



## Research Article

# Routine outcomes to investigate differences between ethnic minorities and White British people presenting to emergency services for injury: the stakeholder consultation

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Published October 2024

DOI: 10.3310/KTNH6788

## Abstract

**Introduction:** Research has found differences in processes and outcomes of care between people in ethnic minorities and White British populations in some clinical conditions, although findings have been mixed. The Building an understanding of Ethnic minority people's Service Use Relating to Emergency care for injuries study is investigating differences in presentation, experience and health outcomes between people from ethnic minorities and White British people who seek emergency health care for injury.

**Objective:** Our aim was to consult with stakeholders to define measurable outcomes available in routine ambulance and emergency department data; to assess the appropriateness of existing outcome measures for ethnic minorities and White British people; and to identify any gaps.

**Method:** Clinicians, public contributors, researchers, people from the third sector, public health, healthcare inclusion were invited to join an online workshop to discuss routine outcomes.

**Results:** Twenty participants attended the stakeholder consultation, with only one being a public contributor, a limitation. Eleven were from a minority ethnic background and seven were female. The integrated list of outcomes included 25 items, combining routine outcomes from the Building an understanding of Ethnic minority people's Service Use Relating to Emergency care for injuries protocol and literature ( $n = 17$ ) with additional outcomes ( $n = 8$ ). Notably, the initial list lacked provisions for safeguarding referrals and cases of treatment refusal, which were new additions. Safety concerns arose due to the lack of safeguarding referrals, treatment refusal and self-discharge. Factors such as pre-existing health conditions, injury location and experiences of discrimination were identified as possible influences on care quality and waiting times for ethnic minority patients.

**Conclusion:** Although the number of stakeholders taking part in our consultation was low, their participation identified outcomes not found in routine data, supporting the adoption of a mixed-methods approach to answer our research questions. A future consultation could look to include more public members and wider range of clinicians including those who work in safeguarding and rehabilitation services.

**Funding:** This article presents independent research funded by the National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research programme as award number NIHR132744.

A plain language summary of this research article is available on the NIHR Journals Library Website <https://doi.org/10.3310/KTNH6788>.

## Introduction

People from ethnic minorities routinely experience health inequalities in emergency healthcare settings.<sup>1</sup> Identifying these inequalities through ethnicity coding data remains challenging in the UK. Reports indicate insufficient coverage and limited access to ethnicity data in routinely collected primary care, emergency department (ED), ambulance, secondary care and pre-hospital data sets.<sup>2,3</sup>

Approaches to determining outcome measures in emergency healthcare research have involved engaging stakeholders such as ED clinicians,<sup>4</sup> ambulance paramedics<sup>5</sup> and patients.<sup>6</sup>

In our study 'BE SURE: Building an understanding of Ethnic minority people's Service Use Relating to Emergency care for injuries' [National Institute for Health and Care Research (NIHR): 132744], we aimed to compare experiences and outcomes of people from ethnic minorities with White British people when they seek emergency health care by calling the emergency ambulance service or presenting to ED for injury.

Prior to undertaking the BE SURE study, we sought to consult with stakeholders to define outcomes available in routine ambulance and ED data with the aim to strengthen and support our epidemiological work. Deliberative consultation methods have been suggested to ensure relevant outcomes are identified through a democratic process to ensure research aligns with the needs and perspectives of a range of stakeholders.<sup>7,8</sup> Our aims were to ensure we included a wide range of perspectives on routinely recorded measurable health outcomes that were appropriate for both study populations to: (1) gain feedback on the outcomes included in our initial study proposal and (2) identify additional outcomes to include in our study.

## Methods

This paper focuses on findings from a consultation with stakeholders which forms part of the wider BE SURE study. We loosely applied the Delphi method which is a structured communication approach used to capture knowledge from experts and move towards a consensus view on a topic area through a process of iterative discussions and feedback. The Delphi method is not prescriptive and can be used to confirm existing knowledge and gain new insights from experts.<sup>8</sup> The Standards for Reporting Qualitative Research checklist was followed for reporting our stakeholder consultation.<sup>9</sup>

## Sampling and recruitment

We used purposive sampling to identify relevant stakeholders to invite to the consultation event.<sup>10</sup> We e-mailed invitations to 72 potential participants across different stakeholder groups, including recognised experts in the field, professional contacts of members of the study team and by searching through recent relevant publications. We invited: ambulance, ED and public health clinicians; general practitioners (GPs) and allied health professionals; members of third-sector organisations located within the catchment area of participating sites; researchers who had published on ethnicity, injury or routine health data; healthcare organisation inclusion leads; and members of patient and public groups.

