Clinical Trial Protocol

Scientific Title:	**Survey of Beliefs and Practices regarding the Donor Site Wound in Paediatric Split-Thickness Skin Grafts**
Abbreviated Title:	Paediatric Donor Site Wounds in Australasia
Protocol Date, Version:	30th May 2019, Version 2
Principal Investigator:	Craig McBride
Associate Investigator:	Bhavesh Patel Roy Kimble Kellie Stockton
Affiliations:	Pegg Leditschke Children's Burns Centre, Children's Health Queensland Discipline of Paediatrics and Child Health, Faculty of Medicine, University of Queensland
Protocol author:	Craig McBride
Study sponsor:	Pegg Leditschke Children's Burns Centre, Children's Health Queensland

Study Synopsis

SCIENTIFIC TITLE	Survey of Beliefs and Practices regarding the Donor Site Wound in Paediatric Split-Thickness Skin Grafts
SHORT TITLE	Paediatric Donor Site Wounds in Australasia
SPONSOR	Pegg Leditschke Children's Burns Centre
RATIONALE	No existing data demonstrating practices in the treatment of the donor site wound following paediatric split-thickness skin grafting.
PRIMARY AIM	Benchmark current practice regarding treatment of the DSW in children.
SECONDARY AIM	1. To determine whether there are differences in practice, determined by • Geography (Australia vs New Zealand, state differences) • Experience (years since Fellowship, practices of peers, number treated annually) • Type of practice (paediatric only vs mixed adult and children) 2. To determine if there have been appreciable changes since a similar survey was done in Australia
PRIMARY ENDPOINT	Survey open for three months, with reminder emails at 2, 4 and 8 weeks
STUDY DESIGN	Online survey
STUDY DURATION	3 months
SAMPLE SIZE & POWER	Aim to have 100% coverage of inclusion criteria below
RECRUITMENT CENTRES	Direct invitation by Pegg Leditschke Children's Burns Centre
INCLUSION CRITERIA	1. Consultant surgeon 2. Working in a burns unit 3. Treating children with burns 4. Creating donor site wounds for STSG 5. Working in Australia or New Zealand
DATA MANAGEMENT	Online survey, with option for paper-based responses. Data will be collected into a password protected electronic database (Survey Monkey).

Study Administration

1. **Chief investigator**	Dr Craig McBride Pegg Leditschke Children's Burns Centre Queensland Children's Hospital 501 Stanley Street SOUTH BRISBANE QLD 4101 p: 07 3068 1111 e: Craig.McBride@health.qld.gov.au
2. **Associate investigators**	Dr Bhavesh Patel Pegg Leditschke Children's Burns Centre Queensland Children's Hospital 501 Stanley Street SOUTH BRISBANE QLD 4101 p: 07 3068 1111 e: Bhavesh.Patel@health.qld.gov.au Professor Roy Kimble Pegg Leditschke Children's Burns Centre Queensland Children's Hospital 501 Stanley Street SOUTH BRISBANE QLD 4101 p: 07 3068 1111 e: royk@uq.edu.au Associate Professor Kellie Stockton Department of Physiotherapy Queensland Children's Hospital 501 Stanley Street SOUTH BRISBANE QLD 4101 p: 07 3068 1111 e: Kellie.Stockton@health.qld.gov.au
3. **Human Research Ethics Committee**	Children's Health Queensland Human Research Ethics Committee c/- Amanda Smith Level 7, Centre for Children's Health Research 62 Graham Street SOUTH BRISBANE QLD 4101 e: CHQEthics@health.qld.gov.au
4. **Funding Source**	In-kind funding Pegg Leditschke Children's Burns Centre
5. **Sponsor details**	Pegg Leditschke Children's Burns Centre Level 5E Queensland Children's Hospital 501 Stanley Street SOUTH BRISBANE QLD 4101

Investigator Agreement

Full Study Title: Survey of Beliefs and Practices regarding the Donor Site Wound in Paediatric Split-Thickness Skin Grafts

I agree:

- To assume responsibility for the proper conduct of the study;
- To conduct the study in compliance with this protocol, with any future protocol amendments and with any study conduct procedures;
- To ensure all people involved with this study are adequately informed about the investigational procedures and other study-related duties and functions as described in the protocol;
- Not to implement any changes to the protocol without prior review and approval from the Human Research Ethics Committee approving the protocol, expect where necessary to eliminate an immediate hazard to the participants, or where permitted by all applicable regulatory requirements (for example, administrative aspects of the study);
- That I am thoroughly familiar with the appropriate use of the investigational product, as described in this protocol;
- That I am aware of, and will comply with, "Good Clinical Practice" (GCP) and all applicable regulatory requirements.

