values determined by this study provide some reassurance of safety from renal toxicity in ambulance officers occupationally exposed while administering methoxyflurane analgesia. However, this result might depend on use of the activated carbon filter, as occurred in this ambulance service, and on exposure frequency and duration consistent with this ambulance service's clinical practice, as well as on the environment in which methoxyflurane is administered. Therefore, these results may not be applicable to other services utilising methoxyflurane more frequently, or in less-ventilated environments.

Authors' contributions

Study design: all authors.
Data collection: SJA, PDD.
Drafting of the manuscript: SJA
Critical interpretation and revision of the manuscript: SJA, PDD, DP, JGC
All authors give final approval for publication and agree to be accountable for all aspects of the work.

Declarations of interest

The authors declare they have no conflict of interest.

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Making anaesthesiology more inclusive: the time for action is now

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Keywords: bias; disparities; diversity; inclusion; minority; under-represented in medicine (URiM)

Editor—The oft-mentioned 'American Dream' is the idea that, with enough gumption, anyone can advance in society. The recent killings of George Floyd, Breonna Taylor, and countless other Black Americans by authority figures, however, echo a centuries-long pattern of dangerous systemic bias in the USA. The fantasy that equal opportunity exists has been revealed as a false narrative, but protests in all 50 states show that society is ready, even aching, for change. It is imperative that institutions turn a mirror inwards to dismantle entrenched injustices, and academic medicine is by no means exempt from this prescription. This is an anaesthesia-targeted piece based on a more general article recently published.[1]

How can anaesthesiology move towards inclusion? The problem seems daunting at first. It is difficult to take an accounting of academic anaesthesiologists by race, as it is a self-reported measure; many abstain from answering the question.[2] It is estimated, however, that Black physicians comprise 3% of the academic anaesthesiology workforce (13% of the general population)[3,4] and under-represented in medicine (URiM) physicians 6% (34% of the population). In 2017, there were fewer URiM anaesthesiologists in leadership positions than women.[2] Increasing representation is crucial, but so are promotion and retention of URiM faculty; these improvements require fostering a workplace where everyone belongs. How though do we begin and who should be accountable? In short, we begin today, and everyone is a stakeholder.

Anaesthesiology departments are in a unique position to be at the forefront of change. We care for patients from every corner of the hospital in multidisciplinary teams, interacting with a range of specialists. Our far-reaching influence on hospital culture confers a moral responsibility to implement solutions to inequality, but evidence shows that increasing diversity can improve efficiency and profits as well. Further, a diverse physician workforce correlates with better outcomes for minority patients.[5] Thus, in the era of glaring racial disparities, in COVID–19, institutions ought to attract employees from URiM backgrounds. There are numerous ways to overcome obstacles that exist in developing an inclusive

workplace, and several departments and chairs have already made a Herculean effort in this regard.[6] Every person from resident to chair can take an active role in changing the landscape of anaesthesiology. We offer some tips that can be implemented immediately to proactively make departments more inclusive and help marginalised staff, residents, fellows, and faculty feel accepted. We recognise that there are varying department sizes, models, and foci, and not all suggestions would be appropriate for all institutions.

Make anti-bias training available

Anti-bias training works best when the participation is voluntary, as people feel more engaged and internalise the lessons learned.[7] In a busy department, effective training should be brief, and participants should feel free to engage without fear of retaliation. The Implicit Association Test (IAT)[8] uses categorisation tasks to reveal hidden biases of the user in about 30 min and is available on the Project Implicit website of Harvard University (https://implicit.harvard.edu/implicit/). Participants are prompted to categorise photos and words representing certain groups as either 'good' or 'bad'; the test measures reaction time and purports to reveal biased thinking when users are slower in categorising certain groups (e.g. Black Americans) as 'good'. Consider making this website available to all staff and allow them to examine their own biases in private. Many will recommit to supporting diversity afterwards, regardless of the results. The act of volunteering makes them stakeholders.

Consider your surroundings

Look at the hallways and website of your department. Who are the people featured? Does it represent the faculty and non-academic staff at large? If a prospective under-represented faculty member walks down the hall, will they see a photograph of someone who looks like them? If not, consider what message this is sending. Whilst having images of previous leaders is a long-standing tradition, there are more inclusive ways to showcase a sense of community. Consider displaying photographs in your hallways and break rooms from conferences, faculty meetings, holiday parties, and late-night calls. Ensure that these photographs showcase an appropriate balance of the diversity of people in your department, including varying ages, gender, race, and ethnicity. Sometimes, informal smiling faces are more appealing than formal staged photographs.

