Top ten research priorities in global burns care: findings from the James Lind Alliance Global Burns Research Priority Setting Partnership

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Burns are a global issue that can result in lifelong multimorbidities and disproportionately affect people in low-resource settings. Prioritising research of importance to patients and health-care professionals improves evidence-based care. This prioritisation setting partnership was undertaken in global burn care (focusing on thermal non-electrical burns) by establishing a James Lind Alliance research priority setting partnership. Over 2 years, two online multilingual surveys with patients, carers, and clinicians, 16 interviews, and a virtual priority setting workshop were conducted to identify and prioritise questions for research. Survey responses were received from participants in 88 countries (1617 survey one respondents; 630 survey two respondents). A short-list of 19 research priorities were ranked at an online workshop attended by 28 participants (14 health-care professionals, ten burn survivors, and four carers or advocates) from 15 countries to produce the final top ten research priorities. These priorities provide opportunities for researchers, funders, and clinicians to shape the future of burns research and improve burns care globally.

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Introduction

Globally, 11 million people are affected by burn injuries every year,[1] resulting in an estimated 180 000 deaths and substantial morbidity.[2–5] Physical disabilities from burn injuries can be metabolic,[6] musculoskeletal,[7] or neurological,[8] and many are lifelong.[9] Psychosocial effects include post-traumatic stress disorder from the injury itself[10] or from undergoing repeated painful interventions.[11,12] Depression and anxiety occur frequently,[10,12–14] and scarring can affect many aspects of psychosocial health.[15,16] Burn injury survivors, carers, and families frequently encounter barriers to social interactions, reintegration, and normal function.[17–19] Long hospital admissions, multidisciplinary input (eg, intensive care), and rehabilitation are frequently needed, which has a substantial economic burden, and different types of burns require different approaches (eg, electrical *vs* thermal burns).[20]

Burns disproportionately affect low-income and middle-income countries (LMICs), with 70% of global burns occurring in these areas.[21–23] Mortality rates are up to ten times higher in LMICs than in other settings, and access to specialist care is often inadequate.[23–25] In countries without universal access to health care, the cost of burns care is frequently beyond the means of patients and their families[2,25,26] and can substantially exceed the catastrophic health expenditure threshold for patients.[24,26,27] To address these challenges, synthesised research evidence is required to inform treatment,[28] to ensure an evidence-based approach,[29] and to shape health policy.[30] Despite the clinical and psychosocial effects on patients and health-care costs, there is a paucity of high-quality research in this field,[31,32] which results in an absence of consensus on the best burn treatments.[32,33] This scarcity of research directly contributes to the wide disparity and absence of standardisation in care.[34] Randomised controlled trials (RCTs) are often single-site and have methodological limitations.[35,36] Few RCTs are done in LMICs.[37–40] Prioritising research areas of most importance to stakeholders is one way to address these issues of inequity. Research funding can then be guided to areas of need selected by global stakeholders, including patients and clinicians.[41,42]

There are various approaches to identifying research priorities.[43,44] The James Lind Alliance (JLA) is a UK-based non-profit initiative that has developed a robust and validated method of placing stakeholders at the centre of research prioritisation.[45] The UK's National Institute for Health and Care Research (NIHR) funds the infrastructure of the JLA to oversee the process for priority setting partnerships. This process has been completed for more than 150 clinical conditions,[46] and generates impact in research and care.[47] The JLA method provides an equal voice to patients, carers, and health-care professionals in a standardised consultation procedure to determine which unanswered questions and treatment uncertainties are most important to them.[45] Such priority setting exercises are usually conducted within one country.[45,48] In 2010, a research agenda setting project was done in the Netherlands to identify the research priorities of burn survivors and health-care professionals, identifying 15 broad topic

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areas.[49] However, we could not identify other work in this area. Given the global effect of burn injuries and the inequity in access to good quality care, ensuring that research focuses on the needs of burn survivors and health-care professionals all over the world is important. To our knowledge, there has been no multiple country research prioritisation work done to support global burn care improvement. The aim of the JLA Priorities in Global Burns Research priority-setting partnership was to identify the top ten research priorities in global thermal burns care that are most important to patients, carers, and health-care professionals.

Methods

Study overview

The Priorities in Global Burns Research priority-setting partnership was conducted in accordance with JLA methods[45] between September, 2021, and January, 2024. This method is described in full elsewhere,[50] and briefly summarised with explanations of any deviation from the original protocol. Ethics approval was obtained from the University of Bristol Faculty of Health Science Research Ethics Committee (9944 Feb 1, 2022). The figure provides an overview of the method.

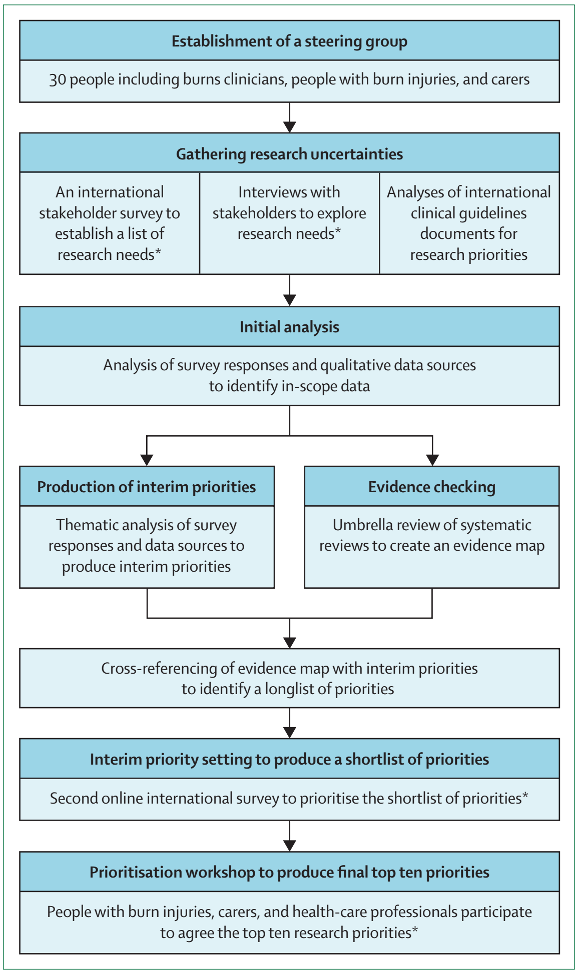

Figure: Overview of James Lind Alliance prioritisation method
*Engagement with international networks and collaboration took place.

A steering group comprising 30 members from 12 countries, including five burn survivors and carers, three patient representatives from support services, and 22 health-care professionals, was established in September, 2021, to provide expert guidance for the central research team of five participants, which included a JLA adviser. The group met monthly and were involved in all aspects of the project, including determining scope, method, survey design and distribution, analysis, write-up, and dissemination. International burns care networks and survivor support groups were approached to identify 25 collaborators for data collection.

