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Within asthma management, ensuring good inhaler technique is an important factor in achieving adequate asthma control. However, it has been estimated that as many as half to two thirds of patients do not use their inhalers correctly, depending on the type of inhaler and method of assessment. If patients do not use their inhalers correctly, this may result in poor control of symptoms, suboptimal disease management, wasted medication and increased use of health care resources. It is therefore important to ensure that clinicians in primary and specialty health care are adequately trained and know how to educate their patients. Several programs have emerged that improve clinician skills for managing asthma. It is timely to draw attention to studies in community and public health that address these issues in asthma care.

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Provider demonstrations and assessment of child device technique during paediatric asthma visits

Authors: Sleath B, Ayala GX, Gillette C *et al*
Reference: Pediatr 2011; 127: 642-48
URL: [http://pediatrics.aappublications.org/content/early/2011/03/28/peds.2010-1206.full.pdf](http://pediatrics.aappublications.org/content/early/2011/03/28/peds.2010-1206.full.pdf)
Comments: This study examined children’s use of their asthma devices and how often providers assess and demonstrate use of device. Two hundred and ninety six children aged 8-16 with asthma and their caregivers and 41 providers at five paediatric practices were recruited. The medical visits were audiotape-recorded. The participants were told that the study was examining communication during the visits. The authors report that the majority of providers failed to demonstrate or assess the patient’s use of their asthma device during the visit despite recommendations from guidelines that demonstrating proper device use and having children practice at the clinic could improve use of devices.

Concurrent use of metered dose inhalers with spacer and dry powder inhalers by asthmatic children adversely affect proper inhalation technique

Authors: Alotaibi S, Hassan WM & Alhashimi H
Comments: This study examined whether children with asthma who use multiple types of inhalers demonstrate poorer inhalation technique scores in comparison to those children using only one type of inhaler. They found that the inhalation technique scores associated with DPIs were significantly reduced when used in combination with pMDI. They concluded that multiple types of devices confuse patients and reduce the likelihood of proper inhalation technique in either device. They recommend clinicians consider using similar devices when prescribing asthma medications to reduce inhalation technique errors.

Choosing inhaler devices for people with asthma: Current knowledge and outstanding research needs

Authors: Haughney J, Price D, Barnes N *et al*
Reference: Respir Med 2010; 104: 1237-1245
Comments: This review article reports that even with training, not all patients can use their inhalers correctly and maintain adequate inhaler technique. The authors, a group of primary care respiratory specialists, remind us that inhalation techniques and device choice are major factors in achieving asthma control. They recommend that matching the device to the patient is better than increasing therapy.
**Inhaler device, administration technique, adherence to inhaled corticosteroid in patients with asthma**

**Authors:** Roy, A, Battle K, Lurslurchachai L *et al*

**Reference:** Prim Care Respir J 2011; 20(2): 148-154


**Comments:** The authors compared inhaled corticosteroid (ICS) device with device use and medication adherence. Data was drawn from a cohort study of adults with persistent asthma, followed up at hospital-based clinics in two inner city locations in New York. A total of 270 patient participated in the study. The authors found that although DPIs were not associated with better inhaler technique, adherence to ICS was higher among patients with DPIs.

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**Technique training does not improve the ability of most patients to use pressurized metered-dose inhalers (pMDIs)**

**Authors:** Hardwell A, Barber B, Hargadon T *et al*

**Reference:** Prim Care Respir J 2011; 20(1): 92-96

**URL:** [www.thepcrj.org/journ/aop/pcrj-2010-06-0064-R2.pdf](http://www.thepcrj.org/journ/aop/pcrj-2010-06-0064-R2.pdf)

**Comments:** The study aimed to assess the use of pMDI in adults with poorly controlled asthma. All patients previously prescribed and currently using pMDIs were assessed on two occasions, when appropriate asthma technique education was also provided. While patients’ ability to use pMDIs improved following two training sessions, the majority of patients with symptomatic asthma remained unable to use pMDIs correctly. The authors conclude that it is important to check all patients’ ability to use their prescribed inhalers on a regular basis and not to rely on cost alone to determine prescribing recommendations.

