



## Medicator<sup>®</sup> Aerosol Maximizer Overview

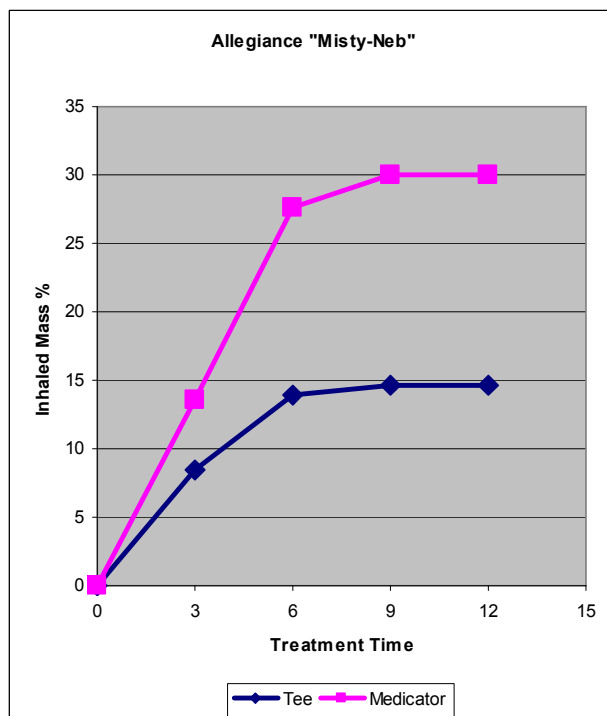
The Medicator<sup>®</sup> Aerosol Maximizer, supplied with the AirLife Misty-Max 10 small volume nebulizer, is a high-efficiency aerosol drug delivery system that was originally developed about 6 years ago for enhanced deposition lung imaging in nuclear medicine. The Medicator<sup>®</sup> enhances the performance of almost any standard “tee”-type nebulizer that is connected to it. For example, it enhances drug delivery of the Misty-Max 10 by a factor of 2.4 times. It performs so well that the company was urged to make it available in a version specifically designed for aerosol drug delivery for respiratory therapy purposes. We officially “launched” the product at the AARC Congress in Las Vegas in December 2003. The product is fully FDA approved, on the market for sale, and already successfully in use in a small number of facilities that we have worked with over the past year. Now we’re trying to broaden our market and ramp up sales.



### “It’s Like a *Holding Chamber* for a Nebulizer”

If you’ve not already done so, you can visit our web site ([www.aerosol-medicine.com](http://www.aerosol-medicine.com)) to download a color copy of the technical brochure and use many of the other aerosol resources available on the web site.

### Major Features and Applications of The Medicator<sup>®</sup>

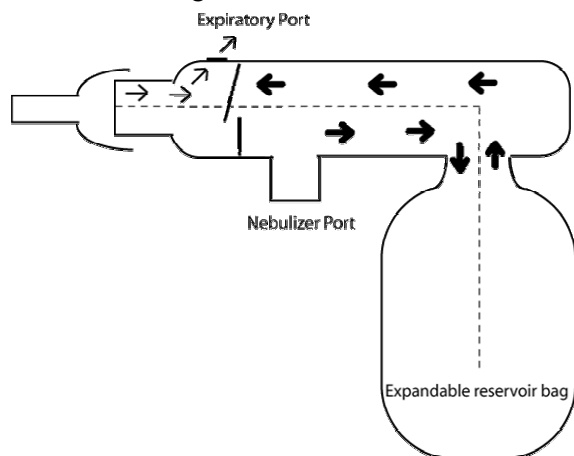


**Routine Therapy.** The performance of The Medicator<sup>®</sup> is so much improved over the standard “tee” neb, or even other reservoir systems, that **you can deliberately cut treatment times down to just 3 minutes by the clock** (instead of waiting for the neb to run dry) and be assured of delivering the equivalent amount of drug as other systems (see graph on left studied with Allegiance “Misty-Max 10 nebulizer;” results are similar for other brands of nebulizer). It performs comparably to breath-actuated devices in terms of TOTAL drug delivery during normal adult breathing patterns and exceeds the performance of breath-actuated systems during rapid, shallow breathing patterns associated with severe breathlessness, and in weak debilitated geriatric patients and children. The Medicator actually has a much higher RATE of drug delivery than breath-actuated devices which is very important for severely ill asthmatics and others in whom rapid delivery of aerosolized drugs is important.