## Data collection

During the online stakeholder event, we presented the BE SURE study to participants. We explained the differences between descriptive data items such as demographics, language, conditions and outcomes of care in order to focus discussions. We then presented a list of routinely recorded outcomes as stated in the BE SURE study proposal and those identified through a search of the literature.

We put participants into four online breakout sessions to encourage small group discussions.<sup>11</sup> Breakout sessions are more comfortable, convenient and interactive.<sup>12</sup> We ensured experienced facilitators<sup>13</sup> (AK, HS, ITR and ANS) followed a framework for facilitating these breakout discussions which were inclusive and respectful of participants' diverse backgrounds, skills and experiences.<sup>14</sup>

During the breakout session, we invited participants to evaluate our proposed measurable outcomes, to assess appropriateness and feasibility. We asked people to suggest any amendments and identify others which may be important to collect as they may differ between people from ethnic minorities and White British people presenting with injury to ambulance services or EDs. Notetakers in each breakout session entered participants' responses into a Google spreadsheet under our predefined outcome categories. Responses that did not fit into our predefined outcome categories were placed into an additional column titled 'other'.

All outcomes identified in the breakout sessions were combined into a spreadsheet and compared to our original predefined list of outcome categories in real time. Through further discussion, sense check and validation<sup>15</sup> as a group, similarities and differences between outcomes were highlighted. Finally, we reached consensus on the appropriateness of these outcomes for inclusion in our study.<sup>8</sup> The breakout sessions were not recorded, as at

the time facilitators were not familiar with recording on TEAMS online software.

### Data analysis

Following the stakeholder event, we adopted a framework analysis approach<sup>16</sup> to integrate our original predefined outcome measures with those identified by stakeholders (see [Table 2](#)). We read through the notes taken during the workshops and charted our list of outcome data onto a pre-existing matrix<sup>17</sup> – that is, our predefined outcome categories. We used a deductive framework approach<sup>18</sup> to code responses as subcodes within our predefined outcome categories and deleted duplicates. Two team members (FB, GN) independently checked subcodes for clarity and consistency, omitting repeated outcomes across our predefined outcome categories.

### Public and stakeholder involvement

We have ensured public contributors are actively involved in all aspects of the wider BE SURE study.<sup>19</sup> We involved two experienced public contributors in the design of the study, and they are members of the Research Management Group. We recruited two additional public contributors to the independent Study Steering Committee alongside clinical, policy, academic, methodological and subject experts. We also regularly share our progress and emerging findings with two public advisory groups: the PRIME SUPER Group<sup>20</sup> and the SAIL Consumer Panel.<sup>21</sup> We follow best practice by providing honorariums, briefings and other support as necessary to ensure effective public involvement in our study outputs.<sup>22</sup>

## Results

Twenty-seven people registered their attendance of whom 20 people attended the stakeholder consultation. Two-thirds of participants were female and 55% were from an ethnic minority background. Stakeholder characteristics are described in [Table 1](#).

Participants confirmed the suitability of our proposed outcomes and identified additional routine outcomes for our study populations ([Table 2](#)). Additional outcomes included the number and types of medical investigations and interventions; onward referrals; waiting times; safeguarding referrals; treatment refusal; self-discharge; and incident reports. Participants reported that, in their experience, the prescribing of medication or the number of medical interventions such as radiology examinations and medical tests offered may differ for patients from ethnic minorities, hence missing outcomes for this group. These decisions could be influenced by the time patients wait to be triaged when arriving at the ED or wait to receive care.

Participants identified safeguarding referrals, refusal of care or treatment and self-discharge by patients as key safety issues. This could reflect the different processes and perception of care that patients from ethnic minorities have experienced compared to people from the White British populations.