Burn survivors, carers, and patient representatives were involved throughout. Members of the steering group contributed to developing the survey questions, terminology usage, promotional materials, method for survey distribution, and analysis of data. In addition to steering group involvement, the NIHR Applied Research Collaboration West Patient and Public Involvement and Engagement (PPIE) Plain Language Panel reviewed participant-facing documentation and the longlist of interim priorities, and multilingual members of the public piloted non-English language documentation and surveys. In accordance with JLA methods, the final research priorities workshop included balanced PPIE representation. Public contributors were reimbursed for their time according to NIHR guidance.

The steering group defined the precise scope of the priority-setting partnership.[50] The focus was on the prevention and treatment of thermal burns in a global context, including prehospital, inpatient, and outpatient care. The scope excluded factors related to health-care infrastructure and the economics of care provision (if these did not specifically relate to burns care and research), small burns not requiring hospital treatment (eg, injuries less than 0·5% body surface area), and non-thermal burns, such as chemical or electrical burns. Chemical and electrical burns were excluded because of the distinct and different set of injuries and treatment approaches required.

Survey one

An anonymous online survey was created with the Research Electronic Data Capture system hosted by the University of Bristol, accessible through Priorities in Global Burns Research. The survey asked respondents questions about their lived experiences of burn treatment, including the elements of burn care that were most important to them. Burn survivors and carers were asked targeted questions. All questions were developed with steering group members and were piloted by burn survivors and clinicians to ensure the questions were comprehensible and captured information relevant and meaningful to this population (panel). In addition to free-text questions, basic demographics were collected, including age, gender, country, and area of residence (eg, urban or rural). Burn survivors (and carers) provided details of their burn injuries and health-care professionals reported their professional role. The online survey and all participant documentation were available in eight languages (English, [Simplified] Chinese, French, Hindi, Arabic, Spanish, Portuguese, and Bengali). Translation of the surveys, participant-facing materials, and all non-English survey responses was done by an independent professional translation service (Bristol Transcription and Translation Services).

Email lists of potential respondents were collated by the research team and steering group. These email lists included professional and survivor networks, corresponding authors of burns articles published in leading burns journals in the preceded 5 years (ie, *Burns and Trauma*; *Burns*; *Journal of Plastic, Reconstructive, and Aesthetic Surgery*; *Journal of Wound Care*; and *Annals of Surgery*), international burn support services, charities, international burn associations and societies, and personal contacts. In addition, participants in a previous burns core outcome set project[51] who had given permission to be contacted for other research work were invited. Emails were sent to all contacts when the survey was launched and one round of follow up reminders was sent. The emails included details of the project and links to the survey. Emails requested that the invitation to participate be shared widely. Promotional materials were developed, including an animation, infographics, posters, and leaflets, in multiple languages with a QR code directly linking to the survey website. In addition to email distribution, the survey was promoted on social media (Twitter or X, Instagram, Facebook, and LinkedIn), at international burns conferences, and via survivor support charities and their networks (The Scar Free Foundation, The Katie Piper Foundation, Dan's Fund for Burns, COANIQUEM, The George Institute for Global Health, The Pheonix Society, NIHR Global Health Research Unit On Global Surgery India Hub [GSU, India], Resurge International, and The Sunshine Social Welfare Foundation).

International collaborators (GSU, India; COANIQUEM, Chile) provided service users with the facilities to complete the online survey. Collaborators in Viet Nam, Türkiye, and Taiwan (Sunshine Social Welfare Foundation) translated the survey in Vietnamese, Turkish, and Chinese (Traditional) and collected data. Collaborators in Malawi and The Gambia collected data on paper copies of the survey in-person from health-care professionals and from survivors and carers in rural communities with little or no internet access.

Panel: Survey one questions

If you are a patient, a survivor, or carer

- What challenges or difficulties have you experienced since your burn?
- What areas of burn care are most important to you?
- What were the best and/or worst parts of your experiences of burn care? What would have made them better?
- What areas of burn care do you think need improving?

If you are a health-care professional or work in burn care

- What are the most important questions burn care research could answer at any time after injury?
- What areas of burn care need improving?
- What areas of burn care need more evidence to demonstrate the effect of the treatment?

Interviews and additional data sources

In-depth semi-structured interviews were conducted online via Zoom with survivors, carers, and health-care professionals to explore their experiences of burn treatment and where improvements could be made. The topic guide was developed with the steering group and was piloted by survivors and health-care professionals (appendix pp 5–8). Participants were recruited through existing professional networks, steering group contacts, and survivor support groups. Interviews continued until saturation point was reached. Additional data sources included emails sent from stakeholders directly to the research team and responses to a service user survey administered by The Katie Piper Foundation. To address barriers to survey completion in countries where internet access is limited by infrastructure and cost, a WhatsApp version of the survey was available in English upon request. A document analysis of major international clinical guidelines in burns care was done to identify treatments highlighted as requiring more evidence and further research.

Analyses

All non-English survey data were translated by the professional translation service, including proofreading by an independent translator. All data were initially analysed to determine whether responses were within scope. Out-of-scope responses (eg, respondents who reported electrical burns or responses that were not specific to burn care) were removed from the dataset with approval from the steering group (appendix pp 11–15). Each survey response was assigned a unique identifier detailing respondent characteristics (eg, survivor, carer, or health-care professional) and all in-scope survey data were imported into NVivo (version 13) for analysis.

All in-scope textual survey data were analysed with a thematic analysis approach.[52] This approach initially involved reading, re-reading, and familiarisation with the data. Complete coding was done, whereby all data were coded to identify and label patterns of meaning within survey responses. Themes within the data were identified, relating to clinical areas of burn care and the

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*Amber Young conceived this project and gained funding before her untimely death on Sept 17, 2022

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For **Priorities in Global Burns Research** see https://burnsresearch.bristol.ac.uk/

For **Bristol Transcription and Translation Services** see https://www.bristoltranscriptionservices.co.uk/

See **Online** for appendix

For **The Translation People** see https://www.thetranslationpeople.com

lived experiences of respondents (eg, pain, burns dressings, acute treatments, and psychological impact). Themes were reviewed and refined, and subthemes were identified. If survey responses related to multiple themes, the data were coded and assigned to all relevant themes. Analysis was led by a senior qualitative researcher (HSR) with supervision and guidance from senior researchers with expertise in qualitative methods (LR and DEl). Initial coding was conducted by HSR and was discussed at multiple steering group meetings. Double coding was done on a portion of survey data by LR and DEl and members of the steering group at multiple meetings.

