

CLINICAL AND ECONOMIC OUTCOMES WITH A CONVERSION TO ARFORMOTEROL ONCE OR TWICE DAILY FROM LEVALBUTEROL USING BREATH ACTUATED NEBULIZERS.

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Background: For COPD patients using liquid nebulization, a long acting effect is achieved by using short acting bronchodilators on a scheduled basis. A large number of treatments for in-patient COPD patients are for maintenance bronchodilatation. This pilot protocol evaluated the conversion from Levalbuterol (Lev) to Arformoterol (Arf) for maintenance. **Method:** COPD in-patients assessed to be on maintenance bronchodilators were converted from Lev to Arf. All treatments (tx) were delivered using the Monaghan Medical AeroEclipse Breath Activated Nebulizer (BAN). If the patient could use a mouthpiece device, they received Arf 15 mcg once daily. If a mask was used, they received Arf 15 mcg twice daily. Arf and Lev treatments delivered from 12/23/07 to 5/25/08 were recorded in a database as scheduled, prn breakthrough, or refused treatments. Prn rates are calculated in 100 patient-days to correct for different treatment frequencies. Average tx per day includes scheduled and prn rx. Labor hours were obtained from the AARC Uniform Reporting Manual. RT salary and benefits averaged \$31/hr. The device cost per tx was derived from the device cost divided by the change out interval and then divided by number of treatments per day. BAN cost=\$4.88, Misty-neb = \$0.36. In 2007 38,533 Lev treatments were delivered. We estimate that 60% of treatments can be converted to Arf. The Arf SVN column is for comparison only. **Results Clinical:** Arf 15 mcg BAN Qday: 376 scheduled, 32 prn (8.5 per 100 pt-days), and 8 refusals. 13 of the 32 prn treatments came from 3 patients. Arf 15 mcg mask BID: 185 scheduled, 4 prn (4.3 per 100 pt-days), and 2 refusals. Lev (BAN & mask) TID: 4,281 scheduled, 153 prn (10.7 per 100 pt-days) and 254 refusals. Economic results: See table. **Conclusion:** Using Arformoterol Qday with BAN or BID with mask decreased the number of treatments delivered and total cost of delivery with prn treatment that compared favorably with Lev. Better patient selection may decrease the prn rate in the Qday group. The large number of refusals in the Lev group would suggest more patients could be converted to Arf. The BAN, by allowing Qday treatments, was extremely cost effective.

Sponsored Research - None

Economic Evaluation	Arformoterol QDay BAN* Nebulizer	Arformoterol BID BAN* Nebulizer	Levalbuterol TID BAN* Nebulizer	Arformoterol BID SVN
Number tx	418	184	4,434	
Ave tx/day	1.08	2.04	3.11	2.04
Labor hrs/tx	0.133	0.133	0.133	1.55
Labor cost/tx	\$4.13	\$4.13	\$4.13	\$4.80
Device cost/tx	\$1.08	\$0.57	\$0.39	\$0.07
Drug cost/tx	\$4.34	\$4.34	\$2.52	\$4.34
Total tx/cost	\$9.55	\$9.04	\$7.04	\$9.02
Daily tx/cost	\$10.34	\$18.48	\$21.86	\$18.82
Assume 60% Arf conversion on 38,533 treatments				
tx%	68%	32%	100%	100%
# Arf tx	5,203	4,926		15,490
# Lev tx	15,413		38,533	15,413
Total # of tx	25,543		38,533	30,903
Arf cost	\$94,198			\$142,575
Lev cost	\$38,841		\$271,122	\$38,841
Total cost	\$133,039		\$271,122	\$181,416
Labor hours	3,400		\$5,129	4,781