Chief Investigator name: Dr Craig A McBride Date: 30 May 2019

Chief Investigator signature:

Protocol Amendments

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List of Abbreviations

AI	Associate Investigator
ANZCTR	Australia and New Zealand Clinical Trials Register
ANZ J Surg	Australia and New Zealand Journal of Surgery
CI	Chief Investigator
CHQ	Children's Health Queensland
DSW	Donor Site Wound
GCP	Good Clinical Practice
HREC	Human Research Ethics Committee
ICMJE	International Committee of Medical Journal Editors
NHMRC	National Health and Medical Research Council
PLCBC	Pegg Leditschke Children's Burns Centre
RCT	Randomised Controlled Trial
STSG	Split-Thickness Skin Graft

Glossary of Terms & Definitions

Child	Birth to 16th birthday
Adult	16 years and beyond

1.0 Introduction

1.1 Overview

The donor site wound (DSW) in paediatric split-thickness skin grafts (STSG) is an often-overlooked area of wound management; with most attention typically on the STSG itself rather than the iatrogenic DSW.

This survey seeks to determine the opinions and practices of burns surgeons in Australia and New Zealand, with respect to their treatment of the donor site wound in children as a consequence of skin grafting.

To some degree this has been done before, by Australasian Plastic Surgeon Patrick Lyall. [1] A similar survey, though with different questions, was carried out in the United Kingdom (UK) in 2012. [2]

Properties of an 'ideal' DSW dressing have been investigated at a world level by survey of practising clinicians. [3] While this survey had a small number of respondents only, most agreed an 'ideal' DSW dressing did not currently exist. Desirable qualities included lack of adhesion to the wound bed, pain-free dressing changes, absorbency, and ease of removal.

This study forms part of the PhD thesis of the primary investigator. It is part of a suite of publications in the field of paediatric donor site wounds. [4-7] The study is an electronic survey of Australasian Burns Surgeons practising in centres treating children with burns.

The **primary aim** is to:

Benchmark current practice regarding treatment of the DSW in children.

The **secondary aims** are:

3. To determine whether there are differences in practice, determined by
   - Geography (Australia vs New Zealand, state differences)
   - Experience (years since Fellowship, practices of peers, number treated annually)
   - Type of practice (paediatric only vs mixed adult and children)
4. To determine if there have been appreciable changes since a similar survey was done in Australia [1]

1.2 How is the DSW managed currently?

This information is not available, as there are no data on current DSW management. The majority of studies state alginates are the most common DSW, but with little supporting evidence to back this assertion. Local data from the PLCBC show that DSW management is often surgeon-specific. There were three DSW dressings in use prior to our recent randomised controlled trial (RCT). There were a number of factors determining which dressing was chosen – both surgeon-specific and patient-specific factors.

1.3 Why examine this?

Lack of current data regarding practice means centres may be operating in a vacuum, unaware of how their practice compares to that of other centres regionally.

2.0 Study Aims

2.1 Primary Aim

The **primary aim** is:
In children being treated for burns with split-thickness skin grafts, what are the beliefs and practices of their treating consultant surgeons with respect to the donor site wound, in Australia and New Zealand?

Our **primary hypothesis** is that the majority of surgeons

- will be using an alginate dressing
- will change it at 5-7 days
- will expect wound re-epithelialisation at 7-10 days
- will have differences of opinion regarding negative aspects of a DSW

The **secondary aims** are:

5. To determine whether there are differences in practice, determined by
   - Geography (Australia vs New Zealand, state differences)
   - Experience (years since Fellowship, practices of peers, number treated annually)
   - Type of practice (paediatric only vs mixed adult and children)
6. To determine if there have been appreciable changes since a similar survey was done in Australia [1]

Our **secondary hypotheses** are that: there will be differences between paediatric-only surgeons, and those with mixed practices; there will be definable geographic differences in practice; there will be definable experience differences in practice.

3.0 Study Design Overview

We plan an online cohort study of consultant burns surgeons in Australia and New Zealand performing STSGs in children and therefore creating a DSW that has to itself be treated.

Experimental Design

- **Groups:**
  Consultant surgeons in Australia and New Zealand treating performing STSG in children with burns

- **Blinding:**
  None. Names will be collected to assist with coverage. Names will be removed from data prior to analysis.

- **Outcome data source/s:**
  Self-reported data from consultants taking part in the survey.

- **Data collection:**
  Electronic database (SurveyMonkey), with the availability for paper-based forms if requested. Data will be entered into a password-protected electronic database.

- **Study duration:**
  Testing of the form suggests it can be completed in under 10 minutes.
  The trial will run for three months to maximise the response rate.

