

E-prescribing by midwives: The situation in Greece

Maria Tigka^{1,2,*}, Aikaterini Lykeridou¹ and Dimitra Metallinou¹

¹ Department of Midwifery, School of Health and Care Sciences, University of West Attica, Ag. Spyridonos Street, GR-12243, Athens, Greece.

² Department of Obstetric Emergency, General and Maternity Hospital 'Helena Venizelou', Elenas Venizelou 2, GR-11521, Athens, Greece.

World Journal of Advanced Research and Reviews, 2023, 19(01), 887–889

Publication history: Received on 24 May 2023; revised on 13 July 2023; accepted on 16 July 2023

Article DOI: <https://doi.org/10.30574/wjarr.2023.19.1.1340>

Abstract

Electronic prescribing (e-prescribing) offers numerous benefits but has also disadvantages. The use of e-prescribing is becoming increasingly widespread worldwide but e-prescribing for midwives may vary from country to country. Regulations in Greece have defined the right of midwives to prescribe specific medicines and diagnostic tests since 1989. However, several years later, in 2019, legislation provided for the regulation of e-prescription for midwives. Midwives play a crucial role in the healthcare system, especially in the care of women and neonates. They are trained professionals who provide a range of services, including antenatal care and can help prevent and treat health problems that may arise during a woman's lifetime. It is therefore of utmost importance to empower midwives with prescribing capabilities which will facilitate the role of Primary Health Care.

Keywords: Global healthcare systems; E-prescribing; Midwives; Greece; Legislation

1. Introduction

Electronic prescribing (e-prescribing) is defined either as the process of writing, recording, processing and storing medical prescriptions using computer systems and specific medical software, or as integrated systems supporting the prescribing process [1,2]. E-prescribing offers numerous benefits, including improved patient safety, prescription accuracy, efficiency and medication adherence. It improves the overall quality of healthcare services while reducing medication errors, healthcare costs and administrative burden on healthcare providers. Disadvantages include the inoperability of the system in case of internet malfunction, the time-consuming process, the occurrence of system errors that can lead to a lack of or overloaded alerts, and finally, privacy and legal issues for patients' personal data [3].

2. Global e-prescribing by midwives

The use of e-prescribing is becoming increasingly widespread worldwide, but it should be noted that the implementation of e-prescribing for midwives may vary from country to country, as regulations and policies differ in different healthcare systems. At an international level, the countries in which midwifery prescribing laws have been enacted are Australia [4], New Zealand [5], Sweden [5], Norway [5], Finland [5], the Netherlands [5], France [5], Ireland [6], Poland [7], Canada [8], England [9], Wales [9], Scotland [9], USA [5], Greece [2] and Cyprus [10]. According to Wilson et al., midwifery and nursing prescribing laws have been also enacted in Denmark, Latvia, Lithuania, Belgium, Luxemburg, Spain, Italy, Malta, Romania, Slovakia, Bulgaria, Croatia, Hungary, Botswana, Ghana, Hong Kong, Israel, Jamaica, Kenya, Namibia, Rwanda, South Africa, Tanzania and Uganda [6].

* Corresponding author: Maria Tigka ORCID ID: <https://orcid.org/0000-0003-2211-4933>

