



# Collapsible MDI Holding Chamber

## An Innovative Alternative

LiteAire®'s unique dual-valved MDI holding chamber design delivers pop-up convenience and effective drug output at a fraction of the cost.

In most clinical settings, the LiteAire MDI holding chamber can reduce costs by replacing existing rigid plastic holding chambers or inefficient spacers with a cardboard alternative. This unique design allows the LiteAire to be reused by a patient over multiple doses and meets and often exceeds the performance of plastic holding chambers.

**The LiteAire delivers true value when used in:**

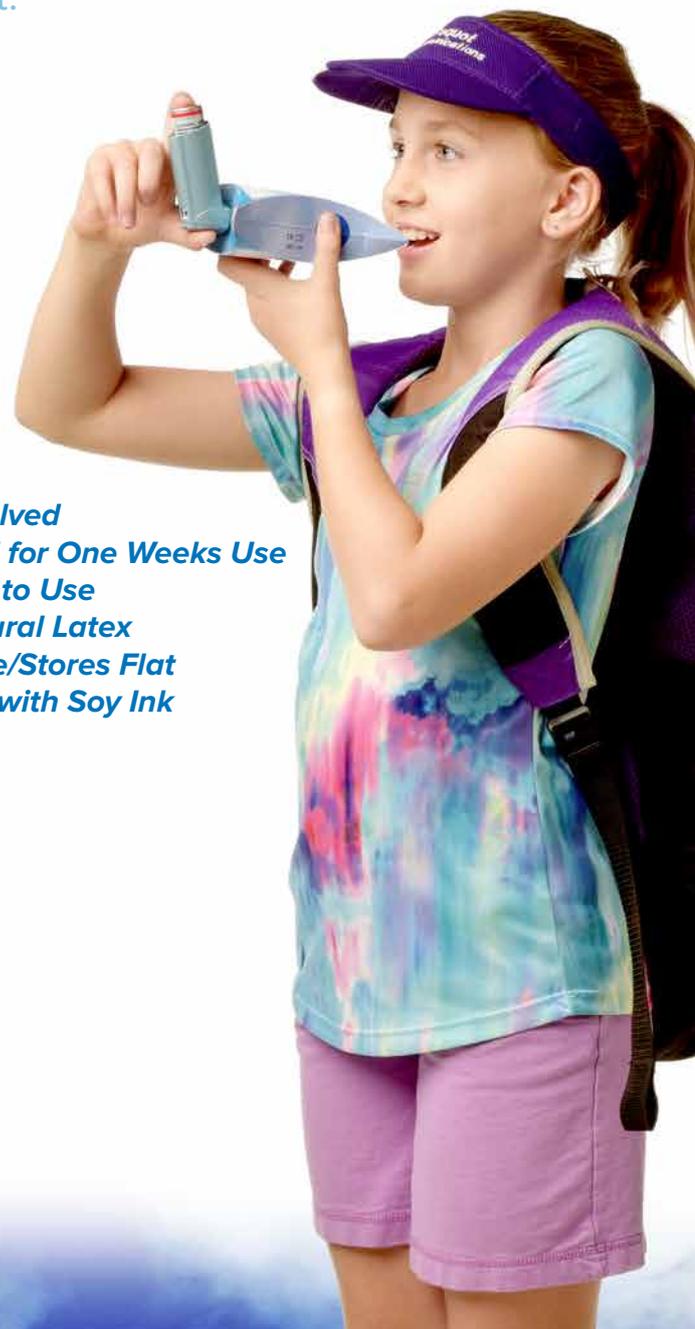
**Emergency Department/Outpatient Clinic:** For patients requiring the use of a holding chamber for immediate treatment. The LiteAire spacer with MDI for beta agonist delivery in the treatment of acute asthma in an emergency department setting has been shown to be as clinically effective as beta agonist delivery with a nebuliser<sup>1</sup>.

**Pulmonary Function Testing:** Clean, disposable, ready to use in a truly single patient use environment; reduces the risks of patient cross-contamination; designed to accept all MDI's.

**Short-Term Respiratory Infections:** A cost effective treatment method that meets the short-term needs of the acute respiratory patient.

**Patient Compliance:** Complies with single patient use labeling and regulations, enhanced infection control and greater patient compliance with added convenience and portability.

Reference: (1). Efficacy and Cost Comparisons of Bronchodilator Administration Between Metered Dose Inhalers with Disposable Spacers and Nebulisers for Acute Asthma in an Inner-City Adult Population Sunil Dhuper, MD et al, The Journal of Emergency Medicine, 2009



- **Dual Valved**
- **Labeled for One Weeks Use**
- **Pop-Up to Use**
- **No Natural Latex**
- **Portable/Stores Flat**
- **Printed with Soy Ink**

# Clinical Efficacy of the LiteAir Disposable Spacer

We present an independent study published in the Journal of Emergency Medicine comparing the clinical efficacy of the LiteAir disposable spacer to nebulisers in the treatment of acute asthma in adult patients admitted to a New York Hospital Emergency Department.