Interviews were transcribed in full. Selective coding of interviews and additional data was done to focus on data relevant to the project aims and was coded deductively according to the themes developed from survey data. If new codes and themes were identified, these were added to the existing list of themes in an iterative manner. Searches identified international clinical guidelines for the management of burn injuries. These guidelines were coded to identify treatments highlighted as requiring further research evidence.

When all data had been assigned to themes and subthemes, further analysis and interpretation was done to develop specific summary questions. For example, responses that described high levels of pain associated with burn treatments were developed into summary questions relating to improving pain management and pain during burn treatments. Similar summary questions were combined to form broad interim priorities. Analysis was done by qualitative researchers (HSR, LR, and DEl) and steering group members, and was completed iteratively until all data had been interrogated and consensus was reached on the longlist of interim priorities.

Evidence checking

A systematic review was done to identify systematic reviews and meta-analyses that included RCTs about any aspect of burn care. The aim was to check whether any of the interim priority questions had been fully addressed. Reliability assessments were conducted based on the rapid assessment previously developed for prioritisation of research in ophthalmology.[53,54] Only the reviews that met all five quality criteria were included in the analysis (ie, defined eligibility criteria for selection of individual studies, comprehensive literature searches, risk of bias assessed, appropriate methods for meta-analyses used [if performed], and concordance observed between review's findings and conclusions). The reviews were classified by intervention type and categorised in accordance with the themes produced from data analysis. If an intervention was related to more than one clinical category, those papers were assigned to multiple categories. Within each category, the interim priorities were mapped against the reviews to find out whether the existing evidence fully answered each interim priority. An interim priority would be considered answered if a review reached clear conclusions about the efficacy of an intervention central to the interim priority, in which case the priority would be removed from the list. This process was done by the research team (HSR and JB) and clinical members of the steering group (JM, JE, KS, RMTS, AL, and NMa) and led to the formation of a longlist of interim priority questions. Full methods and results for this phase will be published elsewhere.

Survey two

A second online survey was created and distributed. Respondents were asked to select the ten most important interim priority questions. To reduce bias, the list of interim priorities was presented in alternating order for each respondent. Following review of response rates to the first survey, survey two was available in seven languages (English, Vietnamese, simplified and traditional Chinese, Spanish, Portuguese, and French). Translation was done by an independent company (The Translation People). Forward and backward translation was conducted to optimise validity.[55] Translations were reviewed by the research team, steering group members, and independent native speakers. To determine the shortlist of priority questions, interim priorities were ranked based on the frequency with which they were selected. Rankings were calculated separately for survivors, carers, and HCPs and based on LMIC status. Rankings between groups were compared to ensure fair representation in accordance the JLA method.[45] Iterative discussion of the rankings by the steering group reduced the list to 19 interim priorities.

Final workshop

The final workshop was held online over two days. Survey two respondents expressing an interest and survivors identified through collaboration networks were invited to participate based on demographics, such as location age and gender, to ensure broad representation. Non-English speakers were advised that interpreters could be provided. The consensus process followed the JLA method.[45] JLA advisers facilitated multiple group discussions about ranking the priorities. Groups were mixed based on location and to ensure the views of survivors, carers, and health-care professionals were considered equally. The inclusion of participants from LMICs was considered essential. JLA advisers informed participants at the outset of the scope and aim of the work and that the aim was to create a set of priorities that were relevant to countries across the world. JLA advisers combined the respective rankings from the groups to determine an overall ranking. Following another round of small group discussions, final rankings from all groups were combined and discussed until consensus was reached on the top ten.

Deviations from protocol

There were four protocol deviations. The scope of the priority-setting partnership was expanded to include health-care infrastructure and economic issues that were specific to burn care. This deviation followed preliminary analysis of survey one data, as the steering group determined that these issues were important to respondents and could be addressed by research. The languages for translations changed for pragmatic reasons. We added translations from countries where we established collaborations, including Viet Nam and Taiwan. The length of time the first survey was open was extended from 3 months to 6 months to optimise response rates. Planned additional systematic reviews addressing priority areas identified in the first survey to supplement the umbrella review were not done, mainly due to insufficient capacity, and also because the poor design and conduct of most RCTs in burn research became apparent.[35,36,56]

Results

Survey one was available online from March 14 to Sept 3, 2022. International collaborators collected survey responses in Vietnamese and (traditional) Chinese. A total of 1833 surveys were submitted, of which 216 (12%) were excluded. Of 216 excluded responses, 144 (67%) were excluded because they were blank or partial responses, 58 (27%) were out of scope, and 14 (6%) were duplicate entries (appendix pp 10–11). In total, complete survey data were received from 1617 participants from 79 countries. Of 1617 respondents, 1052 (65%) were health-care professionals, 357 (22%) were survivors, and 203 (13%) were carers (five respondents did not report this data). Of 1617 responses, most were received from Viet Nam (332 [21%]), the UK (175 [11%]), and the USA (131 [8%]). Survey participant demographics are provided in table 1.

16 online interviews were conducted in English between June 5 and Sept 15, 2022, with nine (56%) health-care professionals, four (25%) survivors, and three (19%) carers from six countries (table 1). The mean interview length was 63 min (range 49–78). Additional data were received from direct emails (n=2), a Katie Piper Foundation service user questionnaire (n=9), and WhatsApp (n=1). Ten international clinical guidelines in burns care were analysed (appendix p 9). Analysis produced 17 main themes and categories (table 2). Further analysis produced 197 initial research priority questions. After combining and refining the text, a list of 52 interim priority questions was produced (appendix p 23).

4407 systematic reviews were identified from seven databases, 2797 of which were retained after deduplication. 232 reviews were eligible and assessed for reliability. 83 (36%) of 232 met the reliability criteria and were included. By examining the population, intervention, comparison, and outcome, objectives, and conclusions, 82 were mapped on to at least one interim priority question. The full paper is under review. However, no priority questions were fully answered by the reviews. As such, all 52 priority questions were included in the second survey.

The second survey was available online between Oct 11 and Dec 31, 2023. A total of 658 surveys were submitted, of which 28 (4%) were excluded as being out of scope. Complete survey data was received from 630 participants from 67 countries. 458 (73%) of 630 participants were health-care professionals, 123 (20%) of 630 were survivors, and 47 (7%) of 630 were carers (two respondents did not report this data). In terms of LMIC status, 396 (63%) of 630 respondents were from high-income countries (HICs), with 89 (14%) from upper-middle-income countries, and 90 (14%) from lower-middle-income countries. 49 (8%) of 630 respondents were from low-income countries (LICs; table 1).