Participants readily identified routinely recorded data as immediate measurable outcomes. However, it was more difficult for participants to identify measurable outcomes over the longer term – up to 6 months – other than

**TABLE 1** Stakeholder characteristics

Stakeholders	Invited, N	Attended, N (%)	Sex females, N (%)	Ethnicity, N (%)
ED clinicians	10	2	0	1
Ambulance service clinicians	9	2	0	1
GPs and allied health providers	3	2	2	1
Third-sector organisation staff	10	1	0	1
Academics/researchers (injury)	6	2	0	1
Academics/researchers (ethnicity)	10	2	1	2
Academics/researchers (health data)	20	6	2	1
Healthcare organisation inclusion leads	2	1	0	1
Public health	4	1	1	1
Public contributors	2	1	1	1
Total	76	20/76 (26)	7/20 (61)	11/20 (55)

TABLE 2 Outcomes identified in breakout sessions, ED, intensive care unit (ICU)

Predefined outcome categories	Routine outcomes in study proposal	Examples of routine outcomes proposed to breakout session participants for discussion	Routine outcomes identified by breakout session participants	Final study outcomes
Treatments	<i>None specified</i>	Administration of pain relief Administration of antibiotics Surgery in recommended timescale	Analgesics Antibiotics Antidepressants Total number of medical interventions	Analgesics Antibiotics Antidepressants Surgery in recommended timescale Total number of medical interventions
Investigations	<i>None specified</i>	Computerised tomography scans X-rays	Initial waiting time ED administered and laboratory tests Radiology	Initial waiting time ED administered and laboratory tests Radiology
Safety incidents	Death within 72 hours of discharge from 999 or ED Re-admissions within 72 hours of discharge	Re-admissions within 72 hours of discharge from 999 or ED	Incident reports Refusal of treatment Safeguarding referrals Self-discharge	Incident reports Refusal of treatment Safeguarding referrals Self-discharge
Immediate outcomes or process of care	Ambulance attendances Death Hospital admissions Length of stay in hospital Length of stay in ICU Transportation to hospital	Ambulance attendances Death Hospital admissions Length of stay in hospital Length of stay in ICU Transportation to hospital Waiting time in ED	Death (within 72 hours) Disposition/referrals Follow-up appointments Recontact or reattendance within 72 hours Waiting time in ED	Ambulance attendances Death (within 72 hours) Disposition/referrals ED attendances Follow-up appointments Recontact or reattendance within 72 hours Transportation to hospital Waiting time in ED
Six-month outcomes	Death Further ED attendances Further hospital admissions	Death Further ED attendances Further hospital admissions	Death Further 999 calls Length of stay in hospital Reattendances	Death Further 999 calls Length of stay in hospital Length of stay in ICU Reattendances

outcomes that involved recontact with the patient, such as death, re-admission and reattendance, that had been included in the original proposal.

In addition to discussing measurable outcomes, participants provided examples of factors which may affect the way patients from ethnic minorities experience care. These included comorbidities, location and mechanism of injury. They also identified experiences of discrimination that patients from ethnic minorities may experience when presenting with injury to emergency services. For example, their inability to communicate their health need in English could be a factor. Participants expressed that these circumstances could potentially influence waiting times, administration of pain relief and the overall care received.

## Discussion

Participation in our stakeholder event was lower than expected given that we invited 72 people. Our level of participation is comparable with other group consultations who report between 25 and 35 participants.<sup>23,24</sup> Guise *et al.*<sup>23</sup> suggest a number of approaches to use for successful stakeholder engagement. The authors state that most contact with stakeholders is made through e-mail or telephone calls. While we e-mailed participants, we did not conduct follow-up calls. They also suggested providing potential participants with information about the purpose and outcome of the consultation, which we did. The authors also add that health professionals are time poor. With this in mind, we conducted a hybrid meeting (online and in-person) to enable participation and offered incentive payments to encourage participation. However, we could have offered more than one meeting opportunity to participate in order to accommodate health professionals' busy work schedules.

We invited two of our public contributors who are co-applicants in the BE SURE study and come from an ethnic minority background. One was unable to attend due to work commitments. In retrospect we realised that we had the opportunity to invite a wider group of people from an ethnic minority background through our existing community networks. Our oversight stemmed from our assumption that we were solely gathering clinical outcomes and overly focused on recruiting clinicians. We have ensured to capture the patient's voice through our qualitative interviews in other aspects of the study.

