

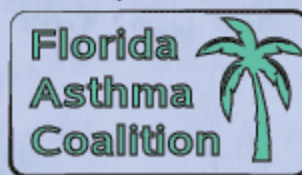


Florida Asthma Program – Florida Department of Health

# Asthma Management in Emergency Department and Hospital Settings: Survey Findings from Select Florida Hospitals, 2012



*A report to the:*



*Prepared by:*

Henry J. Carretta, PhD, MPH  
Xan Nowakowski, MPH  
Florida State University College of Medicine

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## Executive Summary

In spring 2012, the Florida Asthma Program (FAP) at the Florida Department of Health collaborated with evaluators from the Florida State University College of Medicine (FSU), the Florida Asthma Coalition (FAC), and professionals from the Florida Hospital Association (FHA) to develop and carryout a qualitative survey to assess asthma management practices in select Florida hospitals. Adherence to the national guidelines for asthma management defined by the National Heart, Lung, and Blood Institute (NHLBI) in the Expert Panel Report 3 (EPR-3) guidelines for the Diagnosis and Management of Asthma was a primary focus. This report summarizes the findings of a survey of ten hospitals in Florida.

Asthma prevalence, morbidity rates, and associated costs have increased dramatically over the last thirty years in all populations in the United States, including among Floridians. Poor asthma management is costly and puts the lives of Floridians at risk. One notable indication of poorly controlled asthma is frequent or repeat visits to the emergency department (ED) or hospital for asthma care. In 2010, there were a total of 121,680 ED visits and hospitalizations in Florida with asthma listed as the primary diagnosis. The total charges associated with these visits were just under a billion dollars (\$952.6 million). These costly visits are largely preventable with proper clinical treatment, medication adherence, and patient education.

Results from the survey suggest a high degree of adherence to national standards for treatment of asthma in the inpatient setting (i.e. hospitalizations), however adoption of standardized protocols in ED settings are less established. Priority recommendations and next steps to the Florida Asthma Coalition for enhancing asthma care in hospitals include the following.

- Make the FAC a central broker of information about hospitals' Performance Improvement/ Quality Assurance (PI/QA) efforts as well as community benefit programs. Focus the FAC and the Clinical Workgroup on promoting effective collaboration between hospitals, providers, and community partners (schools and childcare centers) on clinical care improvement efforts.
- Provide educational opportunities to hospital staff and administrators about the relevance and utility of national evidence-based guidelines (EPR-3) for ED asthma care. Use case studies and distribute success stories from hospitals doing outstanding work.
- Partner with pharmaceutical companies to increase availability of controller and reliever medications for use by patients discharged from EDs.
- Use the FAC listserv to facilitate hospitals' process of data sharing to promote continuous quality improvement.
- Educate hospitals about the importance of data collection and longitudinal monitoring (for both inpatients and ED patients) by opening dialogue between hospital personnel and evaluation researchers.
- Look for opportunities to use existing resources (e.g., The American Lung Association's Asthma 101 and Open Airways for Schools Programs) to meet unfilled needs in community-based asthma management, such as patient self-management education after discharge.

## Introduction

Asthma rates and associated costs have increased dramatically over the last thirty years in all populations in the United States, including among Floridians. A recent study estimated that in 2007, the total direct and indirect costs of asthma to society in the United States was \$56 billion. A notable indication of poorly controlled asthma is frequent or repeat visits to the emergency department (ED) or hospital for asthma care, as these visits should be avoidable with proper asthma management. In 2010, there were a total of 121,680 ED visits and hospitalizations in Florida with asthma listed as the primary diagnosis. The total charges associated with these visits were just under a billion dollars (\$952.6 million). These visits are largely preventable; therefore asthma partners in Florida embarked on a project to better understand how these visits can be prevented. Findings of this project are presented within this report.

