

Writing a prescription: the law and good practice

Abstract

Paramedic independent prescribing offers an exciting opportunity to improve patient access to medications which will often necessitate the writing of a prescription as part of this process. However incomplete, unclear or incorrectly written prescriptions have the potential to cause harm to patients. This article in the Prescribing Paramedic series considers the legal requirements a prescription must meet for both prescription only medicines and controlled drugs, common errors that may occur during prescription writing and potential solutions or best practice recommendations for prescribers to follow when writing a prescription to try to minimise these. The advantages and disadvantages of electronic prescribing are discussed.

Introduction

There are estimated to be over 230 million medication errors occurring annually in England with 21% of these errors occurring at the prescribing stage and over 50% of these prescribing errors having the potential to cause moderate to severe patient harm (Elliot, 2021). Prescribing errors, including those in prescription writing, are therefore relatively common but largely preventable causes of harm, occurring in 4.9% of prescriptions in primary care (Avery, 2012) and 7–10% on medical wards (Maxwell, 2016). It is hoped that by highlighting the legal requirements and best practice recommendations for prescription writing that this will reduce the risks associated by ensuring a legal, clear and complete prescription.

Legal Requirements

The legal requirements for writing a prescription are defined by Regulation 217 of The Human Medicines Regulations (2012) where in order for any prescription only medicine to be sold or supplied, the prescription must include:

1. A signature in ink by the prescriber
2. Being written in ink or otherwise indelible (carbon copies of NHS prescriptions can be used if not for a controlled drug as long as they are signed in ink)
3. An indication of the kind of appropriate practitioner giving it (i.e. Paramedic Independent Prescriber)
4. The address of the prescriber
5. The appropriate date (which can be the date of signing the prescription or the date which it should not be dispensed before e.g. a date in the future for a delayed prescription of an antibiotic)
6. The name of the patient
7. The address of the patient
8. The age of the patient if under 12 years

In lieu of a physical signature for electronic prescriptions, Regulation 219 of The Human Medicines Regulations (2012) allows the use of an advanced electronic signature when the prescription is sent to whoever is going to dispense it as an electronic communication (this can be either directly or through intermediaries). The advanced electronic signature must be under the prescriber's sole

control and capable of identifying the prescriber, uniquely linking them to the prescription and any subsequent changes made (e.g. to the drug, directions or quantity after the initial prescription has been electronically signed). In practice, this electronic signature is often achieved by the prescriber entering the passcode to their NHS Smart Card to sign a prescription. However, this requires employing organisations and/or electronic prescribing system providers to set up the required permissions to allow Paramedic Prescribers to electronically prescribe which led to delayed implementation particularly among early adopters (Stenner, 2021). Legal responsibility for prescribing lies with the health professional who signs the prescription and it is the responsibility of the individual prescriber to prescribe within their own level of competence (NHS England, 2018)

Paramedic Independent Prescribers are still currently awaiting amendment of The Misuse of Drugs Regulations (MDR) (2001) in order to be able to independently prescribe the following controlled drugs (Advisory Council on the Misuse of Drugs, 2019; College of Paramedics, 2021a):

- Morphine (Oral formulations or injections, MDR Schedule 2 or 5 dependent on concentration)
- Diazepam (Oral formulations or injections, MDR Schedule 4)
- Midazolam (Oromucosal formulations or injections, MDR Schedule 3)
- Lorazepam (Injections, MDR Schedule 4)
- Codeine (Oral formulations, MDR Schedule 5)

In addition to the above prescription requirements, further requirements for prescribing controlled drugs in MDR Schedules 2 and 3 include:

1. The formulation (i.e. morphine injection)
2. The strength if more than one strength exists (i.e. 10mg/mL)
3. The dose to be taken (i.e. “as directed” or “as required” would not be legally acceptable as they contain no dose - one ampoule or 10mg as required would be legally acceptable but recommended practice would be to also include the minimum dosage interval e.g. 10mg up to every two hours as required)
4. The total quantity in both words and figures (i.e. 10 (ten) ampoules)

