The use of imagery in global health: an analysis of infectious disease documents and a framework to guide practice

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We report an empirical analysis of the use of imagery by the key actors in global health who set policy and strategy, and we provide a comprehensive overview, particularly related to images used in reports on vaccination and antimicrobial resistance. The narrative currently depicted in imagery is one of power imbalances, depicting women and children from low-income and middle-income countries (LMICs) with less dignity, respect, and power than those from high-income countries. The absence of any evidence of consent for using intrusive and out-of-context images, particularly of children in LMICs, is concerning. The framework we have developed provides a platform for global health actors to redefine their intentions and recommission appropriate images that are relevant to the topic, respect the integrity of all individuals depicted, are accompanied by evidence of consent, and are equitable in representation. Adhering to these standards will help to avoid inherent biases that lead to insensitive content and misrepresentation, stigmatisation, and racial stereotyping.

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Introduction

In *The Lancet*'s call for papers advancing racial and ethnic equity in science, medicine, and health, Chew and colleagues[1] describe structural racism as the "unconscious bias that manifests as norms embedded in cultures, systems, policies, and practices that routinely disadvantage racially minoritised groups, perpetuating inequities". Failing to address systemic biases in global health propagates imbalances and hinders meaningful progress towards global health equity and wellbeing.[1]

One way in which systemic biases manifest is in the choice of imagery to accompany global health publications. With its roots in colonialism, the foreign gaze often shapes the narrative on health and disease in low-income and middle-income countries (LMICs),[2,3] including the choice of imagery. The images one chooses to tell the story of global health need to be thoughtfully chosen and presented, particularly in relation to imbalances in power, gender, race, economics, and culture.

Global health photography functions to represent the reality of global health programmes and their beneficiaries, and has secondary uses for organisational marketing. There is a compelling need to recognise the ethical responsibilities held by organisations, publishers, funders, and researchers when producing, using, and circulating visual media, particularly due to its exceptional power to elicit emotional reactions and thus more potently embed itself in the minds of readers compared with other media.[4,5]

Historically, organisations based in high-income countries (HICs) have used visual tropes such as emaciated children to "raise the compassion, awareness, and funds necessary for interventions".[4] The devastating consequences and unequivocal absence of accountability associated with using such imagery were highlighted by a series of images of children used by Médecins sans Frontières.[6,7] Images of child rape survivors became available for sale in online stock libraries, prompting an open letter to Médecins sans Frontières by a group of academics, photographers, and Médecins sans Frontières staff who questioned their use and asked for standardised guidelines for the use of imagery, particularly of children.[7] The open letter built on the existing evidence of the persistent dehumanisation of people of colour[8,9] and populations in LMICs,[10,11] generating pity rather than empathy, demeaning rather than empowering, and commercialising rather than representing the featured groups.[7]

Although the Médecins sans Frontières example stands out, inappropriate use of images occurs in the paraphernalia and media releases of many global health organisations. Such use of inappropriate imagery reinforces biases and perpetuates harm rather than challenge the issues that must be addressed to achieve global equity in health and wellbeing.

We reviewed imagery adopted in public-facing grey literature intended for the general public and related to infectious diseases by global health actors headquartered in HICs, to deliver insight into how imagery use can be made equitable, respectful, ethical, and relevant. Infectious diseases represent an area of global health not restricted by geography but where inequities prevail, with the greatest burdens present in LMICs.[12] We define global health actors as an individual or organisation that operates transnationally with a primary intent to improve health.[13] We focused on literature from HIC-based actors as they operate in centres of power in global health and have influence on foreign settings, and thus need to exercise greater responsibility for ethical practice and accountability when depicting people who are recipients of or are affected by funding.

Methods

We reviewed public-facing infectious diseases grey literature focused on vaccination and antimicrobial resistance by global health organisations headquartered in HICs. An initial Google search was performed to

identify key organisational actors in the areas of vaccination and antimicrobial resistance. Coauthors with expertise in global health and infectious diseases helped identify additional key organisational actors.

In 2015, WHO published a Global Action Plan On Antimicrobial Resistance.[14] We used this date as a point of increased global focus on antimicrobial resistance, and documents were included if they were published between 2015 and 2022, available in the public domain in English, and included at least one image.

For more on **programmable Google searches** see https://programmablesearchengine.google.com/

The websites of each of the identified organisations were searched via a programmable Google search for reports using keywords for each topic. For vaccinations, the keywords were vaccin; vaccine; vaccines; vaccination; vaccinations; Immuni; immunisation; immunisations; immunization; immunizations. The antimicrobial resistance keywords were antibiotic resistance; antimicrobial resistance; bacterial resistance; antimicrobial resistance.

