

Developing a conceptual framework for the practical ethics of prescribing in medical school curricula

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Abstract

Prescribing medications has traditionally been conceptualised as a technical process and skill in medical education, failing to acknowledge broader social, political, and economic dimensions. Consequently its ethical component is often overlooked. Existing educational approaches in medicine have predominantly covered ethics in abstract terms, which fail to equip students with an understanding of the complexity of ethical decision-making in real-world medical practice. This essay seeks to address this gap by proposing a conceptual framework to understand the practical ethics of prescribing in terms of its broader determinants. The authors emphasise the contextual factors that determine how ethical prescribing, and its coverage in medical curricula, can be defined. They propose that the framework outlined in this article can be the basis for cross-cultural dialogue. It can help tailor educational approaches and support future physicians in understanding and navigating the complex landscape that shapes their prescribing decisions.

Keywords: Ethical Prescribing, Conceptual Framework, Professionalism, Medical Education, Healthcare Systems.

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Introduction

Prescribing medications is a core part of the work of physicians in virtually all parts of the world.¹ Although it is often conceptualised as both a scientific and clinical process, prescribing involves a myriad of social, cultural, psychological, political, and economic considerations.^{2,3} These include, for example, an understanding of the patient's past medical history and previous treatment preferences and adherence, level of certainty about the current diagnosis, the side effect profile of the treatment, cost-effectiveness, affordability, and the impacts of this

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treatment choice on the broader population and healthcare system. Each decision that a physician takes in the prescribing process therefore has a significant ethical component both for the individual patient and for the healthcare system and society.⁴

Medical education typically deals with prescribing in technical terms rather than in ethical terms, which has profound implications for how doctors themselves go on to conceptualise prescribing. The existing literature on prescribing teaching predominantly focuses on safe prescribing,⁵⁻⁷ with little attention given explicitly to ethics. This raises questions about how this disparity can be ameliorated and how medical educators can equip students to recognise an ethical dimension in their future prescribing.

This essay aims to address this gap by exploring the challenges of integrating ethics with prescribing in medical curricula by proposing a novel conceptual framework. This framework emphasises the diversity of influences that shape ethical prescribing practices. It enables medical educators to analyse the diverse factors within their own local context as they plan their educational approaches, rather than adopting ideas from other contexts.

Definition of ethics

The definition of ethics in medical education often focusses on teaching the moral principles of autonomy, beneficence, nonmaleficence, and justice, initially proposed by Beauchamp and Childress,⁸ while the specific ethical dimensions related to actually prescribing medications have received little attention. This is important because these abstract ethical principles in isolation are insufficient to fully understand the practical, real-world context of prescribing.

To help students understand how ethics is relevant to their work as physicians, they need to identify the intersections of the scientific and clinical principles that govern prescribing with the broader political and economic factors that shape the current pharmaceutical landscape. This more deep-rooted approach will enable them to understand the context and various factors

influencing prescribing decisions. Therefore, expanding our definition of ethics to include these perspectives, can better explain the power dynamics and other influences shaping ethical prescribing practices outside the abstract principles that have dominated to date.

Practical ethics in prescribing

Ethics, in the context of medical education, transcends adherence to a set of abstract principles. Rather, it encompasses a dynamic interplay of influences. Two approaches have dominated: Principles-based and Values-based ethics. Principles-based ethics⁸ emphasises adherence to established rules or guidelines for behaviour. However, Values-based ethics are grounded in personal or societal beliefs and ideals, acknowledging the subjective nature of moral judgments.⁹ When teaching ethics in relation to prescribing, the authors suggest that these approaches are too removed from practice and that a better approach might be adopted: practical ethics.

Practical ethics (also called moral philosophy or applied ethics) has been applied to many areas of medicine where it examines and defines principles for moral behaviour and applies them to real-world scenarios:

Practical ethics today is concerned with what one should do in any given situation. It reflects on personal, professional, policy, and social choices and structures and holds them up to scrutiny. Good practical ethics relies on an in-depth understanding of the relevant real-world facts and issues and so it is often interdisciplinary.¹⁰

Practical ethics can be taught and applied in the light of principles that drive decision-making.¹¹ This not only grounds ethics in practice, but also provides a platform for personal reflection and for research to ensure that what is taught, and the examples that are used, are appropriate to context and culture. The authors do not therefore primarily interrogate ethics but examine the practice of prescribing in the light of principles which will portray the ethical framework of the practitioner.