3. The legislation for midwives in Greece

The Ministry of Health's multi-bill for the general e-government plan was enacted in Greece in 2010, while implementation of e-prescribing started gradually in 2011, with all physicians in Greece being able to prescribe medicines electronically to their patients. The aim was to use the statistical data resulting from the e-prescribing implementation for the development of the broader social security strategy in Greece [2]. Regarding midwives in Greece, according to article 2 of the Presidential Decree 351/1989 (Government Gazette 159/A/14-6-1989), they have the right to prescribe medicines (vitamins, iron, spasmolytics, pethidine, uterine contraction drugs and local anesthetics) [11]. Additionally, midwives can prescribe the Pap smear test and pregnancy-related examinations according to article 12 of Law no. 4486/2017 (Government Gazette 115/A/7-8-2017) on "Midwifery Care in Primary Health Care" [12]. With the implementation of e-prescribing, Law 3892/2010 (Government Gazette 189/A/4-11-2010) was enacted [13], which defined the regulation for physicians and pharmacists, and several years later, in 2019, Law no. 4600/2019 with additions to the already existing law, provides the regulation for midwives [14]. The Health Ministry's law provides that midwives working in the public sector are entitled to provide prescriptions for medicines and referrals for diagnostic tests to persons insured by the Social Insurance Institution. It is clarified that the execution of the referrals is mandatory in public health service structures (par.1 Article 103 of Law 4600/2019 (Government Gazette 43/A/9-3-2019) added to Article 1 of Law 3892/2010 (Government Gazette 189/A/4-11-2010)) [14].

4. Data for e-prescribing in Greece

According to data from the Electronic Governance of Social Security (known as IDIKA) for the year 2021 in Greece, e-prescribing provided services to approximately 2,500,000 insured persons every month; more than 7,000,000 prescriptions for medicines were prescribed and more than 3,000,000 referrals for diagnostic tests were issued [15]. The Covid-19 pandemic and the needs that emerged gave an additional impetus to the Digital Transformation that took place in the country, for the creation of systems and applications always focusing on the provision of electronic health services to citizens. After a thorough review of the literature, no data was found on the prescription rates of midwives, an area that undoubtedly needs further research. In a recent study conducted in Greece, the knowledge and attitudes of midwives working in "Reception and Identification Centers" and "Refugee-Migrant Accommodation Centers" regarding e-prescribing were reported. A percentage of 69.8% of midwives answered correctly to knowledge questions about pharmaceutical preparations and 97.7% recommended routine pregnancy and postpartum examinations to migrant women. Midwives' desire to access e-prescribing services for medicines and diagnostic tests was significantly associated with their knowledge and attitudes about prescribing ($p < 0.001$). It was also shown that refugee-migrant women's compliance with receiving prescribed medications ($p = 0.010$) and vaccines ($p = 0.004$) was significantly correlated with their willingness to receive healthcare, including prescriptions of medicines and diagnostic tests by midwives [16].

5. Conclusion

The prescription of medicines and examinations by midwives is a valuable aspect of their professional competence that can improve the quality of care provided during the reproductive period and menopause. Midwives are highly trained healthcare professionals who specialize in providing timely and advanced care to women and neonates and can help prevent and treat health problems that may arise during a woman's lifetime. By collaborating with other healthcare providers, midwives ensure that women receive appropriate follow-up. It is therefore of utmost importance to expand their capabilities in the areas of prescribing, which will facilitate the role of Primary Health Care especially for women living in remote areas in Greece due to the shortage of doctors.

Compliance with ethical standards

Disclosure of conflict of interest

The authors assure that there is no conflict of interest with the publication of the manuscript or an institution or product mentioned in the manuscript and/or important for the result of the presented study.

References

- [1] Vejdani M, Varmaghani M, Meraji M, Jamali J, Hooshmand E, Vafae-Najar A. Electronic prescription system requirements: a scoping review. *BMC Med Inform Decis Mak.* 2022;22(1):231.