In total for both surveys we received responses from 88 countries (appendix p 30). Rankings between respondent groups (survivors, carers, health-care professionals, and LMIC status) were compared separately to ensure equal weighting and to reduce content overlap between items. There was broad agreement in rankings between groups, although questions relating to stigma, cost-effective interventions, and long-term treatments were prioritised differently by health-care professionals and by respondents from HICs compared with LMICs and LICs, with preference given to short-term treatments and stigma by LICs. At this stage, two highly ranked summary questions with similar content were combined. The top 20 priority questions were ranked according to respondent type (eg, health-care professionals) and according to LMIC status (appendix p 17). In total, 19 priority questions were taken to the final workshop.

An online Zoom workshop was held over two days (Jan 16–17, 2024). This workshop was attended by 28 participants (14 health-care professionals, ten survivors, three carers, and one patient advocate) from 15 countries, including six LMICs (Tanzania, Ghana, Malawi, Nigeria, Bangladesh, and India). Of 14 health-care professionals, seven (50%) were surgeons, two (14%) were nurses, two (14%) were occupational therapists, one (7%) was a psychologist, one (7%) was a physiotherapist, and one (7%) was a paediatrician. All participants were fluent in English, so interpreters were not required. JLA advisers facilitated discussions within four predetermined groups to ensure a mix of survivors, carers, and health-care professionals from different countries. Groups discussed priorities until there was agreement on the ranking of all 19 questions. The rankings of each group were combined to produce a shared ranked list that was then discussed in detail by all attendees together until consensus was reached on the top ten research priorities in global burn care (table 3).

The top research priority was the need for better evidence for effective acute burn treatments. Such research might be to address uncertainties about resuscitation protocols, timing of and techniques in surgery or medication use, and intensive care management. Ways to improve burn symptoms (especially

	Survey one (n=1617)	Interviews (n=16)	Survey two (n=630)	Final workshop (n=28)
Respondent type				
Health-care professional	1052 (65%)	9 (56%)	458 (73%)	14 (50%)
Surgeon	351 (33%)	3 (33%)	160 (35%)	7 (50%)
Nurse	294 (28%)	3 (33%)	103 (22%)	2 (14%)
Physiotherapist	98 (9%)	1 (11%)	58 (13%)	1 (7%)
Occupational therapist	61 (6%)	1 (11%)	33 (7%)	2 (14%)
Anaesthetist or intensive care doctor	61 (6%)	0	29 (6%)	0
Emergency department doctor	38 (4%)	0	10 (2%)	0
Psychologist or counsellor	30 (3%)	0	17 (4%)	1 (7%)
Social worker	13 (1%)	0	3 (1%)	0
Dietitian	7 (1%)	0	3 (1%)	0
Paediatrician	0	0	0	1 (7%)
Other	100 (10%)	0	41 (9%)	0
Prefer not to say or not stated	6 (1%)	0	1 (<1%)	0
Survivor	357 (22%)	4 (25%)	123 (20%)	10 (36%)
Carer	203 (13%)	3 (19%)	47 (7%)	3 (11%)
Burn 1–15% of TBSA	141 (25%)*	NR	26 (15%)†	NR
Burn 16–30% of TBSA	190 (34%)*	NR	48 (28%)†	NR
Burn >30% of TBSA	203 (36%)*	NR	92 (54%)†	NR
Burn TBSA not stated	26 (5%)*	NR	4 (2%)†	NR
Patient advocate	0	0	0	1 (4%)
Not stated	5 (<1%)	0	2 (<1%)	0
Gender				
Female	952 (59%)	11 (69%)	375 (60%)	16 (57%)
Male	650 (40%)	5 (31%)	247 (39%)	12 (43%)
Prefer not to say or not stated	15 (1%)	0	8 (1%)	0
Age, years	NR	47 (22–62)	NR	50 (36–73)
≤18	88 (5%)	NR	0	NR
19–39	624 (39%)	NR	193 (31%)	NR
40–59	697 (43%)	NR	315 (50%)	NR
60–79	188 (12%)	NR	113 (18%)	NR
≥80	9 (1%)	NR	2 (<1%)	NR
Prefer not to say or not stated	14 (1%)	NR	0	NR
Country of residence (five most frequent)				
Viet Nam	332 (21%)	..	29 (5%)	NR
UK	175 (11%)	8 (50%)	139 (22%)	NR
USA	131 (8%)	1 (6%)	51 (8%)	NR
Chile	97 (6%)	..	40 (6%)	NR
Taiwan	97 (6%)	..	..	NR
Australia	..	3 (19%)	44 (7%)	NR
India	..	2 (13%)	..	NR
Guatemala	..	1 (6%)	..	NR
Ghana	..	1 (6%)	..	NR
LMIC status				
High income	NR	NR	396 (63%)	NR
Upper-middle income	NR	NR	89 (14%)	NR
Lower-middle income	NR	NR	90 (14%)	NR
Low income	NR	NR	49 (8%)	NR

Data are n (%) or mean (range). LMIC=low-income or middle-income country. NR=not recorded. TBSA=total body surface area. *N=570; survivors and carers. †N=170; survivors and carers.

Table 1: **Participant demographics**

	Details	Responses including the theme (n=1617)
Improving wound management	Wound dressings, management of wounds (before scar formation); infection diagnosis, treatment, and prevention; debridement and cleaning of burn wounds	1363 (84%)
Improving psychosocial outcomes	Psychological impact of the injury, trauma, and post-traumatic stress disorder, scarring, long-term impact; social impact of scars, impact on family and social factors (eg, work and education), psychological interventions, social, cultural attitudes, and stigma	1012 (63%)
Improving burns rehabilitation	Rehabilitation including physiotherapy and occupational therapy, nutrition, and acute and long-term rehabilitation	972 (60%)
Improving scarring	Management of scars including compression garments, minimisation of scaring, laser and silicone treatments, skin sensitivity, hypertrophic scars, contractures, itching, and temperature regulation	938 (58%)
Improving burns resuscitation and early management	Resuscitation protocols and formulas for fluid resuscitation; calculations for burns surface area; first aid and pre-hospital treatment; medication (not related to analgesia); patient mortality	778 (48%)
Improving surgical intervention in burns care	All aspects of surgery and surgical interventions, including excision and reconstruction; skin grafts and skin substitutes	521 (32%)
Health-care professional and patient and carer interactions and communications	Clinical interactions and communication between HCPs and patients and carers	500 (31%)
Reducing pain	Pain management, the impact of pain, analgesia, and chronic pain	464 (29%)
Managing long-term and chronic issues related to burns	Long-term issues, including chronic conditions, impact on mobility and activities, or specific body areas; growing and ageing with scars	418 (26%)
Optimising access to burns treatment	Access to specialist burns services; equity of access to burns care	395 (24%)
Improving health-care professionals' and patients' education about burns care	Clinician and patient education regarding burns care, including public and community education	273 (17%)
Burns care resources	Clinical resources and facilities for burns treatments	191 (12%)
Developing new treatments and standardising care	New treatments and technologies; standardisation of burns care	120 (7%)
Burns prevention	Prevention of burn injuries, including within specific populations	116 (7%)
Optimising the timing of burn care	Timings and sequence of surgery for wound management and skin grafts; timings of mobilisation for rehabilitation	87 (5%)
Inhalation injury	Inhalation injury diagnosis and treatment	75 (5%)
Clinicians' wellbeing	Impact of burns care on clinicians' wellbeing (eg, vicarious trauma)	29 (2%)

Data are n (%).