When one contextualises prescribing within this broader framework encompassing issues such as healthcare accessibility, profit-driven motives within the pharmaceutical industry, and the influence of gatekeepers on health outcomes, the ethical landscape expands. It becomes increasingly apparent that the challenges faced by physicians transcend individual clinical encounters and are deeply rooted in personal, professional, societal, and economic structures. From this perspective, it may seem that the practical ethical challenges faced by physicians are symptomatic of larger systemic injustices and expecting them to tackle these

issues single-handedly is unrealistic and therefore, potentially destructive.

While ethics education may play a crucial role in shaping doctors' behaviour and decision-making,¹² equipping them with the tools to navigate ethical challenges within their sphere of influence, it is imperative to also engage in broader conversations about societal and economic reforms that address the root causes of ethical dilemmas. This also helps guide medical educators and students about which aspects of this system they can influence.

Developing a conceptual framework

In proposing a conceptual framework for analysing what medical students need to learn about ethical prescribing, our aim is to highlight the complexities inherent in prescribing practice and to situate ethical prescribing by physicians within a broader societal and political landscape. Pharmaceutical companies, often driven by profit motives, play a crucial role, for example. Understanding how prescribers interact with and are influenced by these dynamics is rarely covered in existing curricula.⁷

The authors are aware that there are existing frameworks that have some relevance to teaching about ethical prescribing. However, these typically focus solely on medical ethics or prescribing, without addressing the intricate interplay between these two domains and considering additional educational factors. One such framework is the four principles approach outlined above by Beauchamp and Childress.⁸ While this provides a foundation for ethical decision-making, it does not, for example, capture the complexities arising from commercial interests or societal pressures on prescribing behaviour.

Another example is the ethical decision-making model developed by Pellegrino,¹³ which emphasises the importance of understanding patients' values and preferences in clinical decision-making. While this model prioritises patient-centred care, it does not explicitly address the external influences that can influence prescriber behaviour and compromise ethical decision-making.

The prescribing competency framework for all prescribers by the Royal Pharmaceutical society¹⁴ offers guiding principles for healthcare professionals to prescribe but the only mention of ethics is that the prescriber "understands the legal and ethical implications". Additionally, it is grounded in the context of a single country, the UK, which has a particular set of circumstances around prescribing that link to its national

health service.

In contrast, our proposed framework addresses the interplay between individual prescriber behaviour, societal expectations and commercial interests, offering a broader perspective on the practical ethics of prescribing in medical school curricula.

The framework, to be implemented around the experience of actual practice, includes the following:

- Defining intended performance: Outlining the ethical standards and expectations for prescribing practices to guide educational objectives.
- Addressing assumptions and external influences: Identifying and challenging preconceived notions and external pressures that may impact ethical decision-making in prescribing.
- Evaluating student and doctor performance: Assessing the ethical reasoning and behaviour of both students and doctors in the context of prescribing, incorporating reflective practices.
- Examining the wider impact of education in supporting ethical performance: Considering how educational interventions can support and enhance ethical prescribing.

By integrating these elements, educators can ensure a comprehensive approach to covering the practical ethics of prescribing, equipping students with the necessary knowledge, skills, and awareness. This framework, outlined in Figure, facilitates comparative analysis of practical ethics across various contexts, guiding educators in developing strategies that support ethical performance through educational planning and assessment.

