Centre for Global Burn Injury Policy and Research

2019/20 highlights
MESSAGE FROM DIRECTOR

A message on the successes of 2019/20

We would like to share the highlights of the work of the Centre for Global Burn Injury Policy & Research (CGBIPR) at Swansea University in 2019/20 with you. This time period covers the 2nd and 3rd year of our NIHR grant, and it was great to be able to finalise the first parts of this grant and see results.

A multidisciplinary team of in-country partners, academic research units and burn specific operational NGOs have collaborated to create the NIHR Global Health Research Group on Burn Trauma and we are fortunate to have a unique and synergistic collaboration with Interburns that enhances our capacity to translate knowledge into on the ground action.

The research is led from the target countries, and supported from external organisations to ensure the relevance and compatibility of research outputs, and to increase impact and enhance uptake.

The collaboration has been borne from necessity. Burn injury cause significant morbidity and mortality, with low and middle-income countries bearing 95% of the burden. Burns are preventable, but there is a lack of effective interventions and knowledge surrounding burns in many LMIC’s. The NIHR Global Health Research Group has come together to address this very clear need to research and implement interventions to improve burn care and prevention across the globe.

Prof Tom Potokar OBE
OUR FOCUS

The Centre has focused on three key areas of work; prevention, capacity building, and emergency preparedness. This highlights report shares the details for one of the successful case studies within each sector.

PREVENTION

In 2019 the Centre’s local partners have co-developed a prevention programmes based on the community surveys completed in previous years. They include training for community health staff, women’s groups, and in schools; pamphlets & newsletters; TV and social media; theatre; meetings with community leaders; and physical interventions, such as a rack to raise the height of cooking vessels.

More detail on our case study in Nepal, see p. 8.

QUALITY IMPROVEMENT & CAPACITY BUILDING

The Centre organised several QI workshops in 2019, focusing on Implementation and Improvement Science. The aim of these courses is to give health staff the skills to improve their own burn care services and to teach their colleagues.

More detail on our case study in Malawi, see p. 12.

EMERGENCY PREPAREDNESS

A technical working group has been established led by WHO, Co-Chaired by Prof Tom Potokar with representation from the Centre for Global Burn Injury Policy and Research (CGBIPR), Interburns, Médecins Sans Frontières (MSF), International Committee of the Red Cross (ICRC) and individual experts from across the globe to develop recommendations and training for the management of burn injuries in the event of a mass casualty burn incident.

The organisation and communication was superb. The selection of topics was excellent and instructors were all of high calibre.

Participant from QI workshop held at Swansea

We came back from Moreton in Marsh with a lot of beautiful memories, disaster specific knowledge and incentives for our national plan. The course met my expectations fully.

Participant from the EU workshop
**MAIN MILESTONES TO DATE**

- The community surveys exploring burn incidence and local knowledge and practices has been completed in all 3 target countries.
- Basic Burn Care training delivered in Nepal, West Bank and Ethiopia.
- Community led burn prevention programme developed and piloted in Nepal.
- First group of 12 nurses and surgeons completed a week-long course on Implementation and Improvement Science.
- Advanced Burn Care Surgery module delivered to 64 surgeons and Advanced Burn Care Nursing to 34 nurses.

**THE DYNAMIC STRUCTURE OF A CFIR FRAMEWORK**

A lot of the work done by the Centre uses implementation science to turn research into action. The Consolidated Framework for Implementation Research is a useful tool to organise the complexities underpinning implementation science. It does this by categorising the barriers and facilitators to implementing a programme aimed at improving health outcomes.

"The experience has introduced me to QI research and it was a wonderful experience. The facilitators were so hard working and helpful to ensure we got the concepts as planned."  
Nurse from Malawi on QI training

"The Technical Working Group was multidisciplinary and the exchange of ideas from experienced practitioners was refreshing."  
Participant of the WHO Technical Working Group on burn mass casualties