***Table 2:* Main themes and their details identified from survey responses, ordered by frequency**

pain) and psychological impact of burns (including the stigma associated with scarring) were prioritised. Creation of evidence about wound dressings was prioritised. Three of the top ten priorities identified that more cost-effective data are needed, which is important to consider in low-resource settings. One prioritised item focused on research to identify better ways to educate staff involved in the care of patients with burns. The detailed list of all priorities considered at the workshop is available in the appendix (p 27), showing rankings by LMIC status.

Discussion

This globally representative JLA priority-setting partnership has identified the top ten research priorities in burn care of most importance to survivors, carers, and clinicians around the world. Knowledge gaps have been identified, and future research investment can be targeted at priorities aimed to improve patient experiences and outcomes that are considered most important. This exercise has used robust and standardised methods. It analysed the views and opinions of a diverse range of stakeholders from 88 countries and examined the literature systematically, determining that the existing evidence-base did not fully answer any of the questions identified. This priority-setting partnership has the greatest international engagement and reach of all such JLA partnerships to date. Priorities focus on acute care, psychosocial outcomes, wound and scar management, and research topics around improving care in low-resource settings; all priorities are areas that need high-quality research to improve global burns care for the future.

In this work, few discrepancies were found between the ranking of priorities between patients, carers, and health-care professionals, which contrasts with other priority-setting partnerships.[57,58] We did, however, find that there were differences in priority rankings based on LMIC status. Stigma (final JLA priority five) was considered very important by all respondents in LICs, who ranked it sixth, whereas it was ranked 36th overall. Cost-effective treatments (priority nine) were rated in the top ten of participants from LMICs and LICs. Conversely, long-term treatments (priority ten) were ranked very low

	Respondent type			LMIC status (all respondent types)				Final James Lind Alliance ranking
	Carer (n=47)	Survivor (n=123)	Health-care professional (n=458)	Low (n=49)	Lower middle (n=90)	Upper middle (n=89)	High (n=396)	
What are the best acute treatments in early burns management for improving patient outcomes, and for reducing and treating complications?	8	8	2	23	8	21*	24	1
What are the best ways to identify, measure, and treat the psychological impact of burn injuries and treatments for survivors and carers?	4	1	16	10	37	21*	6	2
What are the best ways to prevent, assess, and treat burn scars and their complications (eg, contractures)?	118	28	5	21	13	6	8	3
What are the best ways to understand and reduce pain and anxiety from burn injuries and treatments, including during burn dressing changes, to improve care and support for survivors and carers?	1	3	3	6*	3	8	1	4
How can the stigma of burns scarring be better understood and reduced in different cultural, ethnic, and social settings?	13*	11	45	6*	25	26	30	5
What are the best ways to improve the education and training of health-care professionals, and all those involved in burns care, to improve treatments and outcomes?	13*	17*	17	3	27	5	16	6
What are the best and most cost-effective burn wound dressings and treatments to improve patient experiences, wound healing, and outcomes, and reduce complications?	3	5	1	1	1	1	5	7
What are the best ways to provide effective burn treatment and support survivors and carers in resource-limited settings?	13*	17*	12	14	4	7	18	8
What are the most cost-effective burn treatments that improve patient outcomes (eg, in low-resource settings where financial cost is a barrier to treatment)?	27	33	21	2	10	26	42	9
After initial treatment and rehabilitation, what are the best long-term treatments or types of support for improved outcomes and quality of life in survivors and carers?	11*	17*	22	30	40	18	12	10

LMIC=low-income and middle-income country. *Items had equal rankings within respondent type.

Table 3: **Survey two order of rankings between respondent type and LMIC status of final top ten priorities and their final James Lind Alliance ranking**

by LMIC and LIC participants, but relatively high by all survivors and carers. This discrepancy could reflect the different patterns of outcomes in burn care in LMICs,[38,59] as hospitals in LMICs are often ill-equipped to adequately treat burns, commonly resulting in substantial hypertrophic scarring and functional limitations.[60] The differences are also reflected in qualitative responses to survey one. Survivors in the UK describe frustration at the scarcity of access to laser treatments for scar reduction, whereas those in Malawi report inadequate bedding and minimal pain relief in hospital during acute treatment. Future work is planned to explore these issues in more depth. In addition to the top ten, the top 20 priorities according to LMIC status (appendix pp 27–30) should be considered an important resource for researchers and clinicians wishing to improve burn treatments and outcomes in global regions where the needs of patients outweigh the provision of adequate care.

A previous research-agenda-setting project involving burn survivors and health-care professionals was done in the Netherlands in 2010. Of the 15 identified research priorities,[49] seven overlap with the ten priorities identified in this priority-setting partnership. These overlaps are around scarring, psychosocial function, and wound healing. Given the international scope of our exercise, we expected that priorities would be different to those of a single country. Similarly, a 2023 systematic review of research prioritisation in stroke care found differences between the priorities from national and international projects.[61] Acute treatments in early burns management were ranked as the most important research priority in our study. Fluid resuscitation management is a key part of acute burns treatment, and is an important area in which research is needed to guide evidence-based practice.[62] Provision of evidence-based acute burns care for patients who reside in low-resource settings,[38] where mortality rates are high,[10,23] is crucial. Psychosocial factors feature in three of the top ten priorities (priorities two, four, and five), highlighting the significance of these issues to stakeholders. Future research should work towards addressing these priorities, specifically low-cost approaches to psychosocial interventions that can be widely implemented.[63]

The main strength of this priority-setting partnership is the breadth of its international engagement and multisource data collection. To our knowledge, it is the most international such JLA exercise to date, and can, therefore, provide valuable lessons for future prioritisation work in other fields. Establishing an international steering group with LMIC representation is an important component. LMICs were represented by four steering group members and our international collaborators worked in eight LMICs. Engagement with collaborators was key to successful data collection, and ensuring their work is recognised in authorship is equally important.