Documents meeting the inclusion criteria were retrieved and analysed. Identified reports were documented on an Excel spreadsheet, with search details recorded according to the PRISMA 2020 guidelines.[15] Duplicates were manually removed. To generate descriptive statistics, we recorded the number of images used and the numbers of images portraying women, people of colour, children, health-care professionals, and lay members of the public. Appendix pp 1–11 provides details of the quantitative data collection methods and the full list of data that support this analysis together with the reference to all the included reports.

See Online for appendix

Panel 1: **Criteria for the analysis of images in the selected public-facing grey literature**

Relevance

- Does the image have immediate relevance to the topic of the report or to the immediate discussion of the portion of text in which it was placed?
- What is the image serving to illustrate?
- If there is no professionally relevant activity taking place, is there reasonable contextualisation of the image (eg, via a caption)?
- Is a local culture being depicted and if so, in what light?

Integrity

- Does the image align with the fundamental principles of respect and dignity for the people it portrays?
- Is the image sufficiently upholding the individual's dignity and privacy?
- Does the image comply with local traditions or restrictions on photography?
- Is the image significantly staged or manipulated?

Consent

- Is there good practice to ensure the images used are consensual and credit the individual depicted for their role or contribution in the story?
- Is there any mention of how the images used were obtained and whether informed consent was received?
- Are workers, particularly those outside of the author organisation, being appropriately acknowledged or credited for their work?
- Are those photographed likely to face stigma or persecution if identified in relation to the topic? If so, have measures been taken to protect or anonymise them?

Representation

- Do the images accurately represent the reality of what has been photographed?
- Is there a clear imbalance in the demographics of people represented as vulnerable or with less power as compared to people represented as having power?

Images were analysed using specific criteria, organised into four themes (relevance, integrity, consent, and representation). As there are no accepted standards for imagery use in global health, the criteria were developed by drawing upon existing published ethical codes from Photographers without Borders,[18] the European NGO Confederation for Relief And Development (CONCORD),[16] and the US National Press Photographers Association.[17] The final analytical criteria were decided upon by consensus (panel 1).

The analytical criteria were piloted using a series of images, and inconsistencies in the analysis were discussed. The documents for inclusion were divided among the researchers, so that every image in each document was independently reviewed by two researchers.

The criteria formed an outline for a thematic framework evaluating the use of imagery. Analysis notes from the two reviewers for each document were compared and discussed among the research team, and any additional relevant emerging subthemes from the analysis were added to the thematic framework.

Results

A total of 1115 images were gathered across 118 reports, sourced from 14 global health actors (appendix pp 2–3). Of these images, 859 (77%) had identifiable people present in the image. Health-care professionals were depicted in 370 (33%) images, adult non-health-care professionals were depicted in 402 (36%) images, and children were depicted in 393 (35%) images. Descriptive statistics of representation by gender, age, and profession status (all subjectively assessed by reviewers) are provided in figure 1.

Samples of the data generated have been referenced according to theme (panel 2). These examples were chosen for delivering what we, by consensus, decided were the most interesting insights for informing a good-practice framework from our dataset. Following our analysis of current imagery use along the four major themes (relevance, integrity, consent, and representation), we developed a framework for the future use of imagery in global health (figure 2). In the sections below we describe the key findings under each theme, referring to our notes in panel 2 (a complete version of the panel is provided in appendix pp 4–9) and examples of images in figure 2.

Relevance to the stated purpose or content of report

If the visual focus of an image is on activities and work directly related to the content of a report, the image was perceived to be sufficiently relevant (panel 2 [theme 1: 1]). Instances when this is not the case, such as portrait imagery, were felt to be more frequently seen in reports depicting LMIC settings (panel 2: theme 1, 2).

When the visual focus is on individuals and faces, we noted that the presence of contextual aids, such as text and visual clues, were necessary to establishing relevance (panel 2 [theme 1: 3–4]; figure 2).

When text is used, the photographed individual's story and relevance to the report can be made clearer, preventing assumptions being made by the reader (panel 2 [theme 1: 5,6]). We also appreciated how direct quotations from individuals in an image humanised the local beneficiaries in the report's wider storytelling and granted them a sense of individuality and ownership over their image (panel 2 [theme 1: 6]). Identifying the location where an image was taken helped the reader differentiate between countries and health programmes, rather than make generalisations about diverse geographical regions covered within a report (panel 2 [theme 1: 7]). When image and text complement each other to communicate a cohesive message, we felt the storytelling of the report was the most enhanced (panel 2 [theme 1: 8]).

Evidence of consent from individuals depicted

There was no explicit mention of consent in the documents or indication of consent-based practice for images in any of the reports (panel 2 [theme 2: 1]). Some images indicated that the photographer had engaged the individuals, such as when the individuals looked directly at the camera or posed, which we reasoned to be a sign of implicit consent (panel 2 [theme 2: 2]). However, when there was an expression or indication of discomfort from the individuals portrayed, we felt the image was invasive (panel 2 [theme 2: 3]).

