

E-PRESCRIPTION - IMPEDIMENT OR FACILITATION?

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ABSTRACT

Aim. The aim of the study was to obtain information about the advantages and disadvantages of using an e-prescription and whether age is a determinant in the case of e-prescription use.

Methods. This study is used the method of diagnostic survey. An original questionnaire was used to collect the diagnostic material. The study involved 94 respondents aged 18–92, who by filling in the proprietary electronic questionnaire indicated the advantages and disadvantages of e-prescription.

Results. The largest age group that participated in the study was the one which was aged 18–29 as it accounted for 26.6% of all participants, while seniors were in the minority, accounting for 7.9%. As for the place of residence, the dominant group were the inhabitants of rural areas (54%). When analysing the education attained by the participants, most respondents had secondary education 40.4% (n=38) and higher education 30.9% (n=29). While focusing only on the group of seniors, vocational education came first. 93.5% of respondents had no problem with the redemption of e-prescriptions. Satisfaction with the quality of

services was indicated by 93.5% of the respondents, and only 1.1% were dissatisfied. People over 60 encountered the most problems with e-prescriptions; these resulted mainly from the inability to reach the clinic and losing the access code.

Keywords: e-prescription, senior, digitization

INTRODUCTION

The e-prescription is currently the basic element of the healthcare system. This IT program was developed over a period of about 9 years; starting from 8 January 2020, e-prescriptions have been mandatory in Poland. This system became an added value during the pandemic, as it reduced human contact having the effect of diminishing the spread of the SARS-CoV-2 virus (Flies, 2020).

The e-prescription is saved in the Patient's Internet Account. This enables quick verification of data concerning the medicines taken, their dosage and the identity of the person prescribing the medicine. E-prescription differs from paper prescriptions in that the prescriber can assign a larger quantity of medicine and the patient can gradually purchase individual packs of medicine without further visits to the specialist. According to Zieliński, this is particularly important for chronically ill patients whose treatment is effective. If their condition does not deteriorate, there is no need for the patient to visit a specialist, and the prescription can be issued electronically (2020). If the drug therapy is used for 365 days, an e-prescription is valid for this period. If the drug therapy is administered for 365 days, this is the length of time the e-prescription can be valid for. However, if the doctor does not indicate an expiry date, all e-prescriptions are valid for 30 days except for antibiotics (up to 7 days) and immunological preparations (120 days).

To obtain an e-prescription, it is not necessary to visit the doctor's surgery in person. An appointment conducted by phone or in an online manner is enough to get an e-prescription. This also solves the problem for forgetful people, because once the e-prescription is obtained, it can be purchased anywhere and the risk of losing it is reduced to a minimum compared to the traditional form of the prescription (Kopański & White, 2018). According to a survey of pharmacists' opinions conducted by Kowalczyk et al. on e-prescriptions, the majority of pharmacists participating in the survey believe that the system will grow and the ability to view the patient's pharmacotherapy history will improve the safety of its use (2016).

E-prescribing ensures a fast fulfilment process due to the electronic system, as well as a fast flow of information between the doctor who issues the e-prescription and the provider who delivers it (Clerks, Trojanowska, & White, 2019). However, the system can be problematic, especially for seniors, amongst whom the level of digital information skills, according to the Central Statistical Office, amounts to 14.2% in the group of age 65–74 years (Dąbrowska & White, 2020). These are people who are not used to working with the Internet connection compared to younger people.

Issuing an e-prescription is homogeneous and independent of the method of using the advice from the specialist. When a doctor issues an e-prescription in the

system, a four-digit prescription code is automatically sent to the patient's phone. Then, to buy the drug at the pharmacy, the patient must give the code and personal identification number of the person for whom the e-prescription is issued. The information about the e-prescription can also be obtained via e-mail (in a pdf file), where a barcode is available, allowing one to verify the e-prescription at a pharmacy. Another way to use an e-prescription is to obtain an information print-out from the doctor, which comes without any stamps or signatures, only containing a code. The aim of this study was to obtain information on the advantages and disadvantages of using an e-prescription and whether age is an indicator of the problems related to e-prescription use.