Despite the low turnout and absence of key groups, the stakeholder consultation enhanced the research team's comprehension on the availability and appropriateness

of routine data outcomes for evaluating ethnic disparities among people presenting with injury to emergency services.

Participants validated our proposed outcomes and identified additional routine outcomes. They deliberated on the suitability of these outcome measures for both groups. They noted that some measures, such as onward referrals, might not adequately capture data for ethnic minorities. This could be due to these groups not being offered further care, resulting in a lack of available data on this aspect. Literature shows that implicit ethnic or racial bias by health care professionals can influence differences in treatments<sup>25</sup> and outcomes<sup>26</sup> for patients from ethnic minorities.

Stakeholders highlighted concerns about potential differences among ethnic minority patients in areas such as the refusal of treatment and safeguarding referrals. These were not included in our initial outcome measures. Studies indicate that factors such as long waiting times, care delays,<sup>27</sup> overcrowding and negative encounters with staff can lead patients to decline care.<sup>28,29</sup> Additional research suggests that language barriers;<sup>30</sup> experiences of racism;<sup>31</sup> religious and cultural beliefs;<sup>32</sup> capacity of patients to effectively communicate their pain and their satisfaction with the care they receive;<sup>33</sup> as well as the choices of clinicians in prescribing medications<sup>34</sup> may influence the decisions of ethnic minority patients regarding the use of emergency healthcare services.<sup>35</sup> Furthermore, there is evidence of disparities for ethnic minority patients in child safeguarding referrals<sup>36</sup> and in making sensitive care decisions, such as the implementation of physical restraints.<sup>37</sup> However, routine health data sets lack sufficient detail on safeguarding referrals and reasons for treatment refusal, underscoring the need for mixed-methods studies to comprehensively understand these issues. Finally, while processes of care can be electronically linked between primary care, ED, ambulance, secondary care and pre-hospital data sets,<sup>38</sup> stakeholders struggled to define outcomes at 6 months. Clinicians indicated that they typically do not maintain ongoing contact with patients after the initial emergency encounter.

## Strengths and limitations

Twenty stakeholders (20/72, 26%) attended our stakeholder event. Among those who attended, only one represented a third-sector organisation, one was a member of the public and one was a GP academic fellow. The majority of attendees were emergency service clinicians and researchers. The low number of participants could have limited our ability to gather a wide range of perspectives on routine outcome measures for injury. However, the consultation allowed the research team to



incorporate perspectives from stakeholders who were not directly involved in the study and helped to validate our outcome measures for the wider study. Our inability to record breakout sessions and provide quotes related to the discussion is also another limitation. Future researchers should ensure that all facilitators undertaking online activities are proficient in the use of video-conferencing software. However, the approach of sharing documents in real time with participants to combine the identified measurable outcomes from breakout sessions facilitated real-time collaboration. This ensured that all stakeholders had a voice in shaping the research outcomes.

## Conclusions

Through consultation with stakeholders, we were able to identify 25 measurable outcomes related to injury presentation to emergency services by ethnic minorities and White British people. The routine outcomes identified by stakeholders largely aligned within the predefined outcome categories included in our study proposal and review of literature. Our findings show that outcomes can be applied to both groups but for people from ethnic minorities this information could be missing. We were able to identify new outcomes such as safeguarding referrals and reasons for the refusal of treatment, which are not available in routine health data. The consultation supports the use of mixed methods in our study. This approach includes the collection of self-reported outcomes and patient and staff interviews and focus groups. Future stakeholder consultations should seek to offer multiple opportunities to enable stakeholders to engage with consultations.

## Equality, diversity and inclusion

The study team includes a range of authors from different ethnic backgrounds. The methods of participant recruitment for this study maintained an equitable approach by actively inviting and including patient and public involvement members and professionals from a range of ethnicities in our stakeholder event. We offered an honorarium to all people we invited to be involved as public contributors and provided support before and after their involvement in activities.

## Additional information

### CRedit statement

**Fadi Baghdadi** (<https://orcid.org/0000-0002-3770-7611>): Data curation (lead), Formal analysis (lead), Investigation (equal),

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### Acknowledgements

We thank all participants in the stakeholder event and our funder – the National Institute of Health and Care Research.