Photographs of sensitive scenes, depicting individuals exposed, vulnerable, or suffering, should warrant explicit consent (panel 2 [theme 2: 4]). This is also true when images are of children, who we considered inherently vulnerable due to their inability to fully understand or critically analyse their situations. This vulnerability was especially heightened without the presence of guardians (panel 2 [theme 2: 5]; figure 2).

Confidence that the right to consent had been observed was particularly high in cases when the individuals photographed were named and their contribution and story or connection to the report's topic was covered in the caption. This suggested more meaningful and extended engagement with the individuals photographed and an indication that they understood how their image would be used (panel 2 [theme 2: 6]). Our confidence in the individual's informed consent was similarly high for images that protected the individual's anonymity (panel 2 [theme 2: 7]).

Representation by race and gender

We observed comparatively more representation of people of colour, particularly women of colour and children, as recipients of care than White people. We noted there was often no discernible link to the immediate topic of the report when such images were used. However, HIC populations were rarely represented (panel 2 [theme 3: 1]).

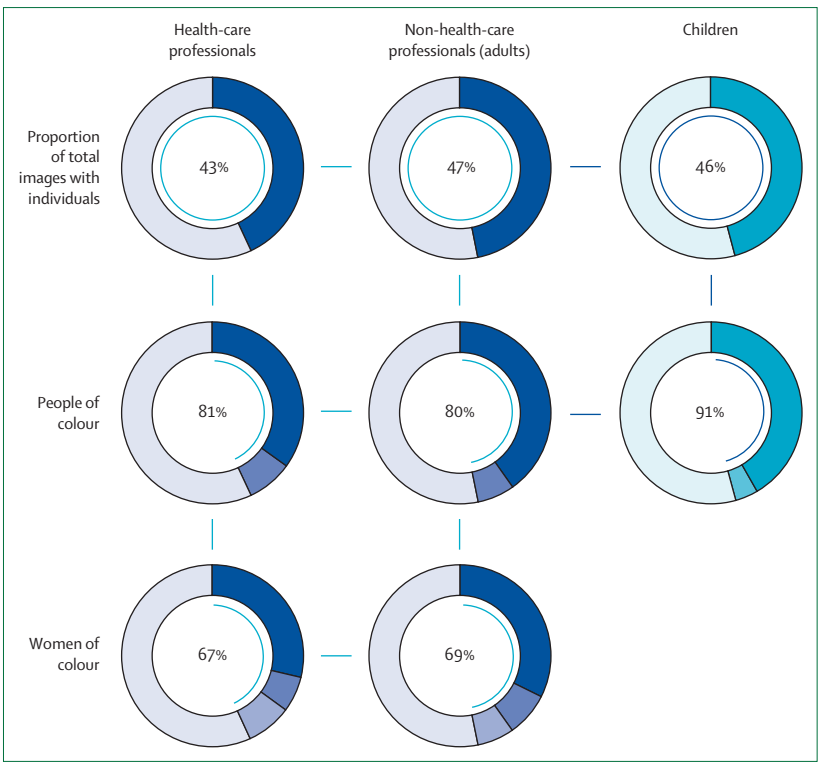


Figure 1: **The proportion of images depicting health-care professionals, women, and children in the reviewed reports**
Gender and age were subjectively assessed by reviewers; individuals were considered children if they looked obviously younger than 18 years (most children depicted were younger than 10 years).

We noted a representation of women of colour in a professional capacity in evaluated images. This helped to give a balanced picture of authority and workers in global health (panel 2 [theme 3: 2,3]).

We observed instances of significant power imbalances between health-care workers and health-care recipients. This was the result of how different parties were depicted in terms of expression, posturing, and positioning in the frame (panel 2 [theme 3: 4]).

The integrity and dignity of individuals depicted

We considered the depiction of negative emotions to be harmful and of detriment to individuals' dignity when depicted insensitively (panel 2 [theme 4: 1]), and particularly when the photograph neither appears directly relevant to the topic nor is contextualised (panel 2 [theme 4: 2]). When there is a substantial amount of information provided to contextualise image, we considered that the individual's dignity was better respected (panel 2 [theme 4: 3]; figure 2).

Although staging can be useful and respectful (panel 2 [theme 4: 4]), it also serves storytelling agendas that are harmful to the dignity of the individuals depicted. Examples of this were noted in images of children depicted

Panel 2: Key examples of image analysis by theme

Within each theme category, we describe several examples of images presented in publications found by our literature search. A version of this panel with references to the publications containing the images discussed can be found in the appendix (pp 4–9).