In spring 2012, the Florida Asthma Program (FAP) at the Florida Department of Health collaborated with evaluators from the Florida State University College of Medicine (FSU), the Florida Asthma Coalition (FAC), and professionals from the Florida Hospital Association (FHA) to develop a qualitative survey to assess asthma management practices in select Florida hospitals. This effort had several key goals:

- (1) Capture information about what selected hospitals in Florida are currently doing to manage asthma in their inpatient units and emergency department, including compliance with National Heart, Lung, and Blood Institute's Expert Panel Report 3, Guidelines on the Diagnosis and Management of Asthma (EPR-3 guidelines).<sup>1</sup>
- (2) Learn about what Florida hospitals are doing to improve their performance and quality of asthma care.
- (3) Assess community benefit programs available for patients with asthma in the catchment areas of participating Florida hospitals.
- (4) Explore and generate interest in collaborative asthma management activities among hospitals and the FAC.
- (5) Make recommendations to the FAC so members can support Florida hospitals in their efforts to enhance the quality and effectiveness of asthma care protocols and programs.

## Recruitment & Participation

The 20 hospitals with the largest number of combined hospitalizations and ED visits in Florida with asthma listed as the primary diagnosis (ICD-9 code 493) in 2010 were selected for participation using the Florida Agency for Health Care Administration's discharge files. The FHA reviewed the list and provided contact information for several key informants at each hospital. FHA partners then made initial contact with each hospital in mid-June 2012, informing key personnel about the upcoming survey and encouraging participation when contacted by FSU evaluators. The following week, FSU evaluators conducted recruitment by contacting the key personnel in each of the 20 hospitals in the sample, with the aim of enrolling 10 or more hospitals to complete the survey. Hospital personnel were given the option of either (1) setting up a telephone interview with an FSU evaluator, or (2) completing the survey instrument themselves and returning it to FSU via email. A minimum of four follow-up contacts by telephone or email were employed to recruit hospital participants. A total of 10 hospitals completed

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<sup>1</sup> Expert Panel Report 3 (EPR-3) guidelines are a standard set of asthma care guidelines developed by the National Heart, Lung, and Blood Institute (NHLBI). These guidelines cover four core topics: asthma education, medications, environmental trigger management, and follow-up care. The full set of EPR-3 guidelines is available online at: <http://www.nhlbi.nih.gov/health/prof/lung/asthma/naci/asthma-info/asthma-guidelines.htm>.

the survey, with three scheduling interviews and seven opting to complete the survey on their own. Data collection concluded in October 2012.

The responding hospitals had a combined total of 19,375 visits, accounting for 15.9% of the 121,680 primary asthma visits in 2010. The responding hospitals had a higher proportion of child asthma visits (72%) than adult asthma visits (27.9%). See table below for additional information.

**Table 1. Characteristics of Responding and Non-Responding Hospitals**

Facility Rank	TOTAL VISITS	VISITS BY AGE GROUP		Completed Survey
	ED and Hospital Discharges with Primary Diagnosis of Asthma	Number of Child (0-17) Primary Asthma Discharges	Number of Adult (18+) Primary Asthma Discharges	
1	3770	2889	881	Yes
2	3040	1607	1433	No
3	2902	1595	1307	No
4	2618	1732	886	Yes
5	2293	2268	25	No
6	2160	950	1210	No
7	1985	1072	913	Yes
8	1935	1151	784	No
9	1780	1768	12	Yes
10	1729	432	1297	No
11	1662	1006	656	No
12	1647	1610	37	Yes
13	1643	1198	445	Yes
14	1603	1056	547	No
15	1555	595	960	Yes
16	1523	1249	274	Yes
17	1508	730	778	No
18	1465	972	493	Yes
19	1462	800	662	No
20	1389	886	503	Yes