- [2] Electronic Prescription [Internet]. Report in Greek. Greece: IDIKA, Electronic Governance of Social Security; 2012 [cited 2023 July 1]. Available from <https://www.idika.gr/etaireia/erga/hlektronikhsyntagografhsh>.
- [3] Porterfield A, Engelbert K, Coustasse A. Electronic prescribing: improving the efficiency and accuracy of prescribing in the ambulatory care setting. *Perspect Health Inf Manag*. 2014;11(Spring):1g
- [4] Small K, Sidebotham M, Gamble J, Fenwick J. Exploring midwifery prescribing in Australia. *Women Birth*. 2016;29(5):436-442.
- [5] Currie B, Marquez O, Darling E. The Safety and Feasibility of Contraception Care by Midwives and Other Nonphysician Providers: A Scoping Review of Randomized Control Trials. *CJMRP*. 2020;19(1):6-19
- [6] Wilson DM, Murphy J, Nam MA, Fahy A, Tella S. Nurse and midwifery prescribing in Ireland: A scope-of-practice development for worldwide consideration. *Nurs Health Sci*. 2018;20(2):264-270.
- [7] Kilańska D, Lipert A, Guzek M, Engelseth P, Marczak M, Sienkiewicz K, Kozłowski R. Increased Accessibility to Primary Healthcare Due to Nurse Prescribing of Medicines. *Int J Environ Res Public Health*. 2021;19(1):292.
- [8] Medications and Substances. Standards, Limits, Conditions [Internet]. Canada: British Columbia College of Nurses and Midwives; Nov 2022 [updated 2023 March; cited 2023 July 1]. Available from https://www.bccnm.ca/Documents/standards_practice/rm/RM_Standards_Limits_Conditions_for_Medications_and_Substances.pdf.
- [9] Standards of Proficiency for nurse and midwife prescribers [Internet]. UK: Nursing and Midwifery Council; [cited 2023 July 1]. Available from <https://www.nmc.org.uk/globalassets/sitedocuments/standards/nmc-standards-proficiency-nurse-and-midwife-prescribers.pdf>.
- [10] The Nursing and Midwifery Regulations of 2012. Appendix IV (regulation 2) [Internet]. Report in Greek. Cyprus: Midwifery Code of Deontology; 2012 [cited 2023 July 1]. Available from [Οι περί Μαιευτικής Κανονισμοί.pdf](https://www.moh.gov.cy/moh/epi/epi.nsf/0/00000000000000000000000000000000?open&lang=en) (moh.gov.cy).
- [11] Presidential Decree 351/1989 - Government Gazette 159/A/14-6-1989 [Internet]. Report in Greek. Greece: Legislation Information Bank; 1989 [cited 2023 July 1]. Available from <https://www.e-nomothesia.gr/katygeia/noseleutries-nosokomes/proedriko-diatagma-351-1989-phek-159a-14-6-1989.html>.
- [12] Law no. 4486/2017 - Government Gazette 115/A/7-8-2017 (Coded) [Internet]. Report in Greek. Greece: Legislation Information Bank; 2017 [cited 2023 July 1]. Available from <https://www.e-nomothesia.gr/katygeia/nomos-4486-2017-fek-115a-7-8-2017.html>.
- [13] Law no. 3892/2010 - Government Gazette 189/A/4-11-2010 (Coded) [Internet]. Report in Greek. Greece: Legislation Information Bank; 2010 [cited 2023 July 1]. Available from <https://www.e-nomothesia.gr/katygeia/n-3892-2010.html>.
- [14] Law no. 4600/2019 - Government Gazette 43/A/9-3-2019 (Articles 98-178) [Internet]. Report in Greek. Greece: Legislation Information Bank; 2019 [cited 2023 July 1]. Available from <https://www.e-nomothesia.gr/katygeia/nomos-4600-2019-phek-43a-9-3-2019-2.html>.
- [15] Press Report: Data on the contribution of IDIKA to the Digital Transformation of Health [Internet]. Report in Greek. Greece: EDIKA, Electronic Governance of Social Security; 2021 Sep 24 [cited 2023 July 1]. Available from [Δελτίο Τύπου: Στοιχεία για τη συμβολή της ΗΔΙΚΑ στον Ψηφιακό Μετασχηματισμό της Υγείας – Ηλεκτρονική Διακυβέρνηση Κοινωνικής Ασφάλισης ΑΕ](https://www.edika.gr/medias/2021/09/24/20210924-01) (idika.gr).
- [16] Papari I. Prescription of pharmaceutical products, vaccines and laboratory exams in Reception Identification Centers (RICs) and Refugee Camps. [MSc dissertation]. Athens, GR: University of West Attica, Polynoe Library; 2022. Available from <https://polynoe.lib.uniwa.gr/aebmc19028>.