Theme 1: relevance to the stated purpose or content of report

This is determined through the key emphasis or focus of the photo, which might be the people being photographed or the action they are performing; it can be analysed through the focus of the lens, the angles of the photo, the positioning or eye contact of the individuals depicted, etc

1. Relevant image of pregnant tummy; simple image to illustrate the subject of maternal health
2. There are portrait images of children of colour with no clear relationship to the health issue aside from illustrating a potential patient population; as the document title is about vaccine product characteristics the choice of image is especially odd
3. Relevant; images have to do with vaccination; the front cover shows an image of a child who has been vaccinated and happily shows off the ink sign on her finger that shows this
4. Although respiratory syncytial virus is a disease affecting infants, the absence of contextualisation does not make it apparently obvious to a lay reader why these Black children and mothers appear in a document about vaccine characteristics; as the text surrounding the images is entirely unrelated, the image insinuates that the infants shown are affected by the titular infection when this is not necessarily the case
5. One image shows children living in squalid conditions of a refugee camp, but the caption discusses the link between poverty and infection, which makes the use of the image less gratuitous
6. All images are related to children receiving malaria vaccination; all images contain captions, with names (and roles) of people in the images, as well as contextualisation and credits for photographs
7. Image appears relevant; however, there are no details on where the image was taken—as the report covers the whole of the western Pacific, it would be useful to know a specific country
8. Almost all photos within the report serve to illustrate the text information of a section; all images are highly relevant and there is effective use of captions that provide contextualisation of images and a clear purpose to the supplementary text

Theme 2: the need for consent

Assessing whether there is any clear evidence to indicate the capturing of the photograph was done consensually; this can be a written statement somewhere within the document or a visual indication from the photo (eg, posing or eye contact)

1. Credit noted for photographers of images but no indication or explicit declaration of consent-based practice as pertaining to individuals
2. Images show individuals looking into the camera in most cases, showing effort to engage with individuals, especially children
3. Some pictures show individuals who appear apprehensive or unready for the shot—photographers should make sure (if they are not taking candid images) that people know what is being done
4. Sensitive images, such as those of breastfeeding, do not have sufficient indication of the mother's knowledge
5. The image seems like an invasion of privacy as no other guardian is present and the child looks vulnerable and alone; the child is looking into camera apprehensively and is too young to give informed consent
6. Appropriate acknowledgment of contribution, and implicit consent from the individuals being photographed through describing their perspectives and naming them
7. The face of the mother being blurred shows protection and anonymisation

Theme 3: imbalances in representation by race and gender

Imbalances in the representation of people by their race or gender, either through the frequency of which some racial groups or genders are portrayed or the way these groups or genders have been represented

1. Notably, all images show individuals appearing to be of African origin, whereas the report describes the burden of Shigella infection across low-income and middle-income countries, including Asian countries; the disproportionate representation of some ethnic groups risks stigmatising or branding them as the face of the problem
2. There is a difference seen in the way that people of colour are portrayed (White people are shown in a professional capacity and the image shows a child of colour vulnerable and exposed)
3. Good representation of all genders in both health-care professionals and non-health-care professional capacities (eg, pp 32–33 show male workers and patients)
4. There seems to be a power imbalance present between the health-care professional or aid-workers entering the shelter to deliver vaccines and the family (especially the children), who appear to be scared and cowering in a corner

Theme 4: the integrity and dignity of individuals in images

Assessing the degree of professionalism (seen through the setting—ie, conference or clinic, but also the clothes or uniform of the individual), dignity and privacy (can be compromised if the individual is captured in a sensitive or negative emotional moment), and emotion (the use of emotionally evoking scenes, eg, images of individuals in distress or in conditions of poverty) with which individuals are portrayed

(Continues on next page)

(Panel 2 continued from previous page)

1 The image on p 9 shows individuals appearing scared and vulnerable, which perhaps impinges on dignity
2 The key image, and the image on p 45, shows children in distress for no clear reason when this instead could have been taken in more dignified ways
3 All images are generally depicted with respect and dignity; although some children appear in challenging circumstances, they are not in pain or distressed and these images are balanced with other children looking happy
4 The cover is probably staged, showing a smiling woman holding her two babies in front and centre and a group of health-care professionals in medical uniforms are lined up in a picture pose behind her; behind them a clinic can be seen with the name of the clinic clearly visible above everyone's heads; there is value to this staging as it allows viewers to get a sense of place, people, and work; the smiling faces also build an impression of a functional clinic with high patient satisfaction (although we cannot be sure that this is true); in the rest of the documents, children are shown in normal, unstaged environments and they are not used to emotionally charge the images
5 Image of a Black child in crumpled clothing all by himself on a hospital bed and staring wide-eyed into the camera, suggesting some degree of staging; the relevance to the topic of infection is low—the image seems instead only to engender pity
6 Image on p 10 is of two children in the middle of a slum; it seems to be colour graded to be especially dark and this has made the already unappealing image seem even dirtier and unsanitary; the children are looking at the camera, indicating they might have been directed into their positions for the picture
7 The face of the child is covered so no visible distress is portrayed—this is a good example of how dignity has been considered and preserved through maintaining privacy and avoiding needless displays of distress and vulnerability
8 There are confidentiality breaches with presenting the medical identification cards of children that are decipherable and is unacceptable; this would not happen in high-income countries

alone in poor conditions to provoke pity (panel 2 [theme 4: 5]). Manipulation of an image could help its integrity (eg, by anonymising the individuals) but might also depict scenes inaccurately by editing details (panel 2 [theme 4: 6]).

