

## Taking care of caregivers: enhancing proper medication management for palliative care children with polypharmacy

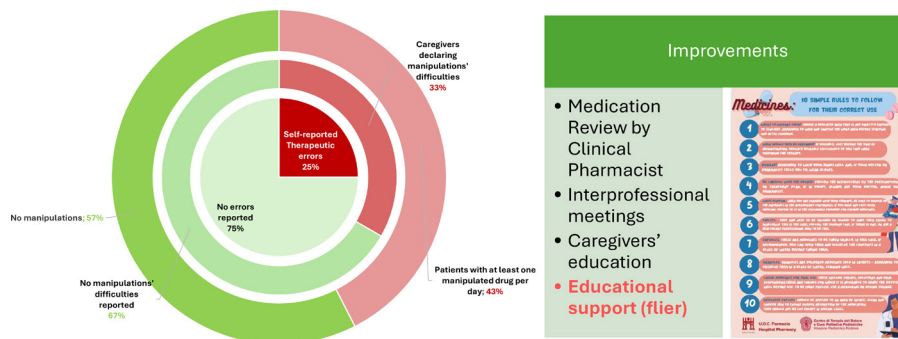
Caring for a child in palliative care is one of the most challenging roles a caregiver can undertake, made even more complex by the need to manage multiple concurrent medications. While polypharmacotherapy is often discussed in other settings such as geriatrics, it is equally relevant in paediatric palliative care (PPC). This is especially true given that PPC often involves managing therapies over extended periods due to the broader range of conditions treated, including oncological end-of-life patients and also those with rare diseases, musculoskeletal and neurological impairments.<sup>1</sup>

The management of multiple medications can be complicated by the limited availability of paediatric-specific pharmaceutical formulations and dosages.<sup>2</sup> Additionally, the palatability and acceptability of these medications often pose significant challenges for caregivers who resort to manipulating commercially available medications to better suit the needs and preferences of the child.<sup>3</sup>

As the management of a PPC patient needs multi-professional support involving daily collaboration between health professionals and caregivers, we outline the measures implemented by our multidisciplinary team (physicians, nurses and clinical pharmacists) to proactively support caregivers in the optimal management of drug therapy.

To better understand the challenges faced by caregivers, we conducted a survey of caregivers of 247 patients who reported a total of 1447 drugs prescribed, averaging approximately 5.9 prescriptions per patient. Through medication reviews, we found that 105 patients (43% of the total) received at least one manipulated drug per day, usually crushed tablets or opened capsules. The survey showed that, although therapies are often chronic and well known, one in three caregivers reported having difficulties in handling them. Alarmingly, these difficulties led to therapeutic errors in one out of four cases (25%), which is probably an underestimate (see figure 1).

In response to these findings, we designed a flier aimed at ensuring education for caregivers with simple easy-to-understand information to help them correctly manage polypharmacy. This flier includes tips on safely altering medication



**Figure 1** Manipulation of pharmaceutical forms in paediatric palliative care: evidence and proposals to support caregivers.

forms, recognising potential side effects and maintaining accurate medication schedules. It provides important information on properly handling various pharmaceutical forms including tablets, capsules, granules and liquid products, detailing how, when and where to handle them. Additionally, the flier contains drug-specific information on the 10 most commonly used medications in PPC, addressing specific topics related to drug–drug interactions and drug–food interactions. To maximise accessibility, we have made this flier available online and translated it into several languages.

This type of caregiver-oriented resource, along with the broader caregiver education performed by the multidisciplinary team, has enormous potential to improve care management, especially in complex patients.<sup>4</sup> Starting from their needs, we can enhance their confidence and competence, ultimately leading to better health outcomes for PPC patients.

In conclusion, managing polypharmacy in PPC is a complex task for caregivers. However, regular medication reviews, effective patient education and practical resources like our educational flier can empower them, boost their confidence and improve care for these vulnerable patients. As healthcare providers, we must bridge the gaps and ensure caregivers are not navigating this challenging journey alone.

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### REFERENCES

- Fraser LK, Gibson-Smith D, Jarvis S, *et al.* Polypharmacy in children and young people with life-limiting conditions from 2000 to 2015: a repeated cross-sectional study in England. *J Pain Symptom Manage* 2022;**64**:213–21.
- Richey RH, Shah UU, Peak M, *et al.* Manipulation of drugs to achieve the required dose is intrinsic to paediatric practice but is not supported by guidelines or evidence. *BMC Pediatr* 2013;**13**:81.
- Parand A, Garfield S, Vincent C, *et al.* Carers' medication administration errors in the domiciliary setting: a systematic review. *PLoS One* 2016;**11**:e0167204.
- Prochnow JA, Meiers SJ, Scheckel MM. Improving patient and caregiver new medication education using an innovative teach-back toolkit. *J Nurs Care Qual* 2019;**34**:101–6.