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**Using the community pharmacy to identify patients at risk of poor asthma control and factors which contribute to the poor control**

**Authors:** Armour CL, LeMay K, Saini, B *et al*

**Reference:** J Asthma 2011; 48(9): 914-922


**Comments:** This is a cross-sectional design study, across 96 pharmacies in Australia. It describes a large primary care asthma population, assessed by trained community pharmacists as at risk of poor asthma outcomes and identifies factors that may contribute to suboptimal control. The study highlights the fact that there is an opportunity within pharmacies to target people with poorly controlled asthma and provide timely and tailored interventions.
### Improving paediatric asthma outcomes in primary health care: a randomized controlled trial

**Authors:** Shah S, Sawyer SM, Toelle BG *et al*

**Reference:** Med J Aust 2011; 195(7): 405-9  

**Comments:** This study aimed to assess the impact of a communication-based paediatric asthma management program, PACE (Practitioner Asthma Communication and Education) Australia, on general practitioners' (GP) asthma practices and patient outcomes. The intervention for GPs comprised of two 3-hour interactive workshops held one week apart. The program increased the provision and ownership of written asthma action plans, led to more appropriate prescribing of asthma medications and devices, and enhanced GP communication skills. This study shows that asthma education programs that combine both education and communication skills are highly relevant for GPs. The authors suggest that the same program may be useful for other health professionals in primary care (e.g. nurses and pharmacists).

### Asthma action plans and patient satisfaction among women with asthma

**Authors:** Patel MR, Valerio MA, Sanders G *et al*

**Reference:** Chest 2012 Feb 16 [Epub ahead of print]  
**URL:** [http://chestjournal.chestpubs.org/content/early/2012/02/14/chest.11-1700.full.pdf+html](http://chestjournal.chestpubs.org/content/early/2012/02/14/chest.11-1700.full.pdf+html)

**Comments:** Asthma action plans (AAP) have been shown to positively affect health outcomes. However, not having an AAP may affect interactions between patient and clinician, and clinical outcomes. This study examines the association between having an AAP, behaviors to keep asthma in control, and patient satisfaction with care from baseline data from a randomized trial evaluating a self-management program among 808 women with asthma. They report that women without an AAP were less likely to initiate discussions with their clinician, take medication as prescribed, and own a peak flow meter to monitor asthma; all considered important self-management behaviors. They were also less satisfied with their care.

### The Colorado Asthma Toolkit Program: A practice coaching intervention from the High Plains Research Network

**Authors:** Bender BG *et al*

**Reference:** J Am Board Fam Med 2011; 24(3): 240-8  

**Comments:** Asthma is often under-diagnosed and under-treated in rural primary care. The Colorado Asthma Toolkit Program provides one approach to improving health care for rural patients by nurse-led coaching of health care practices and clinicians to follow evidence-based guidelines. Practices were also given a spirometer and were trained in its use and interpretation. Evaluations were based on practice interviews 1 to 3 months after coaching. The majority of rural health care practices participated in the program due to the flexible nature of the program, in-office coaching and provision of spirometer. The results of the evaluation showed significant self-reported shifts in prescribing ICS and writing asthma action plans and using spirometry.
### Peer-led education for adolescents with asthma in Jordan: A cluster-randomised controlled trial

**Authors:** Al-sheyab N, Gallagher R, Crisp J *et al*

**Reference:** Pediatr online: December 2011 [DOI: 10.1542/peds.2011-0346]

**URL:** [http://pediatrics.aappublications.org/content/129/1/e106.full.pdf+html](http://pediatrics.aappublications.org/content/129/1/e106.full.pdf+html)

**Comments:** This study aimed to determine the impact of a peer-led education program on health-related outcomes in high school students with asthma in Jordan. Four high schools in Jordan were randomly assigned to the peer-led asthma program or standard practice. Students completed surveys at baseline and 3 months following the intervention. Amongst the intervention group there were clinically significant improvements in quality of life, self-efficacy to resist smoking and knowledge of asthma management. The authors suggest that peer-education, that promotes student-led activities, can be a useful strategy for health promotion programs in Jordanian schools.

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**APSR Respiratory Updates is an initiative of the APSR Education Committee**

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