Amplify voices

Did someone in your department win an award, serve on a committee, get a grant, publish a paper, or get accepted into or finish a prestigious course? There is a good chance that others in the department are not aware of these successes. Leverage your network by amplifying these wins, especially for those who are too often overlooked.[9] Talk about their ideas and contributions at meetings, give them a congratulatory remark on social media whilst mentioning their latest success, and introduce them to others. Try and take a photograph with the person whose voice you are boosting as it sends the message that you are throwing your full support behind them.

Take a pause

There are numerous times every year where we invite people to our institution. Before sending out invitations for grand round speakers or visiting professors, take a pause. Look at who you are inviting and compare that to previous and future invitees. Consider if these speakers are the true experts in their field or if there are others who are equally knowledgeable, yet often fall into groups that are often overlooked, such as women, URiM, and those who are differently abled. Ask others in the department for recommendations and curate a list of potential diverse speakers.

Listen to the experiences…

If we fear that which is unfamiliar, we must get to know each other. Black and other URiM employees experience chronic racial traumas of which their co-workers are likely unaware.[10] It is necessary to provide a safe forum for sharing these experiences. Consider organising a meeting for employees to share stories. Our institution recently held a Zoom meeting featuring members of the anaesthesiology, obstetrics/gynaecology, and psychiatry departments. Allowing space for volunteers to open up about their lives fostered feelings of empathy throughout the departments, the ripple effects of which are still being felt.

…and find commonalities

The ultimate goal is for faculty and every department member to internalise that we have a common task at hand, namely, providing the best possible care for patients. Utilising the diverse skill sets of staff from different backgrounds makes us more likely to succeed in this task. Although our specific life experiences are different, many of our emotions and motivations are universal. It is through continued exposure to colleagues different from ourselves that this realisation is possible.

Develop a diversity committee

To have a long-standing impact, there needs to be a system and culture of awareness and accountability. Developing a diversity admission and retention pipeline is a critical first step, but the responsibility should not fall on one person. Instead, there should be a group of people who are there to review policies and marketing materials to ensure that they are both welcoming and inclusive. This includes educational materials, objective structured clinical examinations (OSCE), internal policies, and departmental websites. This added perspective can help anaesthesiology departments recognise overlooked opportunities for recruitment and retention.

Declarations of interest

DM has nothing to declare. RG is a member of the associate editorial board of the *British Journal of Anaesthesia*.

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Safeguarding anaesthesia research from spin

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Editor—Although perioperative physicians continue to debate propositions and oppositions to evidence-based practice in anaesthesia, the need for reflection upon the objectivity and accuracy of the reporting of individual RCTs is pivotal beyond any debate. The absence of robust reporting and understanding of the results emanating from these trials can substantially impact subsequent formulation of recommendations and guidelines for clinical practice. In this context, an in-depth assessment of RCTs has revealed the phenomenon of 'spin' being increasingly used in research reporting. 'Spin' in research is characterised by '…the manipulation of language to potentially mislead readers from the likely truth of the results….'[1] Given the broad latitude of language used for reporting studies, 'spin' continues to escalate albeit in a covert manner. Concerns manifest in anaesthesia and related specialities wherein misleading results of research influencing clinical practice can have far reaching implications for patients.

Despite initiatives such as checklists, structured instructions, authoring aids, and peer review, aimed at improving accuracy of research-reporting, there remain significant 'spin'ing tricks to distort the evidence for practice.[2] Spin often involves strategically achieving significance by pivoting to the secondary results, using within-group comparisons and invention of subgroups to suit the desired outcomes, which results in overinterpretation of the study results. Boutron and colleagues[3] have described various ways of misrepresentation of a study (from the title to the methods, results, and conclusion) used by authors to accomplish spin. The issues of particular relevance to clinical research are highlighted in Table 1.[3–5]

Evidence on the prevalence of spin is accumulating from diverse clinical fields.[6–9] Kinder and colleagues[7] scrutinised the abstracts of RCTs published in seven leading anaesthesia journals to delineate the extent of spin in anaesthesia-related research. They found that 23.2% abstracts displayed 'spin', with insinuation of treatment effectiveness based on a secondary outcome constituting the most common evidence of spin. With sample size of these RCTs premised on a defined primary outcome, reliance on a secondary endpoint is far from statistically robust. Another recent comprehensive analysis of 93 cardiovascular RCTs (published in six eminent high-impact cardiology and general medical journals) by Khan and colleagues[9] found that as high as 57% of abstracts and 67% of main texts revealed 'spin' in one or the other ways (mostly classified as low-level) as described in the nosology put forward by Boutron and colleagues.[3]

A major contributing concern hinges around the lack of reproducibility and transparency in research particularly when elucidation of details pertaining to methodology, protocols, analysis scripts, and raw data (in certain cases) can provide substantial justification to the conclusions limiting any chances of misinterpretation in the abbreviated forms described above. A recent description of the absence of