### Data-sharing statement

All data requests should be submitted to the corresponding author for consideration. Access to anonymised data may be granted following review.

### Ethics statement

The BE SURE study received a favourable opinion by the Wales Research Ethics Committee (22/WA/0080:05/04/2022). All methods were carried out in accordance with relevant guidelines and regulations; informed consent was obtained from all participants taking part in the stakeholder event.

### Information governance statement

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### Disclosure of interests

**Full disclosure of interests:** Completed ICMJE forms for all authors, including all related interests, are available in the toolkit on the NIHR Journals Library report publication page at <https://doi.org/10.3310/KTNH6788>.

**Primary conflicts of interest:** Professor Ann John, PHIRST Advisory Board. Professor Niro Siriwardena, NIHR127920; NIHRDH-PB-PG-0815-20012; NIHRDH-HS&DR/17/99/34; NIHRDH-HS&DR/15/145/04; NIHRDH-PB-PG-1216-20034; NIHRDH-HS&DR/14/47/22; NIHRDH-HTA/16/84/01; NIHRDH-HS&DR/13/54/75. Professor Helen Snooks, NIHR HSDR Senior Journal Library Editor; NIHR HTA & EME Editorial Board. Professor Alan Watkins, Member of NIHR HS&DR Funding Committee Member, NIHR College of Experts Member.

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This article was published based on current knowledge at the time and date of publication. NIHR is committed to being inclusive and will continually monitor best practice and guidance in relation to terminology and language to ensure that we remain relevant to our stakeholders.

### Study registration

This study is registered as researchregistry7201.

### Funding

This article presents independent research funded by the National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research programme as award number NIHR132744.

This article reports on one component of the research award BE SURE - Building an understanding of Ethnic minority people's Service Use Relating to Emergency care for injuries. Other articles published as part of this thread are: [\[LINKS to other articles\]](#). For more information about this research please view the award page (<https://fundingawards.nihr.ac.uk/award/NIHR132744>).

### About this article

The contractual start date for this research was in October 2021. This article began editorial review in July 2023 and was accepted for publication in June 2024. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The Health and Social Care Delivery Research editors and publisher have tried to ensure the accuracy of the authors' article and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this article.

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### List of abbreviations

BE SURE	Building an understanding of Ethnic minority people's Service Use Relating to Emergency care for injuries
ED	emergency department
GPS	general practitioners
NIHR	National Institute for Health and Care Research