4.0 Study Cohort

4.1 Number of participants/centres

There are a number of centres performing STSG in children, as outlined below

New Zealand: Middlemore Hospital, South Auckland
Waikato Hospital, Hamilton
Hutt Hospital, Upper Hutt
Christchurch Hospital, Christchurch

Australia: Queensland Children's Hospital, Brisbane
Gold Coast University Hospital, Gold Coast
Townsville Base Hospital, Townsville

Fiona Stanley, Perth

Sydney Children's Hospital, Randwick
Westmead Children's Hospital, Westmead

Royal Children's Hospital, Parkville
Monash Children's Hospital, Clayton

Royal Hobart Hospital, Hobart

All consultant surgeons performing STSG in children with burns in these centres will be eligible to participate in the study.

4.2 Recruitment plan

Only participants who fulfil inclusion criteria will be eligible for approach. Data regarding consultants in these centres are readily available publically. The CI will directly approach the lead consultant in each centre to explain the trial and confirm the names of eligible consultant staff. An individual email invitation will then be sent to each consultant. This email will explain the trial and provide a link to the online survey. It will include a return email invitation to address any concerns or questions that may be raised regarding the survey.

Follow up emails and/or phone calls will be sent at 2, 4 and 8 weeks from the time the study opens. The survey will include an option to take no further part in it as an initial question. The name of the consultant will also be requested, in order to not continue to approach those consultants who do not wish to be included in the survey.

4.3 Inclusion criteria for enrolment

1. Consultant surgeon
2. Performing STSG on children for burns
3. Working in Australia or New Zealand
4. Working in a recognised Burns Unit

4.4 Exit criteria during the study

Consent withdrawal. If this occurs and the investigators are notified, the data pertaining to that individual will be deleted from the database and the participant notified that this has occurred.

5.0 Study Implementation

5.1 Study sites

Study will be conducted online, with the central database being administered from the PLCBC at QCH.

5.2 Number of participants

It is estimated there are 60-70 consultant surgeons performing STSG in children in Australia and New Zealand.

5.3 Estimated duration of study

Three months for data collection. A further three months for analysis and writeup.

5.4 Ethics and regulatory approvals

The study will be conducted according to Good Clinical Practice (GCP), and the Declaration of Helsinki.

The study protocol, data collection forms (including consent and information statements), and other documents required for ethical approval will be submitted to the Children's Health Queensland Human Research Ethics Committee (CHQ HREC) for approval prior to study commencement.

5.5 Informed consent

Informed consent processes are to be consistent with the principles of GCP, the Delaration of Helsinki, NHMRC requirements and cultural aspects of consent in Indigenous communities. Freely given informed consent will be obtained from each participant prior to enrolment. A copy of the study protocol will be made available as a part of the invitation email. Entry into the study will be deemed as consent. A sentence to the effect that declining to participate is acceptable will be included in the invitation email. A contact email for questions will be provided.

No inducements, monetary or otherwise, will be provided to encourage participation in the survey.

5.6 Participant identification numbers

Participants will be assigned a consecutive number upon entry into the survey. Names will be redacted from information prior to transfer to statistical analysis software. A master file will be kept to allow re-identification if clarification of any answer is required.

5.7 Outline of study procedures

	0 weeks	2 weeks	4 weeks	8 weeks
Initial email invitation				
Reminder email invitations				

5.8 Study completion

The database will be closed to online entry at 3 months. Any missing data will be located and approaches made to individual surgeons requesting completion of these data.

6.0 Safety Evaluation and Adverse Effects

6.1 Adverse effects

This is an online survey of practice. No adverse effects are anticipated. No patients are directly involved in this study.

7.0 Data Management and Analysis

7.1 Data management

Data will be entered into SurveyMonkey, either by participants online or by transcription of any paper-based forms submitted to the study investigators.

7.2 Sample size

There are approximately 60-70 consultant surgeons eligible to participate in this survey. The community of practice in this field is small, and this is an area of interest and discussion among surgeons. We hope this will encourage near universal uptake of the survey

7.3 Data analyses

A detailed data analysis plan will be prepared prior to analysis. Data will be audited, cleaned and locked prior to final analysis. Names will be deleted and data analysed in aggregate only.

Subgroup analyses, as per the secondary outcomes of interest, will include the following co-variates:

- Geography (Australia vs New Zealand, state differences)
- Experience (years since Fellowship, practices of peers, number treated annually)
- Type of practice (paediatric only vs mixed adult and children)

It is unlikely data will be normally distributed, therefore non-parametric analyses will be used. Tests will be two-tailed, and a p value of 0.05 will be deemed significant.

8.0 Participant completion or withdrawal

8.1 Participant completion

Participants will have completed their participation upon completion of the survey. If open fields remain those participants will be contacted at the end of the study and asked to complete the blank fields.