Challenging assumptions

It is crucial to acknowledge existing assumptions about ethical prescribing. The literature on ethics in medical education often assumes that defining and teaching ethics correctly will automatically lead to improved ethical practices.¹⁵ However, these assumptions are limited as they fail to consider the myriad external influences shaping ethical decisions. The question arises: is it sufficient to teach medical students about ethics and expect the emergence of ethical doctors? Campbell et al.¹⁶ took on this question and concluded that there is limited evidence to show that ethical teaching directly translates into ethical behaviour in medical practice. They highlight the need for a more comprehensive approach to ethics education that goes beyond the current teaching of ethical principles. We therefore take practice as primary and develop practical ethics around that, so

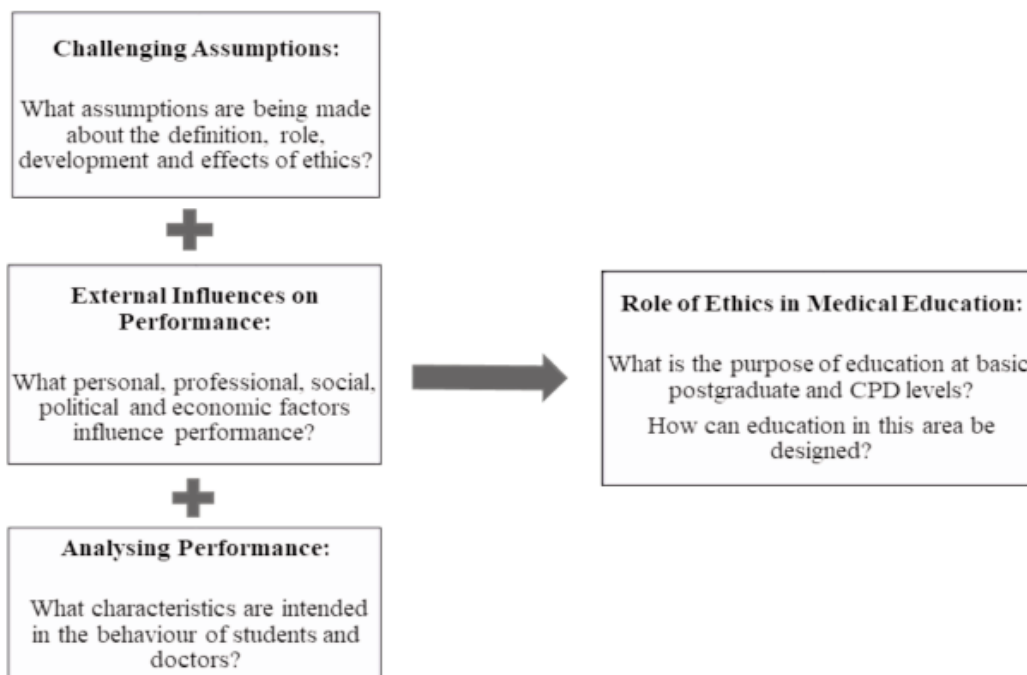


Figure: Conceptual Analytical Framework

For single or comparative analysis of practical ethics within any context. Identifies the factors that underpin thinking and affect performance, sets out the intended performance, taking assumptions and influences into account and enables educational planning to develop and support ethical performance.

that theory is in the service of that practice.

Globally, ethical decision-making norms vary widely, affected by various factors such as healthcare system structures, evidenced by studies exploring influences on prescribing decisions.¹⁷ A study by Panizza¹⁸ highlighted the difficulties encountered engaging students in challenging their own assumptions to facilitate their own moral decision-making. Physicians are not isolated agents but are embedded within complex socio-political and economic structures that shape their behaviours and choices. Understanding these dynamics and contextual differences is crucial to practical development.

External influences on performance

Influences on physician prescribing performance will be identified as the basis of learning. It has already been established that teaching medical ethics is complex with numerous external pressures.¹⁹ Among these influential factors are pharmaceutical influences, where in some cases the pervasive presence of pharmaceutical companies and their marketing strategies can sway prescribing behaviours, potentially compromising the integrity of medical decision-making.^{20,21} Moreover, cultural norms embedded within diverse healthcare settings play a pivotal role in shaping ethical perceptions and practices.²²

The legal and regulatory frameworks within which physicians operate serve as mandatory guides and constraints, influencing the boundaries of ethical behaviour in prescribing.²³ For instance, guidelines regulating the prescription of antibiotics aim to prevent antibiotic resistance and protect public health, which may require physicians to consider not only the individual patient's needs but also the broader societal impact of their prescribing decisions. By acknowledging these external factors, medical schools can better equip students to navigate the complexities of ethical prescribing in practice with conscientiousness and integrity.

