**Ethics in clinical pharmacology: facilitating public trust**

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The COVID-19 global pandemic setting has highlighted the role of trust in mediating relationships between experts, who design, manufacture, market and prescribe medication, and the lay public, who ingest medication[1]. Ethical interventions in science and medicine are intended to cultivate and preserve trust within the larger community. Therefore, this themed issue revolves around the timely topic of ethics in clinical pharmacology. This is a very broad remit, as reflected in this issue which touches on a number of different aspects of pharmacology, from the inception of a *medical problem*, to inclusivity in research and clinical trials, the ethical review of research proposals, and priority in vaccine distribution.

The article by Kaczmarek sets the stage in the broadest sense as it considers the idea of the spectrum of medicalization and pharmaceuticalization, particularly with regard to pain, using it as an example of the complex interplay between physical ailment, medical definition and pharmaceutical input[2]. It rightly emphasizes the nuanced nature of pros and cons that come with a clinical diagnosis linked with a therapeutic indication[2]. Understanding the societal and ethical context in which medication is used is crucial to preventing further crises such as the opioid epidemic in the USA.

The crux of beneficial therapeutic intervention is an evidence base which is robust and supports a positive benefit risk ratio for any medication given. This evidence base must be established using inclusive research, from the perspective of age, gender, gravidity, ethnicity and morbidity. Specific examples of cases for inclusion are highlighted by Weld *et al* , Soofi, and Magavern *et al*(Magavern et al., 2021; Soofi, 2021; Weld et al., 2021).

The rationale of excluding pregnant women from clinical research is similar to that of excluding dementia patients in that the approach is protectionist. The pregnant women, fetus and dementia patient can be viewed as vulnerable and needing to be protected from research. This may be harmful as we then are giving less evidence-based medicine to these groups, thereby making them vulnerable to iatrogenic harm or harm from withholding effective therapy. Therefore, as Weld *et al* write, this needs to shift to protection *through* research[3]. Severally particularly potent examples of harm re discussed; the withholding of effective HIV therapy due to lack of inclusive research, and the exclusion of women from trials for Ebola, which carried an untreated mortality risk of 80% for pregnant women and even higher risk for the untreated infant[3]. Soofi also outlines options to facilitate rather than exclude dementia patients from research participation[4]. The lack of inclusion of various ethnic groups in genetic research stems from a history of abuse leading to mistrust between establishment science and medicine and minority groups. Clinical translation of this less inclusive body of genomic research to pharmacogenomic implementations risks exacerbating current health inequity if not remedied[5].

An important avenue toward inclusion is research ethics committees, which exist to safeguard research participants from violations of trust which have occurred in the past. Despite their crucial role research ethics committees are often viewed as obstructive and are the subject of ongoing reformation. Tusino *et al* address the evolving role of research ethics committees, and how a drive toward centralization has been accelerated by the global COVID-19 pandemic [6]. Yet the role of ethics is not finished when the study is complete. The article by Millar *et al* considers the opposite end of the developmental pipeline in dissemination of COVID-19 vaccines (Millar et al., 2021).The authors support a capacity approach which is more holistic in its considerations that current mathematical algorithms.

From start to finish, the defining of an ailment which could have a therapeutic indication, the therapeutic design, creation, testing, clinical trial design and execution, and therapeutic marketing and dissemination have various ethical facets. Increased awareness of these ethical considerations will serve to promote more inclusive research, more holistic resource allocation, decrease health inequity, and increase public trust in both science and healthcare professionals. The pandemic setting has made it clear that it’s time to rebuild such bridges.

References

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