## Methods

FSU evaluators worked with Florida Asthma Program staff, FHA partners, and members of the FAC's Clinical Workgroup to develop a key informant interview script to guide participating hospital representatives through the survey. The script covered five topics: (1) inpatient care, (2) emergency department care, (3) performance and quality improvement efforts, (4) community benefit programs, and (5) interest in collaborative activities. The full survey instrument is included in this report as an appendix so that readers can see the full range of issues addressed. We were committed to keeping the time to complete the interview to less than 30 minutes. As a result, there were many areas of interest that had to be excluded. The nature of the questions limited the amount of open-ended responses that were collected. The focus was on collecting objective information on hospital programs across the five

topical areas. For example, we were unable to ask questions about how protocols may have varied by patient age except to the extent some hospitals mostly served children and others served mostly adults as reported below. Because of the small sample size we made no efforts to categorize hospitals according to the asthma prevalence in their county, their market share of asthma patients in their catchment area, or hospitals inpatient or ED utilization rates adjusted for the size of the catchment area.

Interviews lasted between 15 and 30 minutes; self-completing hospitals generally returned their survey with responses within three days of receipt. Some respondents reported significant effort to obtain requested information prior to the interview or self-completing the survey. Written responses and interview transcripts were reviewed using basic content analysis techniques to assess compliance with EPR-3 guidelines and to identify common themes, including areas where Florida hospitals have had success in caring for patients with asthma, as well as challenges that these hospitals continue to face. From this analysis, recommendations were developed for the FAC so members can help hospitals better align with national standards and grow their successes and overcome key barriers to effective asthma care. These recommendations are detailed in the final section of this report.

## Findings

### a. Inpatient Units

Nine out of 10 participating hospitals answered the questions about inpatient asthma management. The respondent for the remaining hospital did not feel knowledgeable about inpatient protocols and therefore did not answer questions about inpatient asthma management. Protocols for inpatient asthma management were generally found to be robust. Of the nine hospitals that answered these questions, six reported having asthma management protocols already in place for the inpatient setting; the remaining three indicated that protocols were currently being developed. Hospitals reported using the following sources for guidance in developing their inpatient asthma care guidance documents:

- Joint Commission and its Children's Asthma Care standards (CAC)
- National Asthma Education and Prevention Program (NAEPP) of the National Heart, Lung, and Blood Institute (NHLBI) (also known as EPR-3 guidelines)
- Local American Lung Association (ALA) offices (providing literature from national office)
- National Institutes of Health (NIH)
- American Academy of Pediatrics (AAP)
- Asthma and Allergy Foundation of America (AAFA)
- Krames educational tools from Cerner Electronic Documentation System

All six hospitals with inpatient asthma management protocols already in place reported using patient chart auditing to monitor compliance with protocols. In addition, one hospital reported using case managers to follow up with patients post-discharge. Specific procedures for tracking and following up with patients generally varied according to hospitals' chosen sources of asthma management guidelines (listed above). Two of the three hospitals that did not report having asthma management protocols already in place cited physician orders as their primary source of guidance for managing individual patient's asthma.

Adherence to national EPR-3 guidelines was complete or near-complete for inpatient units at all participating hospitals. All nine responding hospitals reported conducting asthma education activities with their inpatients. Eight hospitals completed the specific questions about education topics; all eight

reported covering inhaler technique, review of medications and when to take them, environmental control measures, and medical follow-up. During this educational process, most hospitals also gave patients literature (brochures, etc.) to take home post-discharge.

Seven out of nine responding hospitals reported sending patients home with a written Asthma Action Plan (called a Home Management Plan of Care (HMPC) by some hospitals). In most cases, hospital personnel reported that these HMPC documents contained equivalent content to Asthma Action Plan templates they had previously seen. All nine responding hospitals reported prescribing inhaled corticosteroids (controller medications) upon discharge for patients with a history of persistent asthma. While this practice was uniform across responding hospitals, decisions about whether or not to prescribe controller or reliever medications were made on a case-by-case basis following chart review and interviews to determine the extent of the patient's asthma history.

All six hospitals with inpatient protocols reported following up with primary care and/or respiratory physicians to ensure that patients received continuing care after discharge. Five of these six hospitals did the follow up themselves, generally within three days of discharge. The sixth provided patients with specific instructions about following up with community physicians. In addition, of the three hospitals without inpatient protocols, two engaged in similar activity, despite not having formal asthma care protocols in place. Mechanisms for communicating with physicians varied from hospital to hospital—some used case managers while others used nurses or respiratory therapists (RTs) to complete these tasks. Standard guidance on communication techniques is not currently provided by the EPR-3 guidelines, which may explain some of this variability.