**TIMELINE**

**KEY POINTS**

**2019**
- **January**: Implementation and Improvement Science course in UK
- **February**: Data analysis from Nepal community survey
- **March**: Burns in Conflict training for Northern Syria for WHO
- **April**: Visit Sierra Leone to prepare national strategy on burn care services
- **May**: Workshop one of Quality improvement for Nurses held in Malawi
- **June**: International inter-sectoral meeting to discuss priorities in burn research
- **July**: Workshop two of Quality Improvement for nurses held in Malawi
- **August**: Preparation and submission of annual report
- **September**: Basic Burn Care training of trainers held in Ethiopia

**2020**
- **January 2020**: Basic Burn Care training of trainers, Gaza
- **February**: Ethiopia and Palestine plans for prevention work set up
- **March**: PhD fieldwork research in Bangladesh on contractures
- **April**: PARI sharing WHO recommendations / Start of EU grant EMT training development
- **May**: Basic Burn Care training of trainers held in Ethiopia
- **June**: Visit Sierra Leone to prepare national strategy on burn care services
- **July**: Workshop one of Quality improvement for Nurses held in Malawi
- **August**: Preparation and submission of annual report
- **September**: Basic Burn Care training of trainers held in Ethiopia
- **October**: Basic Burn Care training of trainers, Gaza
- **November**: Ethiopia and Palestine plans for prevention work set up
- **December**: PhD fieldwork research in Bangladesh on contractures
- **December**: PARI sharing WHO recommendations / Start of EU grant EMT training development
AN EXAMPLE OF PREVENTION IN NEPAL

A COMMUNITY LED BURN PREVENTION AND FIRST AID PROGRAMME

The Basic Burn Care training has been highly appreciated by all participants, health workers of the health posts: they have said that they got knowledge and skills on burns for the first time in their professional life.

Programme manager Kamal Phuyal from our local partners Sagun

OBJECTIVE

Identify key barriers, facilitators and effective strategies for developing and implementing a community-led burn prevention programme, using implementation research.

Key results from community survey in Nepal (1279 households):

- 75% of burns in the house occurred while cooking
- 84% of burn injuries occur in the house
- 39% of burn injuries happen to children 0-5 year old
- 52% of burn injuries happen to women
- 59% of burn injuries are scald or hot-surface injuries

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Interventions to generate and sustain awareness and advocate for prevention

**PHASE 1:**
- Stakeholder introductory meetings
- Formal approval from local government for project
- Stakeholder involvement in preparation for research

**January - June 2018**

**PHASE 2:**
- Key informant interviews
- Focus Group Discussions
- Household Survey
- Patient Journeys

**July - December 2018**

**PHASE 3:**
- Dissemination of results using infographics to guide stakeholder community discussion
- Documentation of community resolutions on approaches to prevent burn injury and improve first aid practices in each setting
- Identification of required resources including local champions and appointed leads
- Development of a monitoring and evaluation tool

**January - July 2019**

**PHASE 4:**
- Initiation of prevention and first aid program
- Monitoring of prevention and first aid program
- Evaluation of prevention and first aid program

**August 2019 - July 2020**

**POPULATION AT RISK**

- Women and children in the home setting experiencing scald and flame burns while preparing or serving food
- Limited knowledge and awareness on burn prevention
- Limited practice of recommended first aid burn injury

Local government and other stakeholders have internalised the importance of burn as an important public health issue and appreciated our idea of ‘preventing burns in the leadership of people themselves’ so that it will be sustainable.

Kamal Phuyal, Programme manager for Sagun, Nepal

Local media including FM radio and television

Inclusion of burn prevention and first aid education in the rural municipality five year plan

Street theatre, awareness campaigns and prevention as part of burn surgery camps

Facilitated stakeholder discussions to identify and action local feasible interventions

Training of Female Community Health Volunteers (FCHVs) and Health Post Staff in Basic Burn Care and prevention

Case studies of prevention plans for publication in local newspapers and magazines
**QUALITY IMPROVEMENT & CAPACITY BUILDING EXAMPLE FROM MALAWI**

**Implementation and Improvement Science: A pilot course for nurses working in burns units in Malawi and Ethiopia**

Here is an example of a project from one of the students on this course.

