

Start with the simple steps first – inhaler technique

Asthma is a chronic disorder affecting both children and adults. Great strides have been made in directed asthma therapy over the years. We have primarily targeted inhaled medications depositing directly into the lungs and systemic therapy targeting specific inflammatory receptors and pathways. Despite these pharmacological advances, asthma control remains globally poor when assessed according to the standard of the Global Initiative for Asthma (GINA) recommendations.^[1] Regular use of background controllers should ideally be accompanied by a less than twice-weekly need for rescue medication, no nocturnal awakenings and normal day-to-day living. This poor control is no more evident than in South Africa where our clinics are filled with inadequately controlled patients and we have an unacceptably and disproportionately high mortality relating to asthma.^[2]

As with all chronic conditions, adherence to therapy is complex, but critical to outcomes.^[3] We have seen this locally with adherence and outcomes in hypertension, HIV and tuberculosis.^[4,5] In asthma and chronic obstructive pulmonary disease (COPD), where the mainstay of therapy is in the form of an inhaler, an additional element is cast into the mix: inhaler technique. Although it may be good enough to take your antihypertensive daily, for inhaled medication ‘using it’ does not necessarily mean it will reach its desired target in the lung.

The correct use of an inhaler is critical for the adequate deposition of the medication into the lower airways where it is required to act. Unless the technique is correctly demonstrated, understood, put into practice and followed up on, simple but critical errors will continue unchecked, and disease control is likely to remain poor. The study by Vanderwagen and Smith^[6] in this issue of *SARJ* highlights a few significant issues. Firstly, the choice of inhaler device may be significant – we are spoilt in pulmonology with the array of devices and drugs available. Each device type, however, requires a different set of steps to ensure adequate lung deposition. This may complicate matters as patients could have several different devices, each requiring distinctive techniques to use. In stark contrast to this state of affairs stands the state sector, where there is no choice of devices and patients who are not able to use pressured metered devices (pMDI) have no alternatives.

Secondly, correct use of the device is rarely well taught and the poor technique is perpetuated by the fact that instructors may not know how to use the devices correctly themselves.

The authors rightly call for more training at all levels of healthcare provision, including specialists, pharmacists, nursing staff and students. Keeping the number and types of devices to a minimum (using combination inhalers rather than two single ones) will reduce the chance of inhalation errors with multiple devices.

Tailoring the best device and medication for a particular patient is essential to promote adherence, drug delivery and treatment efficacy. If the device is easy to use, is used correctly and the patient feels it is working, they would be more likely to use it regularly. In medicine we often focus on the rare and complicated whereas, if we just did the simple things better, we would achieve a great deal more (for less), especially in the treatment of asthma and COPD.

Richard van Zyl-Smit

University of Cape Town Lung Institute, Division of Pulmonology and Department of Medicine, University of Cape Town and Groote Schuur Hospital, Cape Town, South Africa
richard.vanzyl-smit@uct.ac.za

1. Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention. <http://www.ginasthma.org/> (accessed 16 January 2016).
2. The Global Asthma Network. The Global Asthma Report. Auckland: GAN, 2014.
3. Osterberg L, Blaschke T. Adherence to medication. *N Engl J Med* 2005;353(5):487-497. <https://dx.doi.org/10.1056/nejmra050100>
4. O'Donnell MR, Wolf A, Werner L, Horsburgh CR, Padayatchi N. Adherence in the treatment of patients with extensively drug-resistant tuberculosis and HIV in South Africa: A prospective cohort study. *J Acquir Immune Defic Syndr* 2014;67(1):22-29. <https://dx.doi.org/10.1097/qai.0000000000000221>
5. Schneider M, Bradshaw D, Steyn K, Norman R, Laubscher R. Poverty and non-communicable diseases in South Africa. *Scand J Public Health* 2009;37(2):176-186. <https://dx.doi.org/10.1177/1403494808100272>
6. Vanderwagen J, Smith C. Inhaler technique in patients attending an urban pulmonology practice. *S Afr Respir J* 2017;23(1):5-7. <https://dx.doi.org/10.7196/SARJ.2017.v23i1.150>

S Afr Respir J 2017;23(1):2. DOI:10.7196/SARJ.2017.v23i1.150