This work was carefully conducted to optimise response rates, which were good in the first survey and moderate in the second round. However, there were some limitations. The use of online data collection methods presented a barrier for people in some parts of the world,[64] and data collection was limited by accessibility to translations. Data collection might also have had restricted reach within some ethnic groups, which we were unable to monitor as ethnicity was not collected. Most survey respondents were from HICs and upper-middle income countries, with few responses from countries where burns are most prevalent. Although the surveys were available in ten languages, it was not feasible to collect data in all relevant languages because of translation costs. The same limitation applied to the interviews: most were from HICs and upper-middle-income countries, which meant that the wider discourse from other perspectives was not obtained. The final workshop possibly could have been biased because of its delivery online and in the English language. Although interpreter services were offered to participants, these were not used. Members of the research team only spoke English, which might have discouraged non-English speakers from applying to attend the workshop. Future priority-setting partnerships that aim to provide international prioritisation could consider conducting consensus workshops in the native language of key stakeholders and instead provide interpreters for the facilitators.

It is also important to acknowledge our position as a UK-based research team collecting data from participants in low-resource settings, many of which are still subject to the historical and current implications of colonialism, poverty, injustice, and inequity in access to health care.[65] There are many potential biases we have brought to this project, including our choice to categorise countries according to LMIC status,[66] which is a problematic and crude measure.[67] We plan to specifically address these issues in a separate publication.

Other authors have reflected on JLA methods and made some similar recommendations.[68] They underlined the importance of planning ahead for implementing the top ten priorities, which generally means having a good knowledge of the funding landscape to target funders appropriately. For an international priority-setting partnership, the plans needed to take the top ten forwards will vary between countries, and we did not address these issues within this project.

Outside of research, priority-setting partnerships also have the potential to affect clinical practice by influencing clinicians, health-care commissioners, and policy makers.[47] Themes in this top ten include scarring (priorities three and five), pain (priority four), wound management (priority seven), psychosocial impacts (priority two), and acute care (priority one). Pain, psychological wellbeing, scarring, and wound healing are important outcomes for patients and health-care professionals,[69,70] and psychosocial aspects of recovery are central to health-related quality of life following burn injuries.[71,72] There is overlap between these research priority areas and the outcome domains identified as being the most important to patients in a 2024 study[73] and a systematic review of qualitative burns research.[74]

Conclusion

Burns are a global health issue disproportionately affecting people in low-resource settings. We have produced the top ten research priorities for global burn care using the robust and inclusive JLA method, representing the views of survivors, carers, and health-care professionals from 88 countries. In addition to the top ten priorities, this study has highlighted 19 priorities ranked as most important by stakeholders and a long list of 52 priorities developed from the lived experiences of survivors, carers, and health-care professionals, all of which represent opportunities for researchers, funders, and clinicians to address important issues in global burn treatment. Previous JLA priority-setting partnerships have directed future research in clinical conditions[75,76] and we anticipate that these priorities could have a similar effect on research, practice, and policy, with the potential to improve burn care worldwide.

Contributors

AY conceptualised, designed, and acquired funding for the project. JMB originally supervised AY and became the principle investigator following the death of AY. AY, HSR, JMB, SK, and RMTS led on designing the method. All members of the Steering Group contributed to designing the method. HSR and SK were responsible for project administration. All members of the steering group (AY, HSR, RMTS, SK, AK, AA, JB, SB, SC, LQC, CC, DC, LD, BD, RD-S, IE, DEd, JE, SF, EG, AH, CH, ILI, CJ, JL, AL, NMa, JM, NNL, CPu, MS, KS, MV, JMB) and all collaborators (TA, NA, MAC, LAD, OF, VG, DG, JG, TH, JJ, VRK, GL, AMK, NMe, PP, CPa, M-CP, MR, ES, AS, KT, LAA, LPMV, KW, NZ) contributed to investigation and data collection. Data curation was done by HSR, RMTS, JS, and RQ. Resources were provided by SK and the James Lind Alliance. Formal analysis was conducted by HSR, DEl, LR, JMB, JS, RQ, JM, JE, KS, RMTS, NMa, and AL. All steering group members contributed to analysis. HSR, DEl, and RMTS conducted validation activities. AK conducted visualisation work. The original draft was written by HSR and JMB. All surviving authors contributed to review and editing of the manuscript.

Declaration of interests

RMTS receives payment from the University of Oxford as an anatomy tutor. JS has received payments from JEMMDx and Core Models for providing expert opinion and for teaching. SC has received honoraria and support for travel for attending and presenting at the International

Society for Burn Injuries in 2022. BD is a member of Data Safety Monitoring Boards for two trials investigating enzymatic debridement. KS is an ambassador for the Children's Burns Trust; has received consulting fees as an Independent Consultant from Molnlycke, NoBACZ, SpectralMD, Safeguard Medical Technlogies, Flen Health, and Veriton Pharma; and has received honoraria for lectures to the Dorset and Somerset Air Ambulance, CPDme HATZOLA, North East Ambulance Service, Yorkshire Air Ambulance, Wound Care People and as a reviewer for RCN Publishing. AY had no competeing interests to our knowledge. All other authors declare no competing interests.

Data sharing

We have provided open access to survey responses to enable researchers and clinicians to better understand the lived experiences and priorities of burn survivors, carers, and health-care professionals. These data are available at the University of Bristol data repository.

For the **University of Bristol data repository** see https://data.bris.ac.uk/data/dataset/2xjca4aelg3ru2keh1qija432r

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References

1 Peck MD. Epidemiology of burns throughout the world. Part I: distribution and risk factors. *Burns* 2011; **37:** 1087–100.

2 WHO. Burns factsheet. Oct 13, 2023. https://www.who.int/news-room/fact-sheets/detail/burns (accessed March 2, 2024).

3 Jeschke MG, Pinto R, Kraft R, et al. Morbidity and survival probability in burn patients in modern burn care. *Crit Care Med* 2015; **43:** 808–15.

4 Kankam HKN, Lee KC, Sardeli AV, Dretzke J, Lord JM, Moiemen N. Acute burn injuries associated with long-term mortality: a systematic review and meta-analysis. *Burns* 2022; **48:** 1783–93.

5 Smolle C, Cambiaso-Daniel J, Forbes AA, et al. Recent trends in burn epidemiology worldwide: a systematic review. *Burns* 2017; **43:** 249–57.

6 Auger C, Samadi O, Jeschke MG. The biochemical alterations underlying post-burn hypermetabolism. *Biochim Biophys Acta Mol Basis Dis* 2017; **1863** (10 Pt B)**:** 2633–44.

7 Randall SM, Fear MW, Wood FM, Rea S, Boyd JH, Duke JM. Long-term musculoskeletal morbidity after adult burn injury: a population-based cohort study. *BMJ Open* 2015; **5:** e009395.

8 Vetrichevvel TP, Randall SM, Fear MW, Wood FM, Boyd JH, Duke JM. Burn injury and long-term nervous system morbidity: a population-based cohort study. *BMJ Open* 2016; **6:** e012668.

9 Mason SA, Nathens AB, Byrne JP, et al. Increased rate of long-term mortality among burn survivors: a population-based matched cohort study. *Ann Surg* 2019; **269:** 1192–99.

