Prescribing inhalers

Choosing Wisely Canada interview with Dr Kimberly Wintemute

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Respiratory medicine recommendation 5

Do not initiate medications for asthma (eg, inhalers, leukotriene receptor antagonists, or others) in patients 6 years of age and older who have not had confirmation of reversible airflow limitation with spirometry, and in its absence, a positive methacholine or exercise challenge test, or sufficient peak expiratory flow variability.

Recall and describe a clinical encounter in which you were called on to choose wisely

I recently received a request from the pharmacy to renew the prescription of a salbutamol metered-dose inhaler (MDI) for an elderly, medically complex patient. The patient had not been diagnosed with airway disease, and I had not prescribed the inhaler. The MDI had been prescribed during a hospital admission 18 months earlier. I spoke to the caregivers for the patient, who has cognitive impairment, and found that they had been giving the patient a dose every night at bedtime.

In your exchange with the patient, how did you raise the need to choose wisely?

Evaluating the indication: Many patients are prescribed inhalers without a definitive diagnosis, and this was the case here. The caregivers had been administering the inhaler nightly, and the patient had been asymptomatic from a respiratory standpoint.

Inhalers are sometimes prescribed in conjunction with an upper respiratory tract infection. Patients occasionally believe they need it to prevent a "prolonged" cough. But the literature shows there can be a mismatch between what patients expect—5 to 9 days of cough—and the actual duration of cough from a typical upper respiratory tract infection, which is 18 days.[1] In this case, simple education may help avoid unnecessary prescribing.

Assessing use: A salbutamol MDI has 200 doses, and many patients hold on to these inhalers for years. Sometimes the sensation of the aerosolized puff leads a patient to believe that the medication is being delivered, even when the MDI is empty. Additionally, if the MDI has no spacer, or if the inhalation is ill timed, the medication will be deposited onto the palate or posterior pharynx.

For my elderly patient, I wondered about the timeline. The MDI had been prescribed 18 months prior at 1 puff nightly. I explained to the family that given the number of uses, it was likely empty. I also made a home visit and watched her use the inhaler. The technique was not "optimal."

Safety: While inhalers such as β-agonists are generally safe, we know they can cause tachycardia and anxiety. My patient was having some overnight agitation, which was difficult for the family to manage. We discussed that the medication, if it was not empty, may have contributed to the agitation and thus we decided to stop it. I followed up with my patient 2 weeks later and she was doing well, with no new respiratory symptoms.

What are the key elements of the communication that made it a success?

Avoiding blame: I like to point out that this kind of thing is nobody's fault. I explained to the family that sometimes medications get started in hospital when there is a lack of diagnostic clarity.

Prioritizing deprescribing: Fewer medications are generally better, especially for elderly patients. A medication reconciliation at hospital discharge and periodically thereafter can help clear out medications that are no longer relevant, or those that may be doing more harm than good. Pharmacists and allied health professionals can really help this process.

The bigger picture: A 100-dose MDI containing hydrofluorocarbon propellant has a high carbon footprint, emitting as much greenhouse gas as a gas-powered car driven 290 km.[2] So, if an inhaler is needed, a dry-powder inhaler should be used if possible. Free accredited educational webinars are available on this topic for more information (**https://www.sustainablehealthsystems.ca/copsustainableinhalerinitiative**).

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References

1. Ebell MH, Lundgren J, Youngpairoj S. How long does a cough last? Comparing patients' expectations with data from a systematic review of the literature. *Ann Fam Med* 2013;11(1):5-13.
2. Bodkin H. Asthma inhalers as bad for the environment as 180-mile car journey, health chiefs say. *The Telegraph* 2019 Apr 8.

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Choosing Wisely Canada™

Choosing Wisely Canada is a campaign to help clinicians and patients engage in conversations about unnecessary tests, treatments, and procedures, and to help physicians and patients make smart and effective choices to ensure high-quality care. To date there have been 13 family medicine recommendations, but many of the recommendations from other specialties are relevant to family medicine. In each installment of the Choosing Wisely Canada series in *Canadian Family Physician*, a family physician is interviewed about the tools and strategies he or she has used to implement one of the recommendations and to engage in shared decision making with patients. This interview was conducted and written by **Dr Aaron Jattan**, Department of Family Medicine, University of Manitoba, for Choosing Wisely Canada. If you are a primary care provider or trainee and have a Choosing Wisely narrative to potentially share in this series, please contact us at **aaron.jattan@umanitoba.ca**.