Whether a medication is a controlled drug can be quickly checked in the British National Formulary (BNF) Drug Monograph (Joint Formulary Committee, 2021) under the Medicinal Forms Section. The BNF will tell you the MDR Schedule which can differ between formulations e.g. morphine oral solution 10mg/5mL is in Schedule 5 (so has no additional controlled drug prescription requirements) while morphine oral solution 20mg/mL and morphine 10mg tablets are in Schedule 2. An incomplete or incorrect prescription may result in an omission or a delay to patient care while this is clarified or amended. In order to minimise this, the BNF Guidance Section provides a helpful reminder of the legal requirements and recommended practice for writing both prescription only medicines and controlled drug prescriptions.

Practice Recommendations to Reduce Errors

As paramedic prescribing is a recent introduction, there is currently a lack of data as to the prevalence or types of prescribing errors. In general, prescription writing errors commonly occur when the prescription is incomplete (i.e. missing a drug/dose/strength/formulation/route etc), is incorrect (i.e. wrong patient/drug/dose/frequency/route etc) or is unclear (often due to handwriting) (Franklin, 2011; Maxwell, 2016; Avery, 2012). Best practice recommendations try to help reduce these prescription writing errors and may include (College of Paramedics, 2021b; Joint Formulary Committee, 2021):

- Writing legibly (many organisations require the drug name to be in capital letters for clarity)
- Writing drug names in full (using the brand name if a modified-release preparation)
- Including the age and the date of birth for all patients (even where it is not legally required)
- Including the current weight if a child to enable the dose prescribed to be checked (as well as the dose you may also wish to consider including the dose per unit mass you intended to prescribe e.g. 5mg/kg to reduce the potential for error)
- Where possible, prescribing the dose as the mass of drug (i.e. 250mg rather than one tablet or 5mL due to the potential for error with different strengths of tablet or liquid although the strength should also be included particularly for liquid formulations)
- Avoiding the unnecessary use of decimal points (i.e. write 10mg rather than 10.0mg and 500 micrograms rather than 0.5mg)
- Not abbreviating the terms units, micrograms or nanograms
- Including a dose and frequency and a minimum time between doses specified if the medicine is taken 'as required'
- Directions should ideally be in English without abbreviation (although it is acknowledged Latin abbreviations are used, this should only be those which are commonly known and listed within the BNF)

While the above best practice recommendations suggest what can be physically written on a prescription to minimise errors, it is recognised that the causes behind many healthcare errors including those associated with prescribing are multifactorial and will include wider task, individual and system factors (Avery, 2012; Maxwell, 2016; Puaar, 2018).

As the Royal Pharmaceutical Society (RPharmS) Competency Framework for All Prescribers (2021) requires prescribers to use available tools to improve their prescribing practice, this may present an opportunity to reflect on potential or actual prescribing errors. Potential tools could include supervision, observation, portfolios, competency-based assessments, prescribing data analysis, audits, case-based discussions, personal formularies or seeking feedback.

Electronic Prescribing

While not all environments that Paramedic Prescribers practice in currently support electronic prescribing, increasing its use is a Department of Health and Social Care (2018) priority as part of the World Health Organisation Medication Without Harm Challenge which aims to reduce severe avoidable medication related harm globally by 50% within 5 years.

The use of electronic prescribing has been shown to improve safety, prescription clarity and the quality of discharge communication (Mills, 2017). NHS Digital (2021) report that electronic prescribing is more efficient with less time spent dealing with prescriptions and queries. A further advantage of prescribing electronically is that it is easier to undertake prescribing analyses or audits as part of continuing professional development as a prescriber (College of Paramedics, 2021b; RPharmS, 2021)

The use of electronic prescribing systems reduces the frequency of prescribing errors; however, they do not completely eradicate them and change the types of errors that occur (Donyai, 2008). Errors caused by illegible or incomplete prescriptions are reduced by electronic prescribing however there is an increase in the selection of the incorrect medication/route/dose/frequency/formulation/route from drop-down menu boxes (i.e. leading to medicine being prescribed twice daily rather than twice a week) (Donyai, 2008).