This study shows that beta agonist delivery via MDI with the LiteAir disposable spacer for the management of acute asthma is as efficacious as nebulizer delivery.

This is a very relevant and important clinical comparison particularly when we consider that with the exception of Children's Hospitals the use of nebulisers remains the mainstay of clinical practice for bronchodilator administration in the treatment of acute asthma and COPD in the majority of Australian Hospitals.

We do however recognise that spacer usage and spacer advocacy is increasing in respiratory outpatient clinics, pulmonary function laboratories, community health and increasingly so in respiratory and medical wards.

Following the release of the new TGA Guidelines<sup>(1)</sup> in July 2007 prohibiting the reprocessing of single patient-use items (including single patient-use spacers i.e. Volumatic spacer etc) there has been a gradual shift in practice towards the utilisation of the recently introduced disposable spacers.

**The LiteAir disposable spacer is a viable alternative and has significant advantages over other spacers:**

- Proven clinical efficacy of the LiteAir disposable spacer.
- The cost of autoclaving re-usable spacers on average is \$4.60 per spacer including staff time.<sup>(2)</sup>
- Storage - compared to the significant storage space required by large plastic spacers the LiteAir Cardboard Dispenser Box holds 25 LiteAir spacers and is the size of a tissue box.
- Disposal - The LiteAir spacer is made from recyclable cardboard and is recyclable.
- Ease of Use - patients may have difficulty coordinating their inhaler technique with large volume spacers versus small volume spacers - this is particularly true in children and the elderly.
- The LiteAir disposable spacer is ready to use immediately and requires no preparation or priming.
- Convenience - the LiteAir spacer is extremely portable and stores flat.

## EFFICACY AND COST COMPARISONS OF BRONCHODILATOR ADMINISTRATION BETWEEN METERED DOSE INHALERS WITH DISPOSABLE SPACERS AND NEBULIZERS FOR ACUTE ASTHMA IN AN INNER-CITY ADULT POPULATION

*The Journal of Emergency Medicine, 2009*

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### Abstract

**Background:** Despite demonstration of equivalent efficacy of beta agonist delivery using a metered dose inhaler (MDI) with spacer vs. nebulizer in asthma patients, use of a nebulizer remains standard practice.

**Objectives:** We hypothesize that beta agonist delivery with a MDI/disposable spacer combination is an effective and low cost alternative to nebulizer delivery for acute asthma in an inner-city population. **Methods:** This study was a prospective, randomized, double-blinded, placebo-controlled trial with 60 acute asthma adult patients in two inner-city emergency departments.

**Subjects:** (n= 60) received albuterol with either a MDI/spacer combination or nebulizer. The spacer group (n= 29) received albuterol by MDI/spacer followed by placebo nebulization. The nebulizer group (n=29) received placebo by MDI/spacer followed by albuterol nebulization. Peak flows, symptom scores, and need for rescue bronchodilator were monitored. Median values were compared with the Kolmogorov-Smirnov test.

**Results:** Patients in the two randomized groups had similar baseline characteristics. The severity of asthma exacerbation, median peak flows, and symptom scores were not significantly different between the two groups. The median (inter-quartile range) improvement in peak flow was 120 (75–180) L/min vs. 120 (80 –155) L/min in the spacer and nebulizer groups, respectively (p= 0.56). The median improvement in the symptom score was 7 (5–9) vs. 7 (4 –9) in the spacer and nebulizer groups, respectively (p= 0.78). The median cost of treatment per patient was \$10.11 (\$10.03–\$10.28) vs. \$18.26 (\$9.88 –\$22.45) in the spacer and nebulizer groups, respectively (p < 0.001).

**Conclusion:** There is no evidence of superiority of nebulizer to MDI/spacer beta agonist delivery for emergency management of acute asthma in the inner-city adult population. MDI/spacer may be a more economical alternative to nebulizer delivery.

References: (1) Update on the regulation of the re-manufacture of single use medical devices - October 2006 - TGA Website 2008. (2) Laboratory usage habits and delivered salbutamol dose of spacers available in Australia and New Zealand - Presented by Graham Hall, Respiratory Medicine, Princess Margaret Hospital and School of Paediatric and Child Health, University of Western Australia at the TSANZ Conference in Melbourne, April 2008.

### Ordering Information

**Single 25-Count Dispenser Box (PART NO TH1304)**  
**Case of Four 25-Count Dispenser Boxes (PART NO TH1306)**

For a complimentary evaluation of the LiteAir disposable spacer in your healthcare facility please contact our office on 1300 136 855

**NicheMedical**

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