10 Giannoni-Pastor A, Eiroa-Orosa FJ, Fidel Kinori SG, Arguello JM, Casas M. Prevalence and predictors of posttraumatic stress symptomatology among burn survivors: a systematic review and meta-analysis. *J Burn Care Res* 2016; **37:** e79–89.

11 van Loey NE, van Beeck EF, Faber BW, van de Schoot R, Bremer M. Health-related quality of life after burns: a prospective multicenter cohort study with 18 months follow-up. *J Trauma Acute Care Surg* 2012; **72:** 513–20.

12 Woolard A, Hill NTM, McQueen M, et al. The psychological impact of paediatric burn injuries: a systematic review. *BMC Public Health* 2021; **21:** 2281.

13 Bhatti DS, Ul Ain N, Zulkiffal R, Al-Nabulsi ZS, Faraz A, Ahmad R. Anxiety and depression among non-facial burn patients at a tertiary care center in Pakistan. *Cureus* 2020; **12:** e11347.

14 Blakeney PE, Rosenberg L, Rosenberg M, Faber AW. Psychosocial care of persons with severe burns. *Burns* 2008; **34:** 433–40.

15 Mehrabi A, Falakdami A, Mollaei A, et al. A systematic review of self-esteem and related factors among burns patients. *Ann Med Surg (Lond)* 2022; **84:** 104811.

16 Rumsey N, Clarke A, White P, Wyn-Williams M, Garlick W. Altered body image: appearance-related concerns of people with visible disfigurement. *J Adv Nurs* 2004; **48:** 443–53.

17 Finnerty CC, Jeschke MG, Branski LK, Barret JP, Dziewulski P, Herndon DN. Hypertrophic scarring: the greatest unmet challenge after burn injury. *Lancet* 2016; **388:** 1427–36.

18 Martin L, Byrnes M, McGarry S, Rea S, Wood F. Social challenges of visible scarring after severe burn: a qualitative analysis. *Burns* 2017; **43:** 76–83.

19 Hemmati Maslakpak M, Ajoudani F, Lotfi M, Alinejad V. Society, family, and individual characteristics as double-edged swords in the social reintegration of Iranian female survivors from unintentional severe burns: a qualitative study of enablers and barriers. *BMC Womens Health* 2021; **21:** 339.

20 Hop MJ, Polinder S, van der Vlies CH, Middelkoop E, van Baar ME. Costs of burn care: a systematic review. *Wound Repair Regen* 2014; **22:** 436–50.

21 Rybarczyk MM, Schafer JM, Elm CM, et al. A systematic review of burn injuries in low- and middle-income countries: epidemiology in the WHO-defined African Region. *Afr J Emerg Med* 2017; **7:** 30–37.

22 Sengoelge M, El-Khatib Z, Laflamme L. The global burden of child burn injuries in light of country level economic development and income inequality. *Prev Med Rep* 2017; **6:** 115–20.

23 Stokes MAR, Johnson WD. Burns in the Third World: an unmet need. *Ann Burns Fire Disasters* 2017; **30:** 243–46.

24 Botman M, Hendriks TCC, de Haas LEM, et al. Access to burn care in low- and middle-income countries: an assessment of timeliness, surgical capacity, and affordability in a regional referral hospital in Tanzania. *J Burn Care Res* 2022; **43:** 657–64.

25 Chinweuba AU, Chinweuba IS, Diorgu FC, et al. Economic burden of moderate to severe burns and its association with health-related quality of life of Nigerian women. *BMC Womens Health* 2021; **21:** 85.

26 Prinja S, Jagnoor J, Sharma D, et al. Out-of-pocket expenditure and catastrophic health expenditure for hospitalization due to injuries in public sector hospitals in north India. *PLoS One* 2019; **14:** e0224721.

27 Wagstaff A, van Doorslaer E. Catastrophe and impoverishment in paying for health care: with applications to Vietnam 1993-1998. *Health Econ* 2003; **12:** 921–34.

28 Young AE, Staruch RMT, Dziewulski P. Why is priority setting important for global burn care research? *Burns* 2022; **48:** 1035–39.

29 Djulbegovic B, Guyatt GH. Progress in evidence-based medicine: a quarter century on. *Lancet* 2017; **390:** 415–23.

30 Keating C. Medical research, clinical trials, evidence, and the shaping of policy. *Lancet* 2023; **402:** 1225–27.

31 Jeschke MG, van Baar ME, Choudhry MA, Chung KK, Gibran NS, Logsetty S. Burn injury. *Nat Rev Dis Primers* 2020; **6:** 11.

32 Stekelenburg CM, Marck RE, Tuinebreijer WE, de Vet HC, Ogawa R, van Zuijlen PP. A systematic review on burn scar contracture treatment: searching for evidence. *J Burn Care Res* 2015; **36:** e153–61.

33 Campbell JM, Kavanagh S, Kurmis R, Munn Z. Systematic reviews in burns care: poor quality and getting worse. *J Burn Care Res* 2017; **38:** e552–67.

34 Kazis LE, Sheridan RL, Shapiro GD, et al. Development of clinical process measures for pediatric burn care: understanding variation in practice patterns. *J Trauma Acute Care Surg* 2018; **84:** 620–27.

35 Danilla S, Wasiak J, Searle S, et al. Methodological quality of randomised controlled trials in burns care—a systematic review. *Burns* 2009; **35:** 956–61.

36 Young AE, Davies A, Bland S, Brookes S, Blazeby JM. Systematic review of clinical outcome reporting in randomised controlled trials of burn care. *BMJ Open* 2019; **9:** e025135.

37 Grover S, Xu M, Jhingran A, et al. Clinical trials in low and middle-income countries—successes and challenges. *Gynecol Oncol Rep* 2016; **19:** 5–9.

38 Keshri VR, Peden M, Singh P, Norton R, Abimbola S, Jagnoor J. Health systems research in burn care: an evidence gap map. *Inj Prev* 2023; **29:** 446–53.

39 Park JJH, Ford N, Xavier D, et al. Randomised trials at the level of the individual. *Lancet Glob Health* 2021; **9:** e691–700.

40 Saavedra PAE, De Oliveira Leal JV, Areda CA, Galato D. The costs of burn victim hospital care around the world: a systematic review. *Iran J Public Health* 2021; **50:** 866–78.

41 Chalmers I, Bracken MB, Djulbegovic B, et al. How to increase value and reduce waste when research priorities are set. *Lancet* 2014; **383:** 156–65.

42 Ranson MK, Bennett SC. Priority setting and health policy and systems research. *Health Res Policy Syst* 2009; **7:** 27.