**Rescue Therapy.** The Medicator<sup>®</sup> can also be used for beta agonist bronchodilator rescue in acute asthma by simply running the nebulizer until “sputter” (approximately 7 minutes) thereby allowing approximately twice as much medication to be inhaled by the patient during the treatment. This is significantly more medication than they would receive with a standard nebulizer but is consistent with the NHLBI guidelines for the pre-hospital and emergency department treatment of the acute exacerbation of asthma. And, from a management perspective, this will allow a substantial amount of rescue medication to be administered without the extra cost of a breath-actuated nebulizer or a continuous nebulization setup, and will further avoid the added expense of undiluted unit dose medications.

**Levalbuterol.** If you are grappling with the cost of Xopenex<sup>®</sup>, we can save you both time and drug cost through either of two methods: (1) because of the increased drug delivery possible with the Medicator<sup>®</sup>, you may be able to avoid the use of levalbuterol altogether by getting better, faster results from less-expensive racemic albuterol, or (2) you can use a lower concentration of levalbuterol in the nebulizer and achieve greater total drug delivery. Remember, the key to successful use of levalbuterol is by keeping to a TID or Q8 hour treatment schedule. By providing greater drug delivery via a high-efficiency device such as the Medicator<sup>®</sup>, it is much more likely that you can extend the interval between treatments to 8 hours, thereby saving labor time.

**Principles of Operation.** Most conventional pneumatic small volume “Tee”-type nebulizers continuously generate aerosol during the patient’s exhalation phase. This aerosol is typically exhausted to the room and is essentially wasted, not inhaled by the patient. Consequently, the overall efficiency of aerosol delivery is reduced, treatment times are prolonged, and therapists receive unnecessary occupational exposure to aerosolized drugs. Not so with the Medicator<sup>®</sup>.



The Medicator<sup>®</sup> Aerosol Maximizer System, based upon a patented device and design, incorporates an expandable reservoir bag and large-surface area, zero resistance air flow control mechanism, assembled so that aerosol generated during patient exhalation is retained in the reservoir bag and is inhaled during the subsequent breath. This increases delivery efficiency to 2-3X most other systems, *including other reservoir systems*, while reducing environmental contamination. The Medicator<sup>®</sup> does not change the size of particles emitted from the nebulizer (MMAD = 1.25  $\mu$ M with the Misty-Max 10). Finally, the FIO<sub>2</sub> of the Medicator<sup>®</sup> system, when run from an oxygen source at 6 – 8 L/min

averages around 0.80 to 0.90 and can be used for patients who desaturate when placed on conventional aerosol systems.

We can provide you with data and assistance with written documents to help you implement “timed treatment protocols” with the Medicator<sup>®</sup> if you desire. With respect to the cost of our system, the \$3.95 list price is less expensive than the Monaghan *AeroEclipse*<sup>™</sup> Breath-Actuated Nebulizer, and a great deal quicker and more effective; plus, you don’t have to use expensive concentrated solutions to get time savings, as you do with the BAN. The Medicator<sup>®</sup> will pay for itself many times over in terms of improved treatment quality and therapist time savings. The Medicator<sup>®</sup> is a sturdy single-patient use device that may be used by the same patient repeatedly throughout the hospitalization and even sent home with the patient if desired. The nebulizer and reservoir bag are protected from contamination from exhaled particles by the uni-directional flow control valve. Although residual medication should be rinsed from the nebulizer between treatments, the manifold and bag do not have to be routinely rinsed.

**Exhalation Filtration.** We recommend the Medicator<sup>®</sup> #MM-800 with AirLife Misty-Max 10 nebulizer for routine aerosol therapy or home therapy where exhalation filtration is not needed or desired, such as for most bronchodilator treatments. Otherwise, the #AM-602 Medicator<sup>®</sup>+Plus, which includes integral exhalation filtration and Misty-Max 10 nebulizer, is available for use with inhaled antimicrobials (pentamidine, tobramycin, etc), inhaled opioids (morphine and fentanyl) and other drugs that you wish to protect the caregiver from breathing. It may also be used in pre-hospital transport and Emergency Department settings where respiratory precautions against patient’s aerosol droplet dissemination are being followed. Other configurations are available.

Thanks in advance for your interest in our product and feel free to contact either of us for further information regarding applications, performance, technical specifications, product evaluations, free samples and pricing.

**Michael McPeck, RRT FAARC**

Director, Aerosol Medicine / Healthline Medical, Inc.  
Tel: (631) 689-7251 / eFax: (815) 361-0226  
eMail: mmmcpeck@aerosol-medicine.com

**Glenn Samford, CNMT**

Director of Marketing / Healthline Medical, Inc  
Tel: (626) 851-9616 / Fax: (626) 960-8700  
eMail: gsamford@healthlinemed.com