EVE
* Dudley: RHH
* City: CIT
* Sandwell: SAN
* Hereford: HER
* Children’s: BCH
* Bromsgrove: BRO
* Kiddiminster: KID
* Tamworth: RPH
* Redditch: RED
* Queen Elizabeth: QEH
* Heartlands: BHH
* Good Hope: GHH
* Solihull: SHH
* Walsall: WAL
* Worcester: WOR
* Wolverhampton: NXH