We identified privacy as an important consideration, noting that it is preferable to avoid instances of exposure or identification when possible (panel 2 [theme 4: 7]). When there were instances of identification documents being photographed without making details indecipherable, we felt there was a potential invasion of privacy (panel 2 [theme 4: 8]).

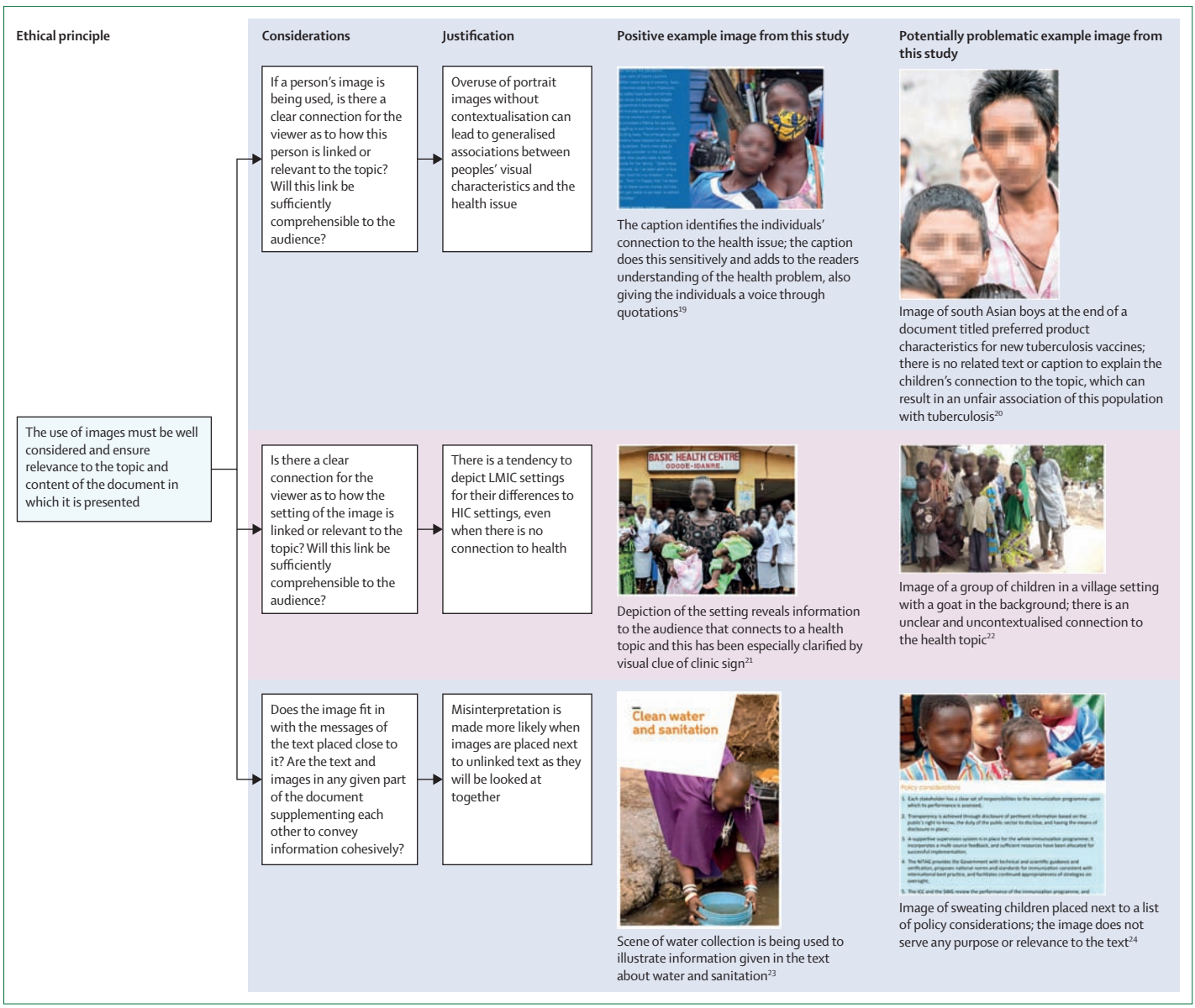
Discussion

There is widespread use of imagery in the work of highly influential organisations involved in setting global health policies and strategies. Currently, there are no well established standards or codes of practice for image use in these contexts, which could lead to inappropriate representation. In this analysis, we provide evidence that the current narrative communicated through imagery in vaccination and antimicrobial resistance reports is one of power imbalances, depicting women and children from LMICs with less dignity, less respect, and less power than those from HICs. These lapses in equitable practice perpetuate racist and misogynistic stereotypes. The absence of evidence of consent for using intrusive and unnecessary images, particularly of children in LMICs and often out of the context of the reports, is of particular concern.

