

Submitted: 27 December 2022
Accepted: 13 March 2023
Published online: 4 July, TAPS 2023, 8(3), 70-71
<https://doi.org/10.29060/TAPS.2023-8-3/LE2938>

Insufficient undergraduate education for medication safety: A student's perspective

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Medication errors are one of the most serious problems in healthcare, and their occurrence is due to a wide variety of causes. While almost all drug-related medical errors are potentially avoidable, the main obstacles are primarily health system vulnerabilities and human error. To remove those obstacles, the World Health Organization (WHO) suggested providing more education (World Health Organization, 2017), specifically by participating in medical care. Graduation competencies in many countries, which include activities about medication and patient safety, are consistent with the statement. In addition, it is known that more prescribing errors occur in the first postgraduate year. Learning about prescriptions during medical studentships must be enhanced.

Nevertheless, we are concerned that medication safety education is still insufficient in the current undergraduate curriculum because of license-based regulation. It is considered difficult for clinical students to incorporate prescribing and ordering medication as part of medical studentship. Such license-based regulation is typical in Asia, where authoritarian attitudes are strong. We would like to point out that invasive clinical procedures are handled differently from prescriptions, despite the fact that such procedures are also medical practices that can involve risk. While medical students have the opportunity to conduct invasive medical procedures in the workplace, they scarcely prescribe medication before graduation.

It is time for medical educators to take the WHO statement seriously and organise more opportunities to learn how to prescribe medications safely. We can transfer learning strategies from invasive clinical procedures, even in the context of strict regulations. For example, we can implement more simulation practices. Although the WHO Curriculum Guide for Patient Safety does not yet include scenario simulation, research suggests that education with appropriate feedback can be very effective (Motola et al., 2013). Simulation-based prescription practice, especially in situations where medication errors are likely to occur, would allow for focused practice in a zero-risk environment. Another concern is that there have been relatively few published studies on the effectiveness of medication safety in undergraduate education, including simulation. High-fidelity simulators are available in many medical schools, but the usability is still limited because they do not cover a wide variety of situations to use medications. A possible breakthrough can be the implementation of virtual or mixed reality environment. Enhancing the reality of prescribing and administering medications through these educational strategies could be a very useful tool to apply not only in Asia but also in other contexts.

Notes on Contributors

Hirofumi Kanazawa conceptualised and wrote the manuscript.

Ikuo Shimizu wrote and supervised the manuscript.

All authors discussed and contributed to the final manuscript.

Funding

This work was supported by JSPS KAKENHI Grant Number 21H03161.

Declaration of Interest

There is no conflict of interest.

The main idea of this article was presented at The 17th Annual Congress of Japanese Society for Quality and Safety in Healthcare on November 27, 2022.

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