**RICHARD MSUKWA**

**Project title:** Improving pain control for burns patients during dressing changes at Mzuzu Central Hospital

**What is the current problem:**
Patient do not regularly get pain relief before dressing changes causing anxiety, distress and lack of co-operation

**Project aim:**
To improve pain control in for burns patient during dressing changes from 10%* to 70% during dressing changes by December 2019 in the male and female surgical wards

*baseline data to be collected - based on estimate

**Change idea(s):**
- Review policy on pain control (already on-going at MCH)
- Orientate stakeholders (nurses and dressers) to the policy at ward meeting
- Produce pocket cards which can be used to remind staff what should be done
- Create a poster of the guideline for the nurses station

**Measurement(s):**
- Audit of drug cards/patient files
- Patient satisfaction questions

**Communication/Motivation strategy:**
- Messages at ward meetings/what’s app group
- Sharing the meeting notes
- Pain ‘champions’

**Introduction**
There is an urgent need to involve, support and empower practitioners to undertake quality improvement projects in burn services. The Centre for Global Burn Injury Policy and Research has piloted an implementation and improvement science course for nurses to build capacity in this area. The course aims to equip nurses working within burns units, in low resource settings, with the knowledge and skills to plan, implement and communicate quality improvement.

**Methods**
Eight nurses from five burns services across Malawi and Ethiopia took part in the pilot course. Focus groups and individual questionnaires were conducted as part of the course evaluation.

**Results**
Course evaluations demonstrated that interactive teaching and learning activities were successful in supporting participants to devise their own quality improvement project. Facilitators to changing practice include: supportive leadership, active individuals, stakeholder involvement and training opportunities. Barriers to changing practice included staff attitudes, motivation, resource limitations, nurse rotation and poor communication.

**Discussion**
Nurses can play a significant role in the improvement of services, however, they face challenges instigating and maintaining change. Future work will consider how the format of this course could be applied to support nursing staff initiate quality improvement across different contexts.

**Conclusion**
While resource constraints can be difficult to overcome, this pilot course has demonstrated a community of practice can be created whereby members can advise and support each other to overcome barriers to implementing change.

**EIGHT NURSES from five burns services across Malawi and Ethiopia took part in the PILOT COURSE**

"We have been equipped with knowledge on how to be a good leader/manager and how we can work with stakeholders while observing ethics throughout the QI project."

"Nurse on the QI training in Malawi"

"It’s a very productive week. In my opinion it helps us overcome the problem at hand with very little resources. I personally gained new knowledge and experience in QI improvement and how to do my proposal. It helped me in every angle."

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The Centre worked with the WHO- EMT to establish a technical working group. An initial 2 day workshop was held at the CGBIPR with over 22 participants from the field of burns to provide guidance on the management of mass casualty burn scenarios, followed by further workshops in Geneva, Delhi and Bergen to finalise recommendations.

Burn mass casualty events present a unique challenge, especially in low resource environments. Implementing effective yet simple standardised approaches and supporting the capability of healthcare systems, can help low and middle income countries manage multiple burn injured patients.

Emergency preparedness pilot training

The Centre worked in partnership with Interburns, Norwegian Directorate of Health, and the European Burn Association to design deliver and evaluate a pilot training event on behalf of the EU. The training was to prepare Burn Assessment Teams for mass casualty events within Europe. Such scenarios could include the likes of terrorist attacks or factory fires. In the past these events have highlighted the need for a more coordinated response within the EU. The B-teams are trained for catastrophic events so that the EU can deploy a prepared and responsive approach when a member country is in crisis. The Centre hope to facilitate more training weeks for B-Team responders in the future. The training was funded by the EU Commission.

For this globally important work, we worked with:
LOOKING FORWARD

2020/2021

Developing an implementation and improvement Science workshop for burn care professionals in Jordan

Setting up mentoring scheme for healthcare professionals from our previous QI courses

European Club for Paediatric Burns World Congress to be hosted in Wales, October 2020

Over 600 healthcare workers trained in BBC in Gaza, West Bank, Ethiopia and Nepal

Starting new research work in Mongolia & Nepal thanks to NIHR funding

Pilot study in Mongolia evaluating cooking racks to prevent burns during cooking
OUR PARTNERS

The Centre has partners in;
1. Bangladesh
2. Sierra Leone
3. Malawi
4. Ethiopia
5. West Bank
6. Gaza
7. Nepal
8. Iraq
9. Japan
10. Mongolia

OUR FUNDERS

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