Analysing performance

Recognising the factors that affect physicians' behaviour and performance involves a deep dive into the thinking that underpins ethical decision-making in prescribing, with the aim of understanding how individuals perceive, interpret, and prioritise ethical considerations amidst the pressures and dynamics inherent in healthcare settings. Truog et al.²⁴ noted the need to support physicians approaching the "microethical" issues that occur in everyday clinical practice, rather than the more widely-used theoretical teaching exploring major, but likely infrequent, ethical dilemmas.

Other steers on physicians' decision-making include cognitive biases, such as confirmation bias or 'anchoring', which can potentially lead to ethical lapses or suboptimal prescribing practices.²⁵ Furthermore, situational factors, including time constraints, resource availability, and patient expectations can have considerable influence, often presenting ethical dilemmas that necessitate thoughtful navigation.²⁶ Individual characteristics including personal values and empathy levels further modulate the ethical decision-making process,²⁷ shaping the choices that physicians make.

Role of ethics in medical education

It has been suggested that ethics education is essential in shaping the moral compass of physicians, influencing decision-making, and fostering compassionate and patient-centred care.²⁸ A scoping review of medical ethics education programmes from 1990 to 2020 highlighted the importance of integrating ethics into medical curricula and involving a "faculty trained in ethics, law, communication [and] professionalism."²⁹ Despite this, the extent to which ethics is integrated into the medical curriculum varies globally, and evidence of effectiveness is weak.³⁰

To address this inconsistency, we suggest that a developmental, constructivist approach to education, based on practical ethics rather than the application of abstract theories of ethics to practice might be more effective in terms of assimilating ethics into existing ways of thinking and behaving which will, in turn, cause accommodation of those existing understandings.³⁴ Using the conceptual framework that we have proposed, medical educators may be better placed to analyse what needs to be taught and assessed in the medical curriculum to optimise how students are prepared to engage in the practical ethics of prescribing.

Global Comparisons

Applying this conceptual framework to diverse healthcare systems worldwide provides a rich insight into the countless influences shaping prescribing practices. By examining different healthcare systems, we gain an understanding of how contextual factors, cultural norms, regulatory frameworks, and healthcare infrastructure intersect to influence ethical prescribing behaviours.

For instance, in the UK's National Health Service (NHS), a publicly funded healthcare system, cost-effectiveness and resource allocation considerations may weigh heavily on prescribing decisions, potentially impacting patient care trajectories. In contrast, the fragmented healthcare system in the United States, with its complex interplay of private insurance, pharmaceutical interests, and

regulatory oversight, introduces a complicated mix of ethical dilemmas regarding accessibility, affordability, and equity in healthcare delivery. Similarly, in developing countries like Pakistan, where healthcare access can be constrained by economic disparities and infrastructure limitations, ethical prescribing practices must navigate unique challenges, including consistent availability and affordability of medication, varying cultural beliefs surrounding healthcare-seeking behaviours, inadequate legal frameworks, and lack of awareness.

By comparing these diverse healthcare contexts, one can see examples of the nuances that underscore regional variations in prescribing behaviours. Using a conceptual framework to comparatively analyse ethics in different countries may ultimately foster cross-cultural dialogue, knowledge exchange, and the development of contextually tailored interventions aimed at promoting ethical prescribing practices on a global scale.

Conclusion

Developing a conceptual framework for ethical prescribing in medical school curricula requires a comprehensive understanding of the influences shaping ethical prescribing practices and the purpose and design of ethics education at different levels. By recognising the complexity of ethical decision-making and using the developmental approach that practical ethics offers, one can ensure the assimilation of ethics into practice and the accommodation of existing ways of thinking to practical ethical demands. This perforce takes context into account and integrates diverse perspectives into ethics education, so that medical schools can prepare physicians to navigate practical ethical challenges with integrity, compassion, and professionalism.

This framework can be used for comparative analysis of ethics within any context by identifying the factors that underpin thinking and affect performance, setting out the intended performance, while taking assumptions and influences into account and enabling developmental educational planning to support practical ethical performance.

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