

How do your patients use their medicines at home and why is it important to know?

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Introduction

Medication safety is a hot topic around the world but tends to focus on what professionals believe about prescribing, supply and safe administration of medicines.¹ Historically, less attention has been paid to the patient or carer's perspective, including how they take or give medicines at home. One key question that we ought to consider routinely is this: what does the patient or carer do with a medicine once they are away from the gaze of the healthcare professional? Emerging patient medication safety data from the home setting is raising concerns. For instance, in some studies it was estimated that 9 out of every 10 parents, carers or family members have administered a medicine incorrectly at some point.² Such errors included dosage mistakes, wrong medication and wrong route of administration. We acknowledge that what health professionals deem to be 'incorrect' may be deliberate and reasoned by carers or patients, and this issue is beyond the scope of this article. However, legitimate concern about mistakes in using medicines is matched by an inertia within the healthcare system to identify and address such problems. More research is needed into medication administration errors in patients' homes. Healthcare professionals may be more concerned about the administration of complex or high-risk medicines, such as oral anticancer agents, anticoagulants, insulins or biologics, and of course, it is critical that patients use these safely. However, our view is that we have neglected to check as part of our routine practice that administration of medicines is correct for lower risk or more commonly used tablets, capsules and liquids.

Illustrating the challenge

A disabled child of one of us (BJ) with a swallowing difficulty was prescribed 25 micrograms per day of levothyroxine. Tablets were dispensed along with a tablet crusher, either because tablets are less

expensive than the liquid or because of past experience with the unpredictable quality of unlicensed liquid formulations. Levothyroxine tablets are tiny and the parents discovered that when they crushed the tablets at home most of the powder got stuck in the crusher device. Had the parents not raised the issue with their healthcare professional, the child would have received less than the prescribed daily dose and subsequent blood results for thyroid function may have led to an unwarranted dosage increase.

Many older patients, those with dementia or a learning disability rely on carers who are often responsible for the drug administration process. Though patients may have received basic instructions on how to take their medicines from doctors, pharmacists or nurses, rarely do professionals discuss exactly how taking the medicine formulation will work practically for them and their carer at home. When the patient leaves the surgery or pharmacy, the unseen world of managing medicines that occurs in peoples' homes is likely to be unknown to most healthcare professionals.

Listening to carers' and patients' experiences of administering medicines highlights the challenges posed by seemingly simple processes, such as administering a tablet.³⁻⁵ For example, a tablet may be used in lots of different ways. It may be stored in a compliance aid, a medicine bottle or a foil strip. Once the tablet is removed from its container, it then may be further altered at home in such a way as to give the correct dose or to allow the patient to put it in their mouth and swallow it. A published case report about the disabled son of one of us (BJ) outlined how complex and individualised the medicine administration process needs to be for some patients, and how this information may be unknown to healthcare professionals unless it is proactively offered or asked for.⁶

This and other literature suggests that too often healthcare professionals either do not fully appreciate the challenges that patients and carers face with the precise details of taking medicines at home, or simply may not be aware that medicines may be administered incorrectly. Pressures on time for consultations, which have been described as 'short and limited', make it difficult to prioritise conversations about the practical aspects of administering or taking medicines.⁷ We suggest that the first imperative is for healthcare professionals to be aware that the 'unseen world of medicines administration' exists and should be explored periodically with patients, carers and family members.

One of us (SM) has established a short-life working group seeking to understand how best to engage patients and families with their medicines. Early findings suggest that healthcare professionals are still not giving the patient experience of medicines management sufficient consideration, despite it being a principle of medicines optimisation.⁸ This reinforces the apparent lack of routine dialogue between families and healthcare professionals about how medicines are actually used.⁶

Despite these concerns, practitioners have reason to be optimistic about the future, and be willing to embrace new methods of consulting with patients and conducting medication reviews. Research projects such as MEMORABLE are using new methods, combined with patient engagement, to uncover how medicines are used at home, and what we need to do to support patients to use their medicines. The MEMORABLE project identified many of the burdens that patients describe in relation to healthcare and taking medicines.⁹ It described the use of medicines at home as a 5-step process, and that support should be directed at specific points along this journey, for example, assessing the burden that using

a new medicine will have for a patient and their family.