## References

- Zhang X, Carabello M, Hill T, Bell SA, Stephenson R, Mahajan P. Trends of racial/ethnic differences in emergency department care outcomes among adults in the United States from 2005 to 2016. *Front Med* 2020;**7**:300. <https://doi.org/10.3389/fmed.2020.00300>
- Mathur R, Bhaskaran K, Chaturvedi N, Leon D, VanStaa T, Grundy E, Smeeth L. Completeness and usability of ethnicity data in UK-based primary care and hospital databases. *J Public Health (Oxf)* 2014;**36**:684–92. <https://doi.org/10.1093/pubmed/fdt116>
- Phung VH, Siriwardena N, Windle K, Asghar Z, Barot M, Kai J. *Ethnicity and Prehospital Emergency Care Provided by Ambulance Services*. Race Equality Foundation; 2015. URL: <https://raceequalityfoundation.org.uk/wp-content/uploads/2022/10/Health-Briefing-37.pdf> (accessed 1 March 2024).
- McRae AD, Perry JJ, Brehaut J, Brown E, Curran J, Emond M, et al. Engaging emergency clinicians in emergency department clinical research. *CJEM* 2018;**20**:443–7. <https://doi.org/10.1017/cem.2017.434>
- Siriwardena AN, Donohoe R, Stephenson J, Philips P. Supporting research and development in ambulance services: research for better health care in prehospital settings. *Emerg Med J* 2010;**27**:324–6. <https://doi.org/10.1136/emj.2009.072363>
- Young B, Bagley H. Including patients in core outcome set development: issues to consider based on three workshops with around 100 international delegates. *Res Involv Engagem* 2016;**2**:25. <https://doi.org/10.1186/s40900-016-0039-6>
- Neale J, Finch E, Marsden J, Mitcheson L, Rose D, Strang J, et al. How should we measure addiction recovery? Analysis of service provider perspectives using online Delphi groups. *Drugs: Educ Prev Pol* 2014;**21**:310–23. <https://doi.org/10.3109/09687637.2014.918089>
- Linstone HA, Turoff M, editors. *The Delphi Method*. Reading, MA: Addison-Wesley; 1975.
- O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med* 2014;**89**:1245–51. <https://doi.org/10.1097/ACM.0000000000000388>
- Campbell S, Greenwood M, Prior S, Shearer T, Walkem K, Young S, et al. Purposive sampling: complex or simple? Research case examples. *J Res Nurs* 2020;**25**:652–61. <https://doi.org/10.1177/1744987120927206>
- Naik V, Govindu A. Enriching and energizing the virtual classroom using breakout sessions: a better experience of active learning during COVID-19 pandemic. *J Eng Educ Transform* 2022;**35**:129–34. <https://doi.org/10.16920/jeet/2022/v35is1/22018>
- Cadieux M, Campos-Zamora M, Zagury-Orly I, Dzara K. Journal club using virtual breakout rooms: interactive continuing education with no learner preparation during COVID-19. *J Contin Educ Health Prof* 2020;**40**:217–9. <https://doi.org/10.1097/CEH.0000000000000321>
- Redish EF, Saul JM, Steinberg RN. On the effectiveness of active-engagement microcomputer-based laboratories. *Am J Phys* 1997;**65**:45–54. <https://doi.org/10.1119/1.18498>
- Zallio M, Grey T, Boland P, Kelly H, White PJ, O'ferrall E. Online-based participatory design: a case study of developing international standards during a pandemic. *Strat Design Res J* 2022;**15**:39–51. <https://doi.org/10.1192/bjp.2020.137>
- Birt L, Scott S, Cavers D, Campbell C, Walter F. Member checking: a tool to enhance trustworthiness or merely a nod to validation? *Qual Health Res* 2016;**26**:1802–11. <https://doi.org/10.1177/1049732316654870>
- Furber C. Framework analysis: a method for analysing qualitative data. *Afr J Midwifery Womens Health* 2010;**4**:97–100. URL: <https://ssrn.com/abstract=2760705> (accessed 1 March 2024).
- Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol* 2013;**13**:1–8. <https://doi.org/10.1186/1471-2288-13-117>
- Hatchard J, Gillespie D, Buykx P. Using Framework Analysis Deductively: A Case Study from Alcohol and Tobacco Tax Policy and Modelling Research. In Clift B, Core J, Bekker S, Batlle IC, Chudzikowski K, Hatchard J, editors. *Myths, Methods, and Messiness: Insights for Qualitative Research Analysis: Edited Proceedings of 5th Annual Qualitative Research Symposium*. Bath: University of Bath; 2019. pp. 30–40.
- Bovaird T. Beyond engagement and participation: user and community coproduction of public services. *Public Adm Rev* 2007;**67**:846–60. <https://doi.org/10.1111/j.1540-6210.2007.00773.x>
- Evans BA, Gallanders J, Griffiths L, Harris-Mayes R, James M, Jones S, et al.; SUPER Group and PRIME Centre Wales. Public involvement and engagement in primary and emergency care research: the story from PRIME Centre Wales. *Int J Popul Data Sci* 2020;**5**:1363. <https://doi.org/10.23889/ijpds.v5i3.1363>