All nine responding hospitals reported making referrals to case management and/or other community resources. Most hospitals had case managers on staff specifically for the inpatient unit, but those that did not used centralized case management resources available on site. All nine responding hospitals either currently employ certified asthma educators or plan to employ them in the future.

All nine responding hospitals reported not dispensing inhalers for home use. Instead, patients at all of the responding hospitals were given prescriptions to fill at a pharmacy. All nine hospitals responding to the inpatient questions reported using metered dose inhalers (MDIs) with holding chambers (sometimes called a spacer) to dispense reliever medication during inpatient stays. These same hospitals incorporated content on using medications and delivery systems into education sessions, usually by having a nurse or RT work with the patient. All but one of these hospitals reported allowing patients to take home their holding chambers for personal use after discharge.

## **b. Emergency Departments**

All 10 participating hospitals responded to the questions about emergency department (ED) care. While many hospitals reported using some of the same national guidelines mentioned in the inpatient care section above, the protocols for emergency care were generally much less robust and still done mostly on a case-by-case basis using formal guidelines as a general foundation. Only five out of 10 participating hospitals currently had formal ED asthma care protocols in place, though two others explicitly reported that they were currently developing formal protocols.

Hospitals that provided information about inpatient care were generally quick to acknowledge the weakness of their ED procedures when compared to their inpatient procedures, even if they already had ED protocols in place. Improving ED care protocols was reported as a major priority for all participating hospitals. The following table provides an overview of hospital efforts related to the EPR-3 Guidelines.

Table 2. Emergency Department Efforts Related to the EPR-3 Guidelines								
EPR-3 Component →	1. Schedule Follow-Up Appointment with Primary Provider or Specialist		2. Provide Education prior to Discharge		3. Prescribe appropriate medications		4. Provide discharge plan / asthma action plan	
	<i>Practice</i>	<i>Policy</i>	<i>Practice</i>	<i>Policy</i>	<i>Practice</i>	<i>Policy</i>	<i>Practice</i>	<i>Policy</i>
Percent of participating hospitals	10%	20%	100%	60%	90%	50%	70%	40%

Despite a lack of formal ED protocols in some hospitals, adherence to EPR-3 guidelines for ED care nonetheless remained robust for patient education and medication prescribing, but was weaker for formal care planning and medical follow-up. All 10 participating hospitals reported covering inhaler technique through hands-on education, review of medications and when to take them, environmental control measures, and medical follow-up. One hospital did report being unsure of how extensively environmental controls were covered, but adherence to the national guidelines for patient education was otherwise uniform.

Only one of the participating hospitals reported sending ED patients home with formal Asthma Action Plans, but at least two additional hospitals were currently working to implement Asthma Action Plans/HMPCs for ED patients upon discharge. However, all 10 hospitals reported providing detailed written discharge instructions for patients to take home, which may include many of the same elements as Asthma Action Plans/HMPCs.

Eight out of 10 participating hospitals reported prescribing inhaled controller medications for patients with a history of persistent asthma. Two of these eight hospitals noted that this practice was a relatively new component of their ED asthma care procedures.

All 10 hospitals reported making referrals to case management and/or community resources as necessary. Likewise, all but two of the 10 participating hospitals already had certified asthma educators on staff, though their EDs did not always have dedicated asthma educators who worked exclusively with emergency patients. Most hospitals indicated making active efforts to train more certified asthma educators, and also to require certification for existing asthma education staff. One hospital reported conducting these efforts in pursuit of a “center of excellence” certification.

Only three of the 10 participating hospitals reported communicating with primary care providers about ED visits for all patients. However, two of the other hospitals scheduled patient follow-up appointments with pulmonology/respiratory specialists, and three provided information in discharge instructions about scheduling follow-up appointments. Only two hospitals reported not taking any specific action on follow-up care.