We encourage global health organisations and other actors involved in producing, using, and circulating imagery in global health to apply and build on this framework we have developed. Having such a framework can facilitate a more equitable and considerate approach to using imagery, adhering to the same standards regardless of gender, race, ethnicity, age, or geography. We have also created a simplified version of the framework as a checklist (appendix pp 10,11).

Providing consent or assent is important, as the use of an individual's image can, over time, become a source of profit or a cause of moral harm; this has ethical consequences.[35] In practice, informed consent must move away from a relaxed interpretation to a full disclosure of risks and implications.

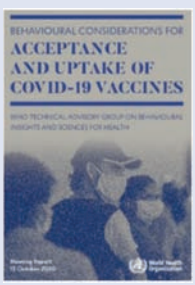
Although detailed ethical guidelines exist for photography and illustrative practice in HICs, challenges to their adoption when photographs are taken in LMIC settings must be addressed.[36,37] For example, meeting consent standards and maintaining communication lines for withdrawal of consent must be a top priority. One of the principles of the Code of Conduct on Images and Messages by CONCORD states that, in all communications, images should be truthfully represented and depicted in their wider context, to improve public understanding of the realities and complexities of development. This principle rests on the belief that global health photography's primary purpose is to authentically inform rather than construct fictional narratives that can misrepresent the real experiences of the individuals depicted. When accurately representative images are chosen, they enrich teaching, research, and advocacy.[18]



(Figure 2 continues on next page)

This Health Policy shows that images of individuals are currently at risk of being used out of context, without relevance to the topic, and failing to afford individuals their due dignity. This practice was noted more frequently in reports that represented LMICs, in direct contrast to the CONCORD recommendations. The harmful effects of such misrepresentation include affirming stereotypes and associating population groups with social problems. This, in turn, reaffirms paternalistic attitudes towards these countries by actors in HICs, and therefore hinders collaborations that are based on mutual respect and the recognition of local expertise and insight.[38] Moreover, it reveals a tendency to depict LMICs through a colonial lens which has been identified as a key ethical pitfall.[4]

Gender and race have a bearing on how power and privilege are distributed and maintained; their representation in global health is important because they can influence how stakeholders perceive and target populations. Over-representation of any race with a specific trait is associated with biases; for example, one study described the over-representation of so-called whiteness with physical fitness.[39] We found Black and African people to be the most represented group in images in reports on vaccination and antimicrobial resistance. Although the burden of vaccine-preventable infectious disease and antimicrobial resistance is concentrated in specific low-resource settings,[12] to excessively represent any one group, especially without purpose or integrity, is likely to draw broad and

Ethical principle	Considerations	Justification	Positive example image from this study	Potentially problematic example image from this study
Images should uphold the right to dignity and privacy of individuals depicted; this must be especially true for children and vulnerable groups	Are image-alteration practices, such as staging or digital manipulation, being avoided? If they are being used, does their use protect the interests of the individuals depicted?	Alteration practices can exaggerate elements of an image to support a specific agenda or purpose; this can be harmful as it detracts from the reality of a scene	 Grain and blur added to this image adds to the aesthetic but also serves to anonymise individuals, thus protecting privacy[25]	 Image of two children living in impoverished conditions has been noticeably colour graded to heighten darker shades; this adds an intensity to the image and makes the setting look especially dirty[26]
	Are depictions of sensitive scenes (eg, where individuals are uncomfortable or exposed) being avoided? If they are being depicted, is this purposeful and as non-intrusive as possible?	Individuals can be, and often are, in a vulnerable state or are going through emotional distress if photographed in relation to a health issue; this suffering must be eased as much as possible	 Image shows a visibly sad woman holding an image of her deceased child; although the image is of a sensitive nature, it is fully contextualised by the caption, which shows that the individual is choosing to be in the photo, and serves the purpose of conveying the human cost[27]	 In this image there is significant exposure of the individual photographed when this is not needed to convey breastfeeding[28]
Informed consent from all individuals depicted should be obtained through a robust process that is explicitly recorded and accessible; the same ethical safeguards should be available to people in LMICs as for people in HICs	If a child is being photographed, is the image in the best interests of the child? Has the parent or guardian agreed and been present when the photograph was taken?	Children are especially vulnerable to exploitation and can be used to emotionally charge images; the close involvement of parents or guardians can help protect their interests	 The presence of a guardian happily consenting to the photo and holding her baby; it is less likely for a child to be exploited for photography when a parent is present[29]	 Image of Black child in crumpled clothing all by himself on a hospital bed; it is emotionally triggering, engendering pity; the absence of any guardians and the impression that the child is uncared for is exploitative[30]
	Is there a clearly traceable documentation of consent from the individuals depicted? Have photos where there are signs of apprehension or discomfort been avoided?	Ensures that individuals are actively aware and informed about photography when they are identifiable and gives individuals the power to exercise legal rights and protect themselves if necessary	 The family standing ready for the photo indicates they had appropriate notice about the photo and were ready for it to be taken; ideally these people would have been told about the way this image would be used[31]	 Image of a mother with her child with both of them looking apprehensively towards the camera, indicating confusion or discomfort; it is unlinkely that the photo was consensual[29]