Care must be taken with medicine names which look or sound alike to prevent the wrong medicine being selected (MHRA, 2018). A common example seen in practice by the author since the introduction of electronic prescribing is the inadvertent prescribing of Penicillamine, usually used as a disease modifying drug for rheumatoid arthritis. A prescriber has often tried to prescribe the antibiotic "Penicillin V" but this comes under the approved drug name, Phenoxymethylpenicillin, in electronic prescribing systems leading to the inadvertent selection of Penicillamine by typing "Penicillin". Another common example could be attempting to prescribe the anti-emetic Metoclopramide but only typing "met" - depending on the set up of different electronic prescribing systems this can lead to the inadvertent selection and prescribing of Metaraminol or Metformin or Methadone etc meaning an action as simple as typing in the full drug name can reduce the potential for error.

It is always worth double checking that the medicine, formulation, route, strength, dose, frequency or quantity intended have been selected before electronically signing the prescription. The electronic prescribing systems available have differing set-ups and degrees of prescription checking or clinical decision support (CDS) meaning that they differ in their abilities to prevent prescribing errors (Fox, 2019). Built-in CDS error alerts can be useful to highlight and reduce prescribing errors; however, it is important to be aware that prescribers can become overly reliant on the alerts to the extent that they stop thinking and rely entirely on the system alerts or, conversely, become fatigued (Lyell, 2017). Prescribers may become so accustomed to having alerts flash up on their screen for lower-risk warnings that they end up clicking to accept them without actually considering what the alert is telling them and what the implications could be for the patient. As a result, you may wish to discuss with your Prescribing Lead any themes of prescribing errors that have arisen within your organisation or try to make prescribing errors on a "test" patient electronic record to gain an awareness of the flaws of your particular electronic prescribing system.

Conclusion

Prescriptions which are incomplete, unclear or incorrectly written have the potential to cause harm to patients. Paramedic prescribers can minimise these risks by ensuring that the legal prescription requirements and best practice recommendations are met which are summarised within the British National Formulary (BNF). The BNF can also be used to check the legal status of individual medicines to ensure that a medicine which is a controlled drug is not inadvertently prescribed.

Checking the BNF and other resources such as the Electronic Medicines Compendium or national guidelines can reduce prescribing errors as can utilising support networks and undertaking professional development activities in relation to prescribing. The use of electronic prescribing systems can help to reduce prescribing errors, particularly those resulting from unclear or incomplete prescriptions, but care is needed due to an increase in other types of prescription writing errors resulting from the incorrect selection of drop-down options or similar drug names.

Keywords

- Advanced Practice
- Paramedic
- Non-medical Prescribing
- Independent Prescribing
- Prescription
- Medication Errors

Key Points

- Prescribing errors are relatively common and largely avoidable and include errors in prescription writing
- Writing a prescription which does not meet the legal requirements may lead to a delay or omission in patient care
- Best practice recommendations found within the British National Formulary should be followed to reduce the risks associated with incomplete, unclear or incorrectly written prescriptions
- Electronic prescribing systems reduce but do not completely eradicate prescribing errors and change the types of errors that occur to those involving the incorrect selection of drop-down options or similar drug names
- Audit, prescribing analysis, participation in supervision, peer discussion or support networks are some examples of ongoing continued professional development activities which could improve your prescribing practice

CPD Reflection Questions

- What are the common medication errors in your practice area? What steps could you take to minimise these in your prescribing practice?
- Consider how you would respond to a prescribing error including what your organisational processes are
- How will you ensure that you stay up to date and develop as a prescriber? How could you audit your prescription writing?

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