MATERIAL AND METHODS

Ninety-four people aged 18–92 participated in the study. Women constituted 83.9% of all respondents, while men 16.1%. The research was carried out in March and April 2021 using a proprietary survey, available in an electronic version, which was created in Google Forms. The method used to conduct the research was online questionnaire completion with a distinction between urban and rural areas. Before filling in the questionnaire, the research participant was informed about the purpose and the course of the study. Completing the questionnaire was equivalent to giving consent by the respondent. The study group was additionally diversified in terms of gender, age and education. The criterion for inclusion into the study was being aged 18 years or older. The study was approved by the Bioethics Committee of the Medical University of Wrocław (No. KB-179/2021, Wrocław, Poland). The conducted research made it possible to verify the responses regarding the advantages and disadvantages of using e-prescription. It allowed also determining whether age is the determinant of the problem of using an e-prescription.

THE RESULTS

The study group was characterised in terms of age, gender and place of residence and education (Tables 1 and 2). The group of 18–29 year olds accounted for 26.6% (n=25) and the age group 40–49 years old accounted for 23.4% (n=22). Seniors, on the other hand, were in the minority of 7.9% (n=16). In the group of respondents (n=94), the percentage of women was 84% (n=79), while men constituted 16% (n=15). Male respondents were missing in the age range 30–39 and in the group of people older than 90. With regard to the place of residence, the dominating group were inhabitants of rural areas: 54% (n=51); and inhabitants of cities: 46% (n=43). When analysing the type of education most respondents had secondary education: 40.4% (n=38); and higher education: 30.9% (n=29). On the other hand, only the group of senior participants had persons with vocational education.

Table 1
Characteristics of the group by age, sex, and place of residence.

Age of the study group	Group of women		Group of men		Place of residence			
					Urban Area		Rural Area	
	N	%	n	%	n	%	n	%
18–29 years	25	26.6%	2	2.1%	19	20.2%	8	8.5%
30–39 years	11	11.7%	0		3	3.2%	8	8.5%
40–49 years	22	23.4%	2	2.1%	5	5.3%	19	20.2%
50–59 years	5	5.3%	3	3.2%	4	4.2%	4	4.2%
60–69 years	5	5.3%	5	5.3%	3	3.2%	7	7.4%
70–79 years	6	6.4%	1	1%	4	4.2%	3	3.2%
80–89 years	4	4.2%	2	2.1%	5	5.3%	1	1%
90 years and over	1	1%	0		0		1	1%
Total	79	84%	15	16%	43	46%	51	54%

Note: n – number of respondents. Source: Own study

Table 2
Characteristics of the group in terms of education

Age of the study group	Education									
	Primary		Secondary		Vocational		High school		Higher	
	n	%	N	%	N	%	n	%	N	%
18–29 years	0	0	3	3.2%	0	0	22	23.4%	1	11%
30–39 years	0	0	0	0	0	0	1	1.1%	10	10.6%
40–49 years	0	0	0	0	2	2.1%	10	10.6%	13	13.8%
50–59 years	1	1.1%	0	0	3	3.1%	0	0	4	4.3%
60–69 years	1	1.1%	0	0	6	6.4%	2	2.1%	1	1.1%
70–79 years	1	1.1%	0	0	4	4.3%	2	2.1%	0	0
80–89 years	2	2.1%	0	0	3	3.2%	1	1.1%	0	0
90 years and over	1	1.1%	0	0	0	0	0	0	0	0
Total	6	6.4%	3	3.2%	18	19.1%	38	40.4%	29	30.9%

Note: n – number of respondents. Source: Own study

The conducted research indicates that 97.9% of the respondents are perfectly aware of what an e-prescription is, and 93.5% of the respondents had no problems with its implementation. The people who encountered problems with filling the e-prescription were over 54 years of age. The problems resulted mainly from the inability to reach to the clinic, the loss of the access code and knowledge deficits on the use of e-prescription.