(Figure 2 continues on next page)

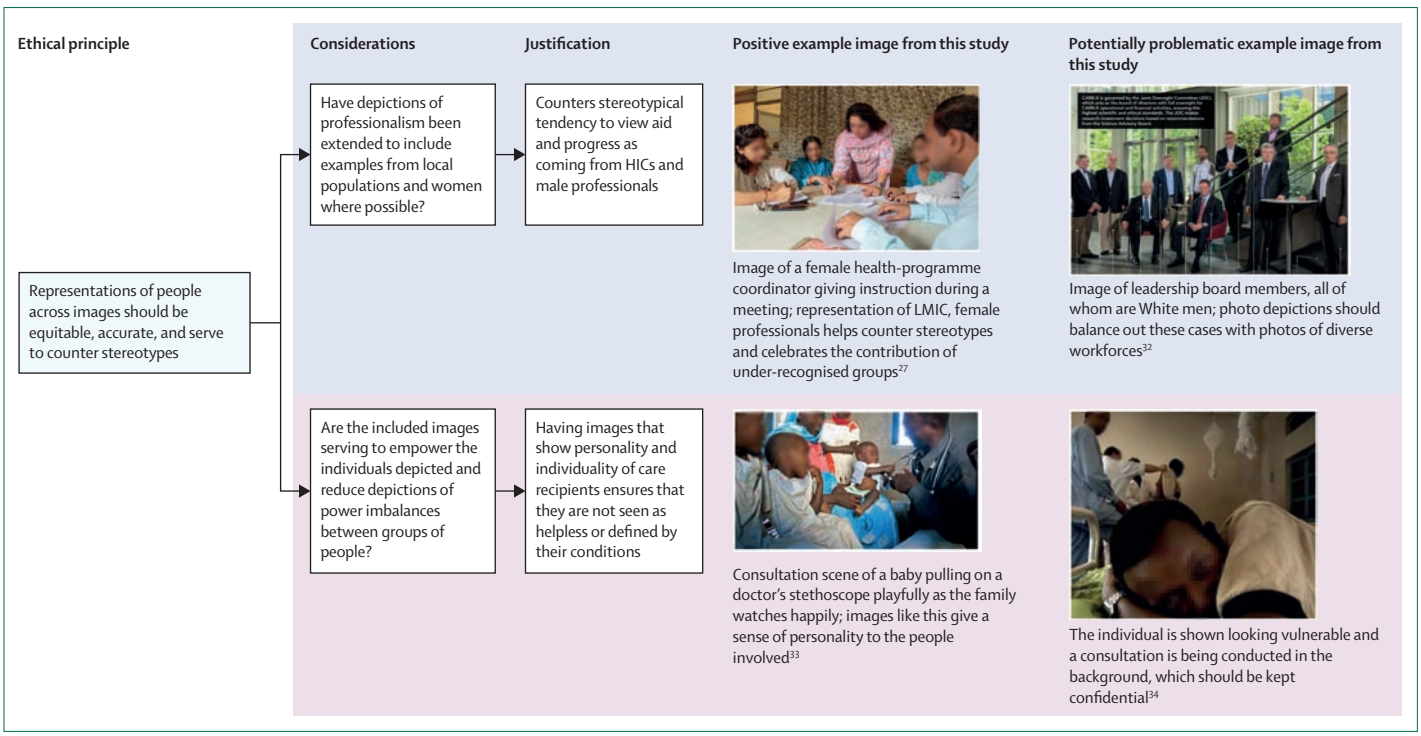


Figure 2: **Framework for the use of imagery in global health**
Images (reading from left to right across each row) have been reproduced from the following reports: *Responding to COVID-19: UNICEF annual report 2020*,[19] by permission of UNICEF; *Preferred product characteristics for new tuberculosis vaccines*,[20] by permission of WHO; *Africa Vaccination Week 2021: activity & social media report*,[21] by permission of WHO; *Implementing the immunization agenda 2030*,[22] by permission of WHO; *The global response to AMR: momentum, success, and critical gaps*,[23] by permission of the Wellcome Trust; *Guide for developing national immunization policies in the WHO African region*,[24] by permission of WHO; *Behavioural considerations for acceptance and uptake of COVID-19 vaccines*,[25] by permission of WHO; *When the drugs don't work: AMR as a global development problem*,[26] by permission of ReACT; *Celebrate life! Vaccination is protection*,[27] by permission of WHO; *Update on WHO interim recommendations on COVID-19 vaccination of pregnant and lactating women*,[28] by permission of WHO; *GAVI annual progress report 2018*,[29] by permission of GAVI, the Vaccine Alliance and WHO; *Improving infection prevention and control at the health facility: an interim practical manual*,[30] by permission of WHO; *The global vaccine action plan 2011–2020: review and lessons learned: strategic advisory group of experts on immunization*,[31] by permission of WHO; *The fight against superbugs: annual report 2018–19*,[32] by permission of Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator; *Regional strategic plan for immunization 2014–2020*,[33] by permission of WHO; *Preferred product characteristics for therapeutic vaccines to improve tuberculosis treatment outcomes*,[34] by permission of WHO; . Images included in this framework were selected by authors during the analysis, by identifying images that reflected the key points in the framework most clearly. The final selection was determined by consensus. LMICs=low-income and middle-income countries. HICs=high-income countries.

misleading associations between whole populations and world regions with diseases. Such an outcome represents a failure to give readers a nuanced understanding of the factors influencing disparities in disease burden and the challenges and work local to each setting.

This Health Policy emphasises the need to respect individuals portrayed in global health imagery, by preserving dignity and privacy and by ensuring consent. The production, selection, use, placement, and circulation of images in global health work reflect a social process that can reaffirm stereotypes. We call on all readers and global health organisations, researchers, and other actors to consider the influence of their own backgrounds, assumptions, and agendas, and to work cooperatively to ensure that the images disseminated are a true, respectful representation of the communities depicted, and not a reflection of their own biases—or of the biases of their supposed audience.

Strengths and limitations

This Health Policy is the first of its kind to systematically approach the evaluation of images used in global health and proposes a framework for the progress to more equitable and ethical representation. Unconscious and conscious biases, however, were likely limitations in this subjective process. The construction of the analysis framework posed another limitation. The four selected criteria were based on an unstructured review of the available ethical codes applicable to global health photography. No formal databases exist for such ethical codes or guidelines. A systematic approach to collecting and interpreting these codes could have yielded a more comprehensive analysis. Although the analysis framework offered a useful basis for our evaluation, it cannot be said to reflect all the existing knowledge and ideas around this subject area.