One hospital reported mainly using nebulizers for management of acute asthma symptoms; the other nine reported using MDIs with valved holding chambers. Seven of the other nine hospitals reported allowing patients to take holding chambers home after use in the ED; the remaining two hospitals that used MDIs did not allow patients to take holding chambers home. As with inpatient care, all 10

hospitals reported discharging patients with prescriptions for reliever medications rather than allowing them to take inhalers home.

### **c. Performance Improvement & Quality Assurance**

All 10 participating hospitals answered the questions about performance and quality. Seven of these hospitals reported currently conducting a comprehensive Performance Improvement/Quality Assurance (PI/QA) process that includes asthma management. The remaining three hospitals did not currently have a PI/QA process underway. Of the seven hospitals currently conducting PI/QA efforts, five reported using the Joint Commission CAC measures as guidance. The two others reported working from their own HMPC (similar to Asthma Action Plans as previously noted) for guidance on data tracking and reporting.

For the six hospitals that already had formal asthma care protocols, revisions were usually quite recent—all reported having revised their protocols within the last six months, and some were in the process of revising their protocols at the time of the interview or survey response. All of these hospitals reported updating their protocols at least once per year.

Six hospitals reported actively tracking inpatient readmissions and/or ED visits. Five of these hospitals tracked repeat visits by specific patients and one tracked aggregate ED visit and inpatient admission rates over time. Seven of the 10 participating hospitals were unaware of how their hospital compared to others in the state with respect to asthma management quality and performance indicators. Of the remaining three, one cited National Association of Children’s Hospitals and Related Institutes (NACHRI) as the source for this information, and two others cited their own efforts to gather and review statistics from other hospitals.

Data tracking was found to be fairly uniform across hospitals for written care plans and patient education—only two participating hospitals reported not tracking education benchmarks from the EPR-3 guidelines. Seven of 10 participating hospitals reported actively reaching out to community providers and other partners to improve asthma care systems as well as practices within the hospital.

Six hospitals reported participating in the NACHRI children’s asthma care core measures project. Two of the other hospitals reported not participating despite being eligible. The remaining two hospitals were not eligible because they were not children’s hospitals.

One hospital reported tracking missed school and work days for patients in addition to other measures listed above. Another hospital reported focusing its PI/QA efforts on improving care in the ED. Finally, a third hospital reported developing a checklist (for use by both hospitals and private practitioners who see patients in the hospital) to ensure compliance with institutional protocols and EPR-3 guidelines.

### **d. Community Benefit & Outreach**

Eight of the 10 participating hospitals reported doing substantial community benefit/outreach related to asthma. Their programs included:

- Patient education
- Parent education
- Collaboration with community charities
- “Family days” with activities, games, food, etc.



- Outreach to school nursing staff
- Nationally recognized education programs (e.g., Asthma 101)
- Modified versions of national programs (e.g., Open Airways for Schools)
- Continuing medical education trainings for care providers
- Student physicals
- Community lectures
- Mobile van that provides asthma education and care services
- Health fairs
- Contests with prizes
- Asthma Awareness Month marketing and programming
- Distributing literature at community events
- Asthma education certification classes (collaborative with ALA)
- Working with insurance companies to improve subsidies for asthma care
- Fundraisers
- Participation in FAC and/or local asthma coalition
- Hosting meetings for other groups interested in asthma management
- Working with clinics for the uninsured/underinsured

Seven of these eight hospitals reported conducting outreach to schools, day care centers, summer camps, and other organizations that work with children. The remaining three hospitals did not. Likewise, these three outlying hospitals were the same ones that generally reported having less robust protocols and educational practices for ED and inpatient asthma care, as well as a lack of awareness of other hospitals' asthma care monitoring and improvement activities.