The most frequently mentioned disadvantages of e-prescription among people over 60 years of age were: lack of knowledge of the type of medication are contained on the e-prescription, having to attend the clinic in person due to lack of the e-prescription code, mishearing the code, lack of explanation at the outpatient

clinic on how e-prescription works and loss of the e-prescription access code. On the other hand, the younger group of respondents (aged 18-54) indicated the following as disadvantages: the need to memorise the access code, lack of network access, loss of the code, inability to view the prescription and the need to enter the personal indication number in the presence of other pharmacy customers when processing the e-prescriptions.

Table 3
Advantages and disadvantages of using an e-prescription

E- prescription	
Disadvantages	Advantages
1. The need to provide the PESEL number next to the other customers while filling the prescription.	1. Quick access, no problem with reading.
2. Possibility of losing the access code or making a mistake when writing down the code during telephone dictation.	2. Possibility to fulfil the prescription in instalments.
3. Not knowing what drugs are on the prescription.	3. Easy to realise.
4. Lack of education in the field of e-prescription.	4. Quick access and its implementation without a personal visit to the doctor for medicines taken chronically.
5. Necessity to set up an Internet patient account.	5. Possibility of implementation in several places.
6. Limiting doctor-patient contact.	6. Long period of validity.
7. Complete lack of clarity for the people in the geriatric age.	7. Access to prescription from the patient's online account.
8. Extended time to call to the clinic.	8. No need to stand in queue at the clinic.
	9. Time saving.
	10. It will not be damaged or lost.
	11. Modern form.
	12. Impossible to counterfeit.
	13. Avoiding contact with sick people.
	14. Paper saving.

According to people aged 60 and above, the advantages of e-prescriptions are mainly: ease of reading the e-prescription, easier access to the service, no need to queuing at the clinic, short delivery time, long validity, short e-prescription issuing time. Only one person indicated that they preferred the paper form. The vast majority of respondents (95.7%) agreed that using e-prescriptions is safe during a pandemic, and only one person believed that using e-prescriptions is not safer. 76.3% of respondents were satisfied with the quality of e-prescription services and only 1.1% showed dissatisfaction, while 22.6% have no opinion on this subject.

The usefulness of the e-prescription was also assessed by Korczak's (2014) study, in which he obtained results comparable to those mentioned above. The usefulness of e-prescriptions was assessed as very high by 25% of respondents and rather high by 67% of respondents, whereas 8% of respondents found it difficult to comment on the issue.

CONCLUSIONS

The conducted study proved that age is the determinant of the problem of using an e-prescription. Older people show a lack of knowledge in the use of e-prescriptions and have obstacles with their implementation. Most of the difficulties faced by older people in the efficient application of e-prescriptions stem mainly from the limitations in using computers and phones. According to CBOS, age has the most significant impact on the efficiency of using equipment and people over 65 constitute only 15% of Internet users. The equipment should be adapted to the capabilities of the people operating it (Skroban & White, 2019).

Limitations in efficient e-prescriptions also result from hearing problems, which are particularly evident in telephone conversations. Problems in filling e-prescriptions are also resulted from losing the access code, which may also be caused by problems with electronic equipment.

Both seniors and younger people believe that the use of e-prescription makes life more convenient due to the possibility of obtaining it by phone, which saves time. Such a solution in medication purchases is valuable particularly for seniors who face issues with mobility. Respondents claim that this is a convenient form that avoids the need to make appointments only to get a prescription. Moreover, it can be dispensed in different places thanks to quick access thereto. The fact that there is no problem with reading an e-prescription also proves to be a significant advantage for seniors. The main disadvantage is that the e-prescription has an electronic form, and some elderly people do not have access to electronic equipment. The survey proves that younger people report fewer disadvantages than older people. This is mainly due to better familiarity with electronic equipment and frequent use thereof. Educating seniors about e-prescribing provides a basis for reducing problems with e-prescribing and, as a result, improving the quality of e-prescribing services.

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