The proposed framework asks broad open-ended questions. Although the framework raises points for consideration, this makes the framework unenforceable. It should be used as guideline with nuanced application, depending on individuals and organisations. There needs to be further engagement with global health communications teams to raise awareness about the need for this approach in selecting imagery.

Reflexivity statement

This work was triggered by the authors' experiences of inappropriate imagery in presentations made by European colleagues working in global health to east African audiences. Having discussed the experiences, we undertook this research to generate empirical evidence to test our hypothesis that imagery in global health was being used without due consideration, leading to biased and insensitive representations. Recognising our limitation of not having direct involvement with global health imagery, we consulted with a professional, global health photographer. Conversely, being outsiders from different racial and ethnic backgrounds could have introduced undue negative bias towards existing processes. This was mitigated through our selected methods, ensuring quantitative and qualitative analyses and cross validation and sense checking between reviewers. We recognise the need to engage with the process of identifying key stakeholders including photographers, report authors and editors, communications officers, publishers, and directors. The next stage will be to validate the framework through a Delphi consensus with key stakeholders to facilitate its broad adoption.

Conclusions

This work has highlighted the biased approaches in the use of imagery by those who hold power in global health. It is crucial to engage with these issues and to identify how we can work to treat individuals featured in global health imagery equitably, regardless of their circumstances, geography, race, gender, or socioeconomic status. The current narrative depicted within the imagery of infectious diseases reports in global health represents power imbalances driven by race, geography, and gender. This translates to women and children of colour that are based in LMICs being treated with less dignity, respect, and power than those from HICs. The absence of evidence of consent for using intrusive and unnecessary images, particularly of children in LMICs and often out of context to the narrative of the reports, is of particular concern. The framework we developed for the use of imagery in global health can be a platform for global health actors to redefine their intentions in using imagery in their communication and recommission appropriate images that are relevant to the topics, respect the integrity of the individuals portrayed, are accompanied by evidence of consent, and are equitable in representation. Adhering to these standards will help avoid biases that lead to insensitive content and misrepresentation, stigmatisation, and racial stereotyping. Upholding such ethical standards will also help realise the potential for empowerment and advocacy provided by photography.

Contributors

EC, SS, SA, and AMCP conceived the project. EC and MM secured funding. EC, SS, and AMCP coordinated the data collection. SS, AMCP, RF, OM, and WN extracted data and, with EC, analysed the findings and developed the framework, which was validated by all coauthors. EC and SS wrote the first draft, all coauthors contributed to subsequent versions and approved the final draft. EC had the final responsibility for the decision to submit for publication.

Declaration of interests

We declare no competing interests.

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