

EPR-3 COMPLIANT BEST CLINICAL PRACTICE RESULTS IN ASTHMA COST SAVINGS

Paul Foreman, PhD, MS, MA; Ben Francisco, PNP, PhD, AE-C;
Sherri Homan, RN, PhD, Tammy Rood, MSN, CPNP-PC, AE -C;
Lainey Bratt, MPH, RN, BSN;
Asthma Ready® Communities, University of Missouri Health Care,
Columbia, Missouri

Background: The federal government has mandated states deliver better health care at lower costs. Expert Panel Report 3 (EPR3)-compliant clinical care requires regular assessments and visits. On average Missouri Medicaid (MO HealthNet) child recipients with asthma have less than one patient visit annually. MO HealthNet children use non-preferred oral or inhaled medications at a very high rate and require costly acute care (emergency room and hospital visits). Exacerbations are managed with risky oral steroid bursts and frequent antibiotics for secondary respiratory infections. For these reasons poorly controlled asthma drives up the total cost of health care dramatically.

Method: We compared per beneficiary per month (PBPM) costs of health care for fee-for-service MOHealth Net population of children ages 5-17 in 2010 to an EPR3-compliant clinical practice serving 147 Medicaid recipient children in order to produce benchmarks for achieving better care at lower costs. Data were analyzed from MO HealthNet administrative claims by the University of Missouri Office of Social and Economic Data Analysis (OSED).

Results: EPR3-treated group costs were 9.6% higher for inhaled corticosteroids (ICS) and 23% higher for claims related to co-morbid conditions. Total asthma direct costs were 4.7% lower than the mean cost for 6577 Medicaid children with persistent asthma. Remarkably, asthma medication costs were 33% lower and **total cost of all health care was 30% lower for the EPR3-treated group. This realized a \$453 PBPM cost saving benchmark.** Asthma Ready® Communities (ARC) has trained 58 clinical teams (914 health professionals) in 36 sites (11 Missouri Federally Qualified Health Center sites) in EPR3-compliant clinical practice.

Conclusions: EPR3-compliant care (Table 2) clearly yields quality health care at lower cost for Missouri children with asthma. ARC is dedicated to provide benchmark evidence of improved cost efficient care so asthma education and literacy programs thrive in an environment of diminishing resources.

Comparison of Cost for Missouri MO HealthNet Beneficiaries with Persistent Asthma to a Benchmark Panel of Patients Receiving EPR3-Compliant Pharmacotherapy and Care, Children ages 5 to 17 years, 2010								
Medication	MoHealthNet (MHN)			EPR3-Compliant			PBPM	
	Persistent Asthma			Asthma Clinic Panel			Difference	
	Number of Recipients	% of Total Med Cost*	PBPM**	Number of Recipients	% of Total Med Cost*	PBPM**	MHN \$	EPR %
Inhaled Corticosteroids (ICS)	2,389	16.5	95.1	79	40.7	104.26	-9.16	9.6
ICS with LABA (combinations)	1,376	16.7	163.12	11	3.6	65.5	97.62	-59.8
Leukotriene Modifiers (i.e., Singular)	4,280	47.5	149	49	29.3	121.6	27.4	-18.3
Short Acting Beta Agonists (SABA)	5,156	18.9	51.45	125	26	43.92	7.53	-14.6
Total Asthma Drugs	6,325	100	214.58	140	100	143.59	70.99	-33.1
Health Care								
Direct Asthma Claims	6,325	20.1	294.94	130	24	280.97	13.97	-4.7
Non-Asthma Claims	6,515	79.9	1,227.80	133	76	785.3	442.5	-36
Total Claims	6,577	100	1,497.20	134	100	1,043.97	453.23	-30.3
*Other asthma medication not shown account for 0.4 percent for MoHealthNet & EPR3 Panel.								
**Per Beneficiary Per Month, Source: MU MO HealthNet Data Project								

EPR3-Compliant Best Clinical Practice Attributes
Asthma care is delivered by a team, composed of a clinic provider and a nurse trained as an asthma educator.
Patients' goals of treatment assessed and documented at each clinic visit (e.g. What do you want to accomplish at this visit? What other questions do you have for me today?) (EPR3 p. 126)
Assess asthma control, including impairment and risk, at each clinic visit (EPR3 – p. 309, 310, 345)
Use inhaled corticosteroids (ICS) as the preferred treatment for all levels of persistent asthma. (EPR3 p. 216, 334)
Deliver key educational messages and reinforce at each clinic visit (e.g. role of medications – control vs. quick relief, basic facts about asthma, patient skills [identify and avoid environmental triggers, asthma self-monitoring, and use of asthma action plan]) (EPR3 p. 124)
Clinic educator and provider assess and encourage ICS adherence and utilization during all asthma visits. (EPR3 p. 131) This is done through verbal history with patient/family, reviewing patient pharmacy claims reports, and encouraging family to bring inhalers to each visit (check inhaler dose counter). ICS adherence can be assessed by monitoring date when ICS supply should be depleted. The patient/family can be encouraged to mark the calendar for the date a new ICS inhaler is needed if patient is taking ICS as prescribed (number of days inhaler should last if taking ICS as prescribed listed on asthma action plan); ICS star chart (place star for each ICS dose taken, incentive provided after 2 months of ICS adherence).
Use of validated questionnaires to assess asthma control. (Asthma Control Test – ages 4-11 and 12 to adult; consider Children's Health Survey for Asthma [American Academy of Pediatrics]) (EPR3 p. 330, 345).
Inhalation technique assessed at every visit (correct use of inhaler devices, verbal report of technique used for nebulizer or Aerochamber with mask, use of In-Check Dial to have patient demonstrate technique used then coaching for improvement provided for optimal inhalation technique, use of 2 TONE MDI trainer for patients who have difficulty with achieving optimal inhalation technique with In-Check Dial coaching session. (EPR3 p. 124; EPR3 - Stepwise Approach- p 305, 306, 343)
Standardized detailed asthma education provided by clinic educator (CPT code 99402 and 99401: asthma counseling [preventive medicine counseling and risk factor reduction]). Key educational points are documented in the patient's record (under "Counseling Topics") to enable all members of team to be consistent and reinforce education and progress being made. (EPR3 p. 124)
Review actions in case of asthma emergency – documented on asthma action plan ("Initial Treatment -Inhaled SABA: up to two treatments 20 minutes apart of 2–6 puffs by metered-dose inhaler (MDI) or nebulizer treatments." EPR3 p. 382)
Personal best FEV1 documented on asthma action plan and peak flow zones updated to reflect personal best peak flow measures (EPR3 p. 51, 59, 379, 381)
Written asthma action plan at each visit, developed with agreed upon goals for treatment, reviewed by clinic asthma educator (EPR3 p. 131, 376). Written asthma action plan to guide patient/family self-management of exacerbations at home (includes appropriate intensification of therapy). (EPR3 p. 373)
Follow up clinic visits based on EPR3 guidelines. (Very poorly controlled or not well controlled asthma – follow up in 1 to 6 weeks; well controlled asthma- follow up every 6 months [EPR3 - Stepwise Approach- p 305, 306, 343]).
Reference: Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma. 2007. www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf. Accessed January 18, 2012.