43 Nyanchoka L, Tudur-Smith C, Thu VN, Iversen V, Tricco AC, Porcher R. A scoping review describes methods used to identify, prioritize and display gaps in health research. *J Clin Epidemiol* 2019; **109:** 99–110.

44 Petit-Zeman S, Firkins L, Scadding JW. The James Lind Alliance: tackling research mismatches. *Lancet* 2010; **376:** 667–69.

45 James Lind Alliance. JLA guidebook 2021. Oct 7, 2024. https://www.jla.nihr.ac.uk/jla-guidebook/ (accessed June 12, 2024).

46 James Lind Alliance. Funded research. https://www.jla.nihr.ac.uk/making-a-difference/funded-research (accessed June 12, 2024).

47 Staley K, Crowe S. More than a top 10: how James Lind Alliance Priority Setting Partnerships transform research, people and organisations. NIHR Oxford Biomedical Research Centre, 2019.

48 Lee A, Higginbotham G, Davies P, Young A. Research priority setting in plastic and reconstructive surgery: a systematic review. *J Plast Reconstr Aesthet Surg* 2023; **76:** 148–59.

49 Broerse JE, Zweekhorst MB, van Rensen AJ, de Haan MJ. Involving burn survivors in agenda setting on burn research: an added value? *Burns* 2010; **36:** 217–31.

50 Richards H, Staruch R, King A, et al. Protocol for a Global Burns Research Priority Setting Partnership to agree the most important unanswered questions in international burns care. *BMJ Open* 2022; **12:** e065120.

51 Young A, Davies A, Tsang C, et al. Establishment of a core outcome set for burn care research: development and international consensus. *BMJ Med* 2022; **1:** e000183.

52 Braun V, Clarke V. Thematic analysis: a practical guide. Sage, 2021.

53 Qureshi R, Azuara-Blanco A, Michelessi M, et al. What do we really know about the effectiveness of glaucoma interventions: an overview of systematic reviews. *Ophthalmol Glaucoma* 2021; **4:** 454–62.

54 Saldanha IJ, Lindsley KB, Lum F, Dickersin K, Li T. Reliability of the evidence addressing treatment of corneal diseases: a summary of systematic reviews. *JAMA Ophthalmol* 2019; **137:** 775–85.

55 Valdez D, Montenegro MS, Crawford BL, Turner RC, Lo WJ, Jozkowski KN. Translation frameworks and questionnaire design approaches as a component of health research and practice: a discussion and taxonomy of popular translation frameworks and questionnaire design approaches. *Soc Sci Med* 2021; **278:** 113931.

56 Mihailidis TH, Al-Benna S. Examining trends in the evidence base for the treatment of burns and a quality assessment of randomised controlled trials over an 11-year period. *Burns* 2022; **48:** 753–61.

57 Potter S, Fairhurst K, Cowan K, et al. Identifying research priorities in breast cancer surgery: a UK priority setting partnership with the James Lind Alliance. *Breast Cancer Res Treat* 2023; **197:** 39–49.

58 Taylor CJ, Huntley AL, Burden J, et al. Research priorities in advanced heart failure: James Lind Alliance priority setting partnership. *Open Heart* 2020; **7:** e001258.

59 Jacobs C, Vacek J, Many B, Bouchard M, Abdullah F. An analysis of factors associated with burn injury outcomes in low- and middle-income countries. *J Surg Res* 2021; **257:** 442–48.

60 Gupta S, Wong EG, Mahmood U, Charles AG, Nwomeh BC, Kushner AL. Burn management capacity in low and middle-income countries: a systematic review of 458 hospitals across 14 countries. *Int J Surg* 2014; **12:** 1070–73.

61 Leitch S, Logan M, Beishon L, Quinn TJ. International research priority setting exercises in stroke: a systematic review. *Int J Stroke* 2023; **18:** 133–43.

62 Guilabert P, Usúa G, Martín N, Abarca L, Barret JP, Colomina MJ. Fluid resuscitation management in patients with burns: update. *Br J Anaesth* 2016; **117:** 284–96.

63 Kazis LE, Sager A, Bailey HM, Vasudevan A, Garrity B, Tompkins RG. Physical rehabilitation and mental health care after burn injury: a multinational study. *J Burn Care Res* 2022; **43:** 868–79.

64 Bhaumik S, Rana S, Karimkhani C, et al. Ethics and equity in research priority-setting: stakeholder engagement and the needs of disadvantaged groups. *Indian J Med Ethics* 2015; **12:** 110–13.

65 Abimbola S, Pai M. Will global health survive its decolonisation? *Lancet* 2020; **396:** 1627–28.

66 Khan T, Abimbola S, Kyobutungi C, Pai M. How we classify countries and people—and why it matters. *BMJ Glob Health* 2022; **7:** e009704.

67 Lencucha R, Neupane S. The use, misuse and overuse of the 'low-income and middle-income countries' category. *BMJ Glob Health* 2022; **7:** e009067.

68 Jongsma K, van Seventer J, Verwoerd A, van Rensen A. Recommendations from a James Lind Alliance priority setting partnership—a qualitative interview study. *Res Involv Engagem* 2020; **6:** 68.

69 Hoffmann C, Davies P, Elliott D, Young A. Exploring what is important during burn recovery: a qualitative study investigating priorities of patients and healthcare professionals over time. *BMJ Open* 2023; **13:** e059528.

70 Spronk I, Wood FM, Fear MW, Lansdorp CA, Edgar DW. The short- and long-term outcome priorities of a Western Australian adult burn population. *J Burn Care Res* 2024; **45:** 451–58.

71 Kool MB, Geenen R, Egberts MR, Wanders H, Van Loey NE. Patients' perspectives on quality of life after burn. *Burns* 2017; **43:** 747–56.

72 Simons M, Price N, Kimble R, Tyack Z. Patient experiences of burn scars in adults and children and development of a health-related quality of life conceptual model: a qualitative study. *Burns* 2016; **42:** 620–32.

73 Spronk I, van Uden D, van Dammen L, et al. Outcomes that matter most to burn patients: a national multicentre survey study in the Netherlands. *Burns* 2024; **50:** 31–40.

74 Mathers J, Moiemen N, Bamford A, Gardiner F, Tarver J. Ensuring that the outcome domains proposed for use in burns research are relevant to adult burn patients: a systematic review of qualitative research evidence. *Burns Trauma* 2020; **8:** tkaa030.

75 Laurence R. Highlighting progress made in living with and beyond cancer research. National Cancer Research Institute. Jan 27, 2020. https://www.ncri.org.uk/progress-made-in-living-with-and-beyond-cancer-research/ (accessed May 20, 2024).

76 Waterman C, Manthorpe J. Did it make a difference? Uses of the James Lind Alliance Adult Social Work research priorities partnership report. NIHR Policy Research Unit in Health and Social Care Workforce, The Policy Institute, and King's College London, 2022.