21. Jones KH, McNerney CL, Ford DV. Involving consumers in the work of a data linkage research unit. *Int J Consum Stud* 2013;**38**:45–51. <https://doi.org/10.1111/ijcs.12062>
22. INVOLVE. *Public Involvement in Research: Values and Principles Framework*. Eastleigh: NIHR, INVOLVE; 2015.
23. Guise JM, O'Haire C, McPheeters M, Most C, Labrant L, Lee K, et al. A practice-based tool for engaging stakeholders in future research: a synthesis of current practices. *J Clin Epidemiol* 2013;**66**:666–74. <https://doi.org/10.1016/j.jclinepi.2012.12.010>
24. Neale J, Panebianco D, Finch E, Marsden J, Mitcheson L, Rose D, et al. Emerging consensus on measuring addiction recovery: findings from a multi-stakeholder consultation exercise. *Drugs: Educ Prev Policy* 2016;**23**:31–40. <https://doi.org/10.3109/09687637.2015.1100587>
25. Hall WJ, Chapman MV, Lee KM, Merino YM, Thomas TW, Payne BK, et al. Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: a systematic review. *Am J Public Health* 2015;**105**:2588. <https://doi.org/10.2105/AJPH.2015.302903>
26. Maina IW, Belton TD, Ginzberg S, Singh A, Johnson TJ. A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test. *Soc Sci Med* 2018;**199**:219–29. <https://doi.org/10.1016/j.socscimed.2017.05.009>
27. Lu FQ, Hanchate AD, Paasche-Orlow MK. Racial/ethnic disparities in emergency department wait times in the United States, 2013–2017. *Am J Emerg Med* 2021;**47**:138–44. <https://doi.org/10.1016/j.ajem.2021.03.051>
28. Marco CA, Bryant M, Landrum B, Drerup B, Weeman M. Refusal of emergency medical care: an analysis of patients who left without being seen, eloped, and left against medical advice. *Am J Emerg Med* 2021;**40**:115–9. <https://doi.org/10.1016/j.ajem.2019.158490>
29. Gorski JK, Arnold TS, Usiak H, Showalter CD. Crowding is the strongest predictor of left without being seen risk in a pediatric emergency department. *Am J Emerg Med* 2021;**48**:73–8. <https://doi.org/10.1016/j.ajem.2021.04.005>
30. Njeru JW, St Sauver JL, Jacobson DJ, Ebbert J, Takahashi PY, Fan C. Emergency department and inpatient health care utilization among patients who require interpreter services. *BMC Health Serv Res* 2015;**15**:1–9. <https://doi.org/10.1186/s12913-015-0874-4>
31. Agarwal AK, Sagan C, Gonzales R, Nijim S, Merchant RM, Asch DA, South EC. Assessing experiences of racism among Black and White patients in the emergency department. *J Am Coll Emerg Physicians Open* 2022;**3**:e12870. <https://doi.org/10.1002/emp2.12870>
32. Ezenkwele UA, Roodsari GS. Cultural competencies in emergency medicine: caring for Muslim-American patients from the Middle East. *J Emerg Med* 2013;**45**:168–74. <https://doi.org/10.1016/j.jemermed.2012.11.077>
33. Mahmoud I, Hou XY, Chu K, Clark M, Eley R. Satisfaction with emergency department service among non-English-speaking background patients. *Emerg Med Australas* 2014;**26**:256–61. <https://doi.org/10.1111/1742-6723.12214>
34. Lee P, Le Saux M, Siegel R, Goyal M, Chen C, Ma Y, Meltzer AC. Racial and ethnic disparities in the management of acute pain in US emergency departments: meta-analysis and systematic review. *Am J Emerg Med* 2019;**37**:1770–7. <https://doi.org/10.1016/j.ajem.2019.06.014>
35. Mahmoud I, Hou XY. Immigrants and the utilization of hospital emergency departments. *World J Emerg Med* 2012;**3**:245–50. <https://doi.org/10.5847/wjem.j.issn.1920-8642.2012.04.001>
36. Brady M. UK paramedics confidence in identifying child sexual abuse: a mixed-methods investigation. *J Child Sex Abus* 2018;**27**:439–58. <https://doi.org/10.1080/10538712.2018.1477223>
37. Carreras Tartak JA, Brisbon N, Wilkie S, Sequist TD, Aisiku IP, Raja A, Macias-Konstantopoulos WL. Racial and ethnic disparities in emergency department restraint use: a multicenter retrospective analysis. *Acad Emerg Med* 2021;**28**:957–65. <https://doi.org/10.1111/acem.14327>
38. John A, DelPozo-Banos M, Gunnell D, Dennis M, Scourfield J, Ford DV, et al. Contacts with primary and secondary healthcare prior to suicide: case-control whole-population-based study using person-level linked routine data in Wales, UK, 2000–2017. *Br J Psychiat* 2020;**217**:717–24. <https://doi.org/10.1192/bjp.2020.137>