Ethical challenges in clinical decision-making in the era of new technologies: Experiences from low income countries

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Abstract

New technologies have remarkably changed the healthcare field over the last three decades by improving the functionality and efficiency of health care systems and patient outcomes. However, if not well managed, new technologies present ethical challenges to clinicians globally but more so in low income countries (LICs) where there is lack of resources and the technologies may serve to increase existing health inequities. There is paucity of literature exploring the ethical challenges faced by clinicians in LICs in this era of new technologies.

Objective: To discuss the ethical (and other) challenges clinicians in LICs face in this new technology era.

Methods: (i) The author’s personal experiences (As a clinician and researcher working in LICs), (ii) empirical research findings from interviews with 44 doctors and 16 nurses working in a LIC hospital, and 2 policy makers and (iii) relevant literature.

Patient related challenges included; inappropriate demand, ability to make informed decisions and balancing self-interest vs. public interest. Clinician related challenges included; the use of unfair criteria, lack of explicit criteria and processes, lack of evidence, potential for abuse, physicians’ dual role, autonomy and moral distress. Most of these were directly influenced by the extreme lack of resources, and decisions made at the meso- macro and global levels with regards to research and development and investing in new technologies for LICs. Hence addressing these challenges require concerted efforts at all levels, ensuring that decisions are guided by ethical values; and not only the clinicians’ duty.

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Keywords
New health technologies; Low income countries; Decision making; Clinicians; Ethical and other challenges
Background and summary

New drugs, new vaccines, biotechnology, new diagnostics, the rapidly growing genome related technology, telemedicine and information technology; have remarkably changed the healthcare field over the last three decades [15]. These technological innovations aim to improve the functionality and efficiency of health care systems and, could, if used properly transform medicine and healthcare in LICs [1,35].

Technological innovations, however, present ethical dilemmas since they tend to be expensive and hence not easily accessible to everyone who would benefit from them [21]. This challenge is more acute in LICs with extremely limited resources. For example, before being subsidized, ARVs were not available to every individual who needed them [5], yet decisions made about who should access the ARVs meant life or death for patients [31]. Such grave consequences make it critical that decisions regarding access to new technologies are made fairly.

Discussions of the ethical challenges associated with clinicians’ decision making in the era of new technologies have focused on high and middle income countries. Given the push to develop/export new technologies to LICs, a discussion of the ethical challenges faced by LIC clinicians is timely. Ethical challenges faced by patients and decision makers in LICs are contextually complicated by extreme poverty, relatively low government health expenditures, high donor support, and low literacy levels [6,36]. Corresponding health systems are characterized by inequitable health facility distribution, unfair health care financing (whereby 50% of the health care financing is out of pocket), and limited human resources resulting in poor access to quality healthcare [24]. New technologies in these LICs introduce unique ethical challenges in clinical decision making which are not often discussed in the literature.

The objective of this paper is to discuss the ethical challenges clinicians in LICs face when making clinical decisions in this new technology era, and the contextual factors that contribute to these challenges.

Methods

The paper is based on (i) the author’s personal experiences, (ii) qualitative interviews (iii) relevant literature.

Author’s experiences

The author trained in- and worked as a physician and policy maker in a LIC; with over 10 years LIC health systems research experience.

Interviews

Respondents were drawn from the departments of paediatrics, medicine, surgery and obstetrics / gynecology (Table 1). Using a pre-tested interview guide, the author and two research assistants interviewed 40 doctors and 16 nurses from a teaching hospital. The questions asked related bedside rationing, reported elsewhere. [19]. This information was updated with data from 6 key informant interviews (2 policy makers and 4 clinicians) for an ongoing study in the same setting. All interviews were audio recorded (with permission from the respondents) and transcribed verbatim. Data analysis involved reading through and coding entire transcripts. We identified and grouped codes relating to new technologies under categories. The categories were in turn summarised under broader themes namely; (i) patient- and (ii) clinician related challenges; which we use as subheadings to summarise the literature (below) and report the study findings. Relevant quotes are used where appropriate.

This research received ethical clearance from the University of Toronto, McMaster University and the LIC national research ethics board.

Literature

We accessed electronic publications on PubMed, Ovid, Web of Science, and Embase. Search terms used included: “ethical challenges” “new technologies”, “new drugs” “LICs” / “low income countries”. We limited the search to English language publications between 2000-2013. Given the paucity of LIC literature, we included literature from middle income countries which was deemed, by the author, to be relevant to LICs. We retrieved and summarized 172 articles under the subheadings i) date of publication; (ii) setting of the study or report, (iii) ethical challenges iv) type of new technology, v) documented experiences. Only 22 articles provided the above information and were included in the review.

Results

Patient related challenges

Inappropriate demand

Respondents reported situations where elite patients demand new drugs when the old drugs are equally effective. This constrained clinicians decisions and also led to misuse of new drugs. Although respondents did not talk about diagnostics, the literature revealed the occurrence of inappropriate demand for diagnostics in some LICs: a study of a district hospital in Botswana, Tautz et al.[33] found that women demanded and overused ultrasound while they undervalued the non-technological (yet effective) aspects of antenatal care.

Informed consent

Autonomy requires that patients give informed consent to decisions affecting their lives. However, low literacy levels in most LICs make it difficult for most patients to understand the information necessary to make informed decisions on new technologies [28]. This is further complicated with the high turnover of new technologies. Patients who cannot keep up with the new information defer decision making to clinicians. This resonated with the respondents (and the author) who found the inability to discuss the different options with their patients very frustrating. Respondents expressed concern that when patients defer decision making to clinicians, clinicians are liable to be blamed if things go wrong, yet felt unable to influence what technologies are accessible to patients.

Patients self interest vs. other interest

The literature reports that patients are often driven by self interest and may find it difficult to resist asking for a new technology they think would benefit them, although it might...
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