#### **e. Networking & Collaboration**

All 10 participating hospitals answered the questions about networking and coalition building. While only three participating hospitals reported formally paying attention to what other hospitals are doing to provide and improve asthma care in inpatient and ED settings, all 10 expressed enthusiastic interest in learning more about other hospitals' activities. Likewise, all 10 hospitals expressed a desire to obtain data on other hospitals' success with reducing repeat inpatient admissions and ED visits.

Webinars, printed materials, and face-to-face meetings were equally popular with respondents as possible delivery mechanisms for information about other hospitals' activities and PA/QI strategies. In addition, one respondent specifically requested introductions to other hospital staff who are working on successful asthma PA/QI initiatives.

All but two of the 10 enrolled hospitals reported having strong interest in additional collaborative activities. The outlying hospitals were also hospitals that reported having no protocols in place and not generally meeting EPR-3 guidelines. Three participating hospitals reported already being members of the FAC. Of the remaining seven hospitals, four were explicitly interested in joining the FAC and possibly joining the Clinical Workgroup as well. One non-member hospital reported being completely unaware of the FAC's existence until the interview. The remaining two non-member hospitals declined the opportunity to become a member of the FAC at this time.

Some hospitals offered specific suggestions on what the FAC can do to improve hospital-based asthma management in Florida:

- More public health alerts
- Constant education
- Information about latest recommendations from research
- More publicizing of the FAC itself
- Assist with community outreach
- Do more research
- Provide more resources that hospitals can use for education and outreach

Finally, hospitals already familiar with the FAC expressed positive sentiments about the FAC's existing activities and resources, and encouraged coalition managers to continue these efforts over the long term. Many hospitals stressed the importance of doing more to publicize the FAC's activities and accomplishments. Several hospital personnel said that they would have joined the coalition much earlier had they been aware of its existence. Likewise, hospitals that had only been FAC members for a short time indicated lack of awareness of activities conducted by the coalition prior to their joining.

## Discussion & Conclusions

The 10 hospitals that participated in this survey are doing uniformly solid work in the area of inpatient asthma management. They use national evidence-based guidelines as appropriate and meet EPR-3 criteria to a robust degree. In addition, hospitals are actively working to improve their procedures for patient follow-up. Hospitals also recognize the value of training and hiring certified asthma educators to supervise patient education. The key shortcoming of inpatient procedures for asthma management in Florida appears to be lack of a process for dispensing of reliever and controller medications that complies with Florida laws so that it can be used at home along with the valved holding chambers that hospitals are already (for the most part) allowing patients to take home. This issue is likely to remain unchanged for the time being due to its roots in public policy, but may be improved in the long term via advocacy by key stakeholder groups.

The quality of ED asthma care in Florida is much less uniform, with some hospitals already having robust formal protocols and others using a more holistic approach with informal review of evidence-based guidelines. All hospitals did report using an evidence-based approach and keeping abreast of national guidance, but formalization was very inconsistent across hospitals, as was data collection. Adherence to EPR-3 guidelines was more mixed in ED units—strong for patient education and medication prescribing, but weak for environmental trigger management and follow-up care scheduling. Use of case management services, community resources, and certified asthma educators is strong for ED units as well as inpatient ones. ED units also appear to face the same challenges as inpatient units in terms of sending patients home with medication.

The surveyed hospitals are making active efforts to improve their inpatient and ED asthma care, with efforts more concentrated in the comparatively weaker area of emergency care. Likewise, most hospitals are also working to engage community health care providers and other partners in collaborative efforts to improve asthma management for residents of their catchment areas. However, hospitals are largely unaware at this time of how their performance measures and quality improvement efforts compare to those of other hospitals in the state.

Participating hospitals generally responded positively to the idea of collaborating with other hospitals, as well as the possibility of becoming FAC members if they were not already. Consequently, the lack of awareness among many Florida hospitals of what other hospitals are doing to manage asthma and

improve care for asthma patients represents a solid opportunity for teamwork, as does the desire of many hospitals to improve their ED care protocols. The high level of interest in collaboration reported by participating hospitals can help to change the landscape, especially if the FAC can do more to broker information-sharing between hospitals in different parts of the state.