Key messages and recommendations

It is time for healthcare professionals to move beyond assuming that patients and carers always administer medicines as expected when they are prescribed and supplied. We should proactively and routinely ask how medicines administration happens or will happen at home and be more curious about how patients take their medicines. Healthcare professionals may be concerned about whether they have the knowledge to confirm appropriateness, rectify what may be incorrect or have the time that this may take. We believe that the risk of not knowing how to verify or correct a medicines administration or formulation issue is outweighed by the risk of not uncovering a potential medication safety issue, which in the long run is likely to require more time and resources to resolve. We also challenge pharmacists to ensure that they are equipped to respond to queries from patients and other members of the clinical team through their training in pharmaceuticals and access to relevant information sources. Medicines administration at home is a safety issue and yet passes unmentioned in many medication safety initiatives.¹ This is a significant policy weakness that should be addressed.

A person-centred approach to medication safety argues for newer measurement concepts that could incorporate patient experience in areas including patient

burden, and satisfaction with medication-related processes and outcomes.¹⁰ Safe practice around use of medicines requires insight into the patient experience of practically using medicines, otherwise the healthcare professional's knowledge and experience will only be part of the reality of what is happening at home. The COVID-19 pandemic has led to many changes in healthcare practice, one of which is the proliferation of remote consultations, sometimes through video. This is an ideal opportunity for patients and carers to demonstrate how they administer medicines at home.

Given the risk of unsafe or suboptimal practice in the administration of medicines at home, all healthcare professionals should routinely ask patients and carers how medicines are taken or given in that setting, and teach our students and novice practitioners to do the same. We should not be afraid of not knowing the immediate answer to problems that we uncover, because by asking the question we might appreciate the difficulties our patients face, as well as learning how to solve a lot of medicines-related problems and prevent harm in the long run.

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References

- 1 World Health Organisation. Medication without harm. *Bull World Health Organ* 2017;95:317–17.
- 2 Parand A, Garfield S, Vincent C, *et al.* Carers' medication administration errors in the domiciliary setting: a systematic review. *PLoS One* 2016;11:e0167204.
- 3 Aston J, Wilson KA, Terry DRP. The treatment-related experiences of parents, children and young people with regular prescribed medication. *Int J Clin Pharm* 2019;41:113–21.
- 4 Smith F, Grijseels MS, Ryan P, *et al.* Assisting people with dementia with their medicines: experiences of family carers. *Int J Pharm Pract* 2015;23:44–51.
- 5 Look KA, Stone JA. Medication management activities performed by informal caregivers of older adults. *Res Social Adm Pharm* 2018;14:418–26.
- 6 Jubraj B, Blair M. Use of a medication passport in a disabled child seen across many care settings. *BMJ Case Rep* 2015;2015. doi:10.1136/bcr-2014-208033. [Epub ahead of print: 25 Feb 2015].
- 7 Sheehan R, Hassiotis A, Strydom A, *et al.* Experiences of psychotropic medication use and decision-making for adults with intellectual disability: a multistakeholder qualitative study in the UK. *BMJ Open* 2019;9:e032861.
- 8 Royal Pharmaceutical Society. *Medicines optimisation: helping patients to make the most of medicines*. London, UK, 2013.
- 9 Maidment I, Lawson S, Wong G, *et al.* Towards an understanding of the burdens of medication management affecting older people: the memorable realist synthesis. *BMC Geriatr* 2020;20:183.
- 10 Lee JL, Dy SM, Gurses AP, *et al.* Towards a more patient-centered approach to medication safety. *J Patient Exp* 2018;5:83–7.

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