8.2 Participant withdrawal

If participants withdraw from the study their responses will be withdrawn. Withdrawn participants will still be asked if they would like a copy of the results.

9.0 Milestones and Performance Indicators

	Milestone	Timeline	Performance indicator
1	Identification of potential participants	1 mo prior	Email list of burns units treating children and consultant staff
2	Governance	Up to start date	HREC approval SSA approval Protocol registered with ANZCTR
3	Data collection	Start to 3mo	Data collection Follow up contacts at 2, 4, 8 weeks
4	Data analysis	3-6mo	Outcomes defined Manuscript in preparation
5	Dissemination	6-12mo	Manuscript submitted to peer reviewed journal (*ANZ J Surg*)
6	Post project feedback	6-12mo	Email to participants requesting feedback and results

10.0 Administrative Aspects

10.1 Regulatory approvals

Ethics approval for the study will be sought from the CHQ HREC.

10.2 Committees and panels

The investigators will establish a data management committee. The team will meet throughout the process to monitor progress of data collection. No data will be analysed until completion of the collection phase. Names will be removed from the database, raw data will be cleaned and locked by the CI, then presented in aggregate to the AIs for analysis and discussion.

10.3 Study files

Essential study documentation and management of all study files and databases will be in accordance with GCP guidelines.

All databases will be password protected and will be electronic files comprised of core data fields. Data will either be entered directly by participants, or transcribed by the CI or AIs following submission of paper data collection forms. Originals of any study documents will be retained. The database will be monitored regularly (at each reminder timepoint: 2, 4, and 8 weeks). Any data queries will be referred back to the original participant for verification and/or correction prior to locking off the database.

10.4 Data quality control

Data generated through the study will be internally monitored for completeness and accuracy. Queries resulting from spurious or incomplete data will be referred back to the participant for clarification.

10.5 Study closure

The study will be closed upon completion of the following:

- Three months from the start of the project
- All data queries have been actioned
- Data completeness has been verified

10.6 Record retention

Data will be retained in accordance with NHMRC guidelines, for a minimum of 15 years following completion of all study-related procedures (including final report and/or publication of study results). Retention of records may be on-site, at a secure off-site facility, or in a secure online data repository.

10.7 Release of data

Raw, de-identified data may be made available upon reasonable request from other investigators. Prior to release of any such data this request will be forwarded to the CHQ HREC for approval.

10.8 Study report

A study report will be written in the form of a manuscript to be submitted to a peer-reviewed medical journal (likely *ANZ J Surg*). The final report will be signed by all investigators, in accordance with ICMJE guidelines for authorship.

A version of the final study report will be made available to all requesting participants.

10.9 Confidentiality

All identifiable information on study participants will be retained in password protected files and locked cabinets or locked rooms at the study site. Access to this information will only be provided to immediate study staff, unless required by legislative or regulatory agencies and the HREC. Consent to participate in this study will include consent for access to data by such agencies.

No identifying information will be included in study reports:

- Names will be removed and participant numbers assigned
- Geographic data will be replaced with an assigned number for each state, and for New Zealand.

11.0 References

[1] Lyall PW, Sinclair SW. Australasian survey of split skin graft donor site dressings. Aust N Z J Surg 2000;70:114–6.

[2] Geary PM, Tiernan E. Management of Split Skin Graft Donor Sites–Results of a National Survey. Clinics in Plastic Surgery 2012;39:77–84. doi:10.1016/j.cps.2011.09.012.

[3] Lars PKLP, Giretzlehner M, Trop M, Parvizi D, Spendel S, Schintler M, et al. The properties of the "ideal" donor site dressing: results of a worldwide online survey. Ann Burns Fire Disasters 2013;26:136–41.

[4] McBride CA, Patel B, Stockton KA, Kapoor V, Kimble RM. Alginate dressings for donor sites of split-thickness skin grafts. Cochrane Database of Systematic Reviews 2018;49:129–18. doi:10.1002/14651858.CD013048.

[5] McBride CA, Kimble RM, Stockton KA. Prospective randomised controlled trial of Algisite™ M, Cuticerin™, and Sorbact® as donor site dressings in paediatric split-thickness skin grafts. Burns Trauma 2018;6:1028. doi:10.1186/s41038-018-0135-y.

[6] McBride CA, Kimble RM, Stockton K. Three donor site dressings in paediatric split-thickness skin grafts: study protocol for a randomised controlled trial. Trials 2015;16:557.

[7] McBride CA, Kempf M, Kimble RM, Stockton K. Variability in split-thickness skin graft depth when using an air-powered dermatome: A paediatric cohort study. Burns 2017;43:1552–60. doi:10.1016/j.burns.2017.02.010.