Evidence Table

<table>
<thead>
<tr>
<th>Reference (include title, author, journal title, year of publication, volume and issue, pages)</th>
<th>Evidence level (I-VII)</th>
<th>Key findings, outcomes or recommendations</th>
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- Assessment of a child’s pain during a burns dressing may be difficult as children may not be able to express or identify where the pain is. |
- Caring for children with burn wounds present special challenges because children are still developing physically and psychologically.  
- Before a painful procedure the child should be prepared both physically and emotionally.  
- In paediatrics, family members should be involved in patient care to give them a sense of competence. They also offer the child a sense of security and comfort, helping to alleviate anxiety and enhance pain relief.  
- The parent and where possible the child should be educated about what causes burn pain, how it is relieved and different coping strategies help to relieve pain.  
- Therapeutic play allows the child to use methods to explore the equipment and act out procedures.  
- Children should be given the opportunity to choose whether they want to participate in wound care and be allowed to make decisions about how the dressing is performed.  
- Documentation of pain assessment, effective pain control strategies and the child’s response will help ensure that pain management is optimised. |
| Clifton, L., Chong, L. & Stewart, K. (2015). Identification of factors that predict outpatient utilisation of a plastic dressing clinic. A retrospective review of 287 paediatric burn cases. *Burns*, 41, 469-475. | V | - A retrospective review was performed of all paediatric burn cases to one hospital focusing on presentations to outpatient clinics and inpatient admission times  
- Multidisciplinary teams optimise patient care in burns patients. The use of dressing’s clinic is an important part of the team.  
- Most simple burns can be managed at home and been seen in outpatient clinics therefore reducing hospital length of stay  
- This study looked at only one hospital therefore it is hard to apply to further populations |
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<th>Key Points</th>
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- Hydrogels have been shown to exhibit a number of beneficial properties favourable for burns patients. |
| Douglas, H. & Wood, F. (2017). | Burns dressings. RACGP- Burns dressings. 46, 3. | 2017 | - This paper only reviews the literature. No study was actually performed.  
- It is important to consider the size of a burn when a dressing is applied.  
- Deep dermal/ full thickness burns require dressings to debride and lift the dead skin.  
- Dressings prevent infection; promote wound healing, reducing pain. |
| Elena Stoica, A., Chircov, C. & Grumezescu, A. (2020). | Hydrogel dressings for the treatment of burns wounds: an up to date overview. Materials (Basel), June; 13 (12) 2853. | 2020 | - This paper is a review of the literature.  
- Hydrogels provide skin healing  
- Antimicrobial dressings prevent the needs for drug treating infections in some instances |
- If the history is inconsistent with the wounds physical abuse of the child should be considered.  
- Distraction can be effective at any age using such things as toys, cartoon characters, songs, dummies, blankets and colours. Children are often distracted well with visual imagery.  
- Special attention should be paid to the immunisation status of children with burns. This can be achieved by simply asking parents.  
- Often there are times where a child is unable to cope with the pain of the procedure therefore the use of pharmacological sedation may be required. |
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<td>- Effective wound healing treatments are imperative in burns wound management of the paediatric patient.</td>
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<td>- There is a lack of evidence and trails comparing silver dressings to each other in the paediatric population.</td>
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<td>- The study compared the effects of three silver dressings on small to medium size acute partial thickness burns in children, focusing on re-epithelisation, pain and distress.</td>
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<td>- 96 children were included in the analysis from one hospital.</td>
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<td>- The results of this study indicate that &lt;10% TBSA partial thickness burns in children 0-15 years, dressed with Mepilex Ag re-epithelialised significantly faster than those with Acticoat. Children also experienced less pain on dressing removal and application.</td>
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<td>- Sample size of this study is small and only included one hospital population.</td>
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<td>- There may be risks associated with the use of hydrotherapy including infection.</td>
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<td>- A survey included 28 burns care providers using hydrotherapy was conducted. Only 11 used a defined criteria in the use of hydrotherapy with many variations to practice noticed.</td>
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<td>- The use of hydrotherapy should be done with enforced infection control procedures.</td>
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<td>- Hydrotherapy for burns management is used nationwide however high variation in practice exists.</td>
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<td>Liao, A., Andreson, D., Martin, H., Harvey, J. &amp; Holland, A. (2013). The infection risk of plastic wrap as an acute burns dressing. <em>Burns</em>.</td>
<td>VI</td>
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<td>- Plastic wrap has been recommended as an appropriate burns dressing. There are limited studies reporting the risk of infection with this dressing.</td>
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<td>- Ten plastic wrap samples were collected from an open roll on a burns unit. Plates were then imprinted with the plastic and incubated.</td>
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<td>- There was no significant growth on the plates after incubation indicating that the potential risk for plastic wrap to act as a fomite when used, as an acute burn, wound dressing is low.</td>
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<td>- Sample size for this study is small and there has been no control used in the study.</td>
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- This study uses a qualitative methodology to explore the psychological experiences of children with burns.
- The sample size of this study was small with only 12 surveys completed. This makes application to the larger population difficult.
- Burns are described as one of the most painful injuries a person can experience. In addition to the burn itself children may experience surgery, invasive procedures and are often left with permanent scarring. Burns not only affect a child’s physical appearance but also psychologically, socially and functionally.
- Dressing changes are imperative to the physical outcome of burns however children fear not knowing about the dressing changes. Preparatory information about medical procedures reduces distress.
- Procedural preparation recommends age appropriate content, format and timing.
- Appropriate pain management is fundamental to minimising the onset of secondary complications such as anxiety. In addition to pharmacological methods of pain control, non-pharmacological methods of are just as important. Non-pharmacological techniques have been proven to reduce pain and anxiety in burns dressing changes.
- Non-pharmacological methods include; distraction, relaxation techniques, and preparation/education.


- An online cross sectional survey was completed by burns care providers across the globe focusing on daily practice to develop an “ideal” burns wound dressing
- Results from the study indicate that:
  - “Ideal” wound dressing features include a non-adhesive, absorbent and antimicrobial property containing. It should be easily removable and only require changes once per week.
  - Antimicrobial activity is the most essential property of a burns dressing due to burns incurring a high potential risk for infection.
  - Absorbency is also essential of a burns dressing.
- This survey included a number of worldwide burns care providers therefore is easily applied to the larger population. The study however is based on individual’s opinions.
References