## **Recommendations & Possible Next Steps**

Results from this survey suggest that many Florida hospitals have a strong interest in growing and improving their asthma management practices, many of which are already robust. Likewise, all participating hospitals showed strong interest in collaboration and data-sharing. These high levels of enthusiasm for improvement, combined with already-strong capacity at many of the state's hospitals, create a promising environment for progress and innovation. Specifically, the following actions are recommended as components of an integrative, collaborative strategy to enhance hospital-based and hospital-managed asthma care in the state of Florida.

- **Inpatient Unit Protocols**

- Establish a partnership between the FAC and any organizations in Florida or nationally that recognize hospitals as centers of excellence for asthma care, such as a “Partner in Management” or “Asthma All-Star” recognition. This mechanism should grow out of the “center of excellence” concept that has become widespread among United States hospitals, and should be delivered in partnership with other organizations recognizing asthma centers of excellence in Florida.
- Collect and distribute success stories from hospitals that are doing outstanding work.
- Encourage inpatient units to serve as a possible setting for formal asthma management courses that can be delivered over a short time period, such as Asthma 101.

- **Emergency Department Protocols**

- Focus the FAC Clinical Workgroup on the issue of improving ED care for patients with asthma.
- Educate hospitals about the relevance and utility of following national evidence-based guidelines for ED asthma care, possibly through a webinar format.
- Make guidance documents listed in this report available via links on the FAC website, with suggestions from successful hospitals on how to implement them.
- Partner with pharmaceutical companies to increase availability of controller and reliever medications for use by patients discharged from EDs. Explore creative solutions, such as labeling technology, that EDs can implement at low cost to increase rates of medication dispensation for home use.
- Collect and distribute success stories from hospitals that are doing outstanding work.

- **Performance Improvement & Quality Assurance**

- Use the FAC listserv to facilitate hospitals' process of data sharing to promote continuous quality improvement.
- Collect and distribute success stories from hospitals that are doing outstanding work.
- Educate hospitals about the importance of data collection and longitudinal monitoring (for both inpatients and ED patients) by opening dialogue between hospital personnel and evaluation researchers. This would be an ideal way to capitalize on the strong capacity for academic research that FAC evaluation process identified among coalition members.
- Establish a partnership between the FAC and any organizations in Florida or nationally that recognize hospitals as centers of excellence for asthma care. Use this partnership to educate

hospitals about criteria for designation as a center of excellence, and also resources (e.g., NACHRI core measures) that can help with PI/QA.

- **Community Benefit & Outreach**

- Collect and distribute success stories about hospitals' community benefit work and efforts to engage private practitioners in the improvement of community wide asthma care.
- Look for opportunities to use existing resources (e.g., Asthma 101, Open Airways for Schools) to meet unfilled needs in community-based asthma management, such as patient education and training after discharge.
- Increase awareness of the FAC by giving the coalition exposure (via member representatives, literature, small giveaways) at partner hospitals' community events.

- **Networking & Collaboration**

- Make the FAC the central broker of information about hospitals' PI/QA efforts as well as community benefit programs.
- Focus the FAC Clinical Workgroup on promoting effective collaboration between hospitals, providers, and community partners (schools and childcare centers) on clinical care improvement efforts. Use existing channels when possible, such as communication with local ALA offices as well as resources from NACHRI and the Joint Commission.
- Provide brief "how to" webinar modules for hospitals interested in improving specific aspects of their asthma care and management practices, resources, etc. These modules should address areas not covered by other quality improvement resources. Modules developed by the FAC should focus on collaboration, partnership-building, and community outreach rather than the logistics of clinical care, as materials covering those topics are already widely available.
- Continue studying hospitals that are currently engaged in a process of PI/QA. Use periodic online surveys and occasional group webinars to monitor their progress as well as their setbacks, and provide a forum in which these hospitals can receive actionable feedback to advance their efforts. This should be done through partnership with organizations recognizing asthma centers of excellence, as described above.