

Indian Health Service

Asthma Control in Tribal Communities (ACT) Informatics Response

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Asthma Control in Tribal Communities (ACT) Informatics Response

- IHS National Strategic Initiative May 1, 2023 designed to promote asthma-related awareness, early recognition/diagnosis, control, & improved outcomes
- IHS National Pharmacy & Therapeutics Committee (NPCT) is actively seeking ACT Ambassadors in tribal communities as part of the ACT Strategic Initiative
- Participation as an IHS ACT Ambassador is recommended for clinical, public health, and environmental health professionals and teams with asthma-related expertise operating at I/T/U facilities and in tribal communities
- The Indian Health Service Asthma Control in Tribal communities (ACT) Initiative is a comprehensive strategy designed to support federal, tribal, and Urban Indian Organization Programs as they
 - ACT to increase asthma awareness
 - ACT to recognize and diagnose asthma
 - ACT to support asthma control, and
 - Act to improve asthma-related outcomes



Asthma Overview

SUMMARY OF DISEASE



Definition of Asthma

Global Initiative for Asthma 2023 Guidelines

“A heterogeneous disease usually characterized by chronic airway inflammation”

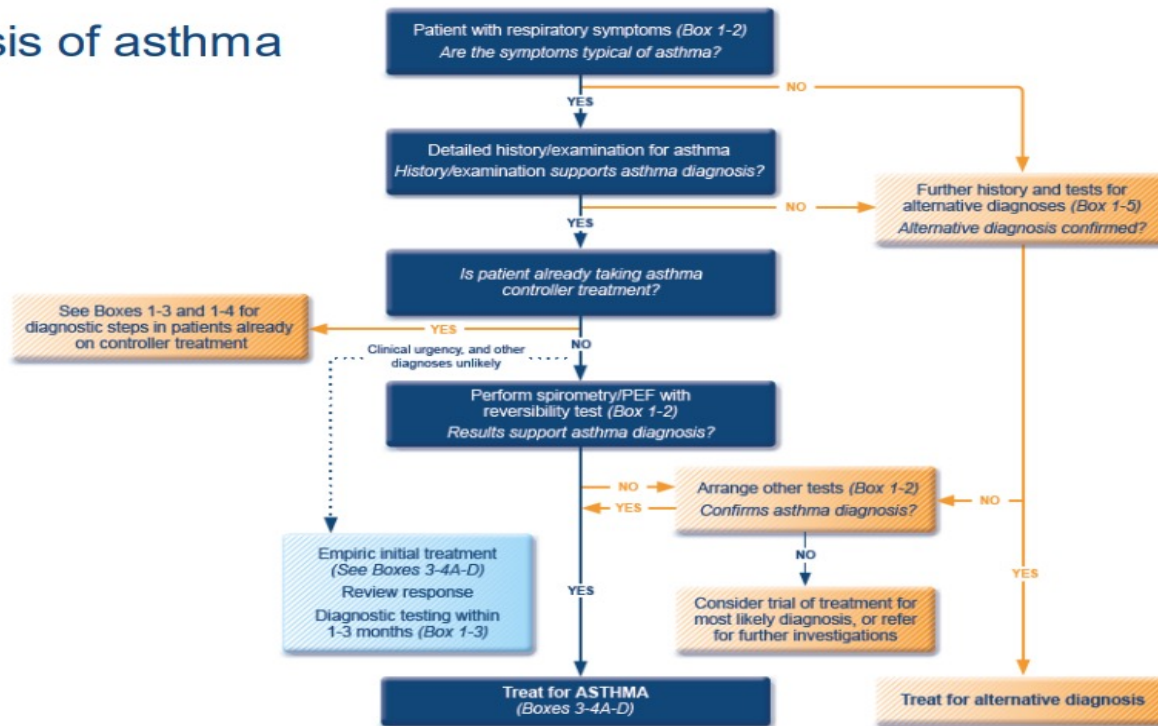
Defined by:

- Respiratory symptoms (wheeze, shortness of breath, cough) +
- Variable expiratory airflow limitation
- Both vary over time and in intensity



Diagnosis of Asthma

Diagnosis of asthma



Respiratory Symptoms

Respiratory symptoms- wheeze, shortness of breath, cough, chest tightness

Higher probability of asthma diagnosis	Lower probability of asthma diagnosis
Experiencing more than one of the symptoms	Isolated cough with no other respiratory symptoms
Worse at night or early morning	Chronic production of sputum
Vary over time and intensity	Shortness of breath along with dizziness, light-headedness, or paresthesia
Triggered by viral infections, exercise, allergies, changes in weather, or irritants	Chest pain
	Exercise-induced dyspnea with noisy inspiration



Spirometry for Diagnosis

Documented excessive variability in lung function tests (one or more of the following):	Findings:
Positive bronchodilator responsiveness	Increase in FEV1 of >12%
Excessive variability in twice daily PEF over 2 weeks	Average daily PEF variability >10% for adults, >13% in children
Increase in lung function after 4 weeks of treatment	Increase in FEV1 by >12% from baseline after 4 weeks of ICS treatment
Positive exercise challenge test	Fall of FEV1 from baseline >10%
Excessive variation in lung function between visits	Variation in FEV1 of >12% between visits
AND documented expiratory airflow limitation	Findings: When FEV1 is reduced, confirm that FEV1/FVC is also reduced (>0.75-0.8 in adults)



Diagnostic Pearls

- Important to confirm diagnosis to avoid unnecessary treatment and avoid overlooking other diagnoses
- Family history of asthma increases probability that respiratory symptoms are linked to asthma
- Specific recommendations to confirm asthma diagnosis in those receiving maintenance therapy



Assessment of Asthma

- Asthma **severity** is based on retrospective assessment via treatment needed to control symptoms and exacerbations
- Asthma **control** is assessed via symptom control and risk of adverse outcomes
 - Could use ACT, ACQ, or ->

Box 2-2. GINA assessment of asthma control in adults, adolescents and children 6–11 years

A. Asthma symptom control		Well controlled	Partly controlled	Uncontrolled
In the past 4 weeks, has the patient had:				
• Daytime asthma symptoms more than twice/week?	Yes <input type="checkbox"/> No <input type="checkbox"/>	None of these	1–2 of these	3–4 of these
• Any night waking due to asthma?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
• SABA* reliever for symptoms more than twice/week?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
• Any activity limitation due to asthma?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
B. Risk factors for poor asthma outcomes				
Assess risk factors at diagnosis and periodically, particularly for patients experiencing exacerbations.				
Measure FEV ₁ at start of treatment, after 3–6 months of ICS-containing treatment to record the patient's personal best lung function, then periodically for ongoing risk assessment.				



Assessment Pearls

- Important to distinguish between “severe asthma” (refractory to conventional treatment) and uncontrolled asthma due to modifiable factors (inhaler technique/ adherence)
- GINA suggests the term “mild asthma” should be avoided because patients with infrequent symptoms are still at risk for fatal exacerbations



Treatment – Nonpharmacologic

- Assess nonintentional and intentional nonadherence
- Ensure proper inhaler technique
- Utilize spacers
- Address physical barriers (i.e., arthritis) limiting use of inhalers
- Reduce exposure to triggers, including smoking cessation
- Encourage physical activity for cardiopulmonary benefit
- Address other comorbidities
- Utilize breathing exercises



Treatment – Patient Education

Asthma Self-Management Education (ASME)

- Self monitor symptoms and peak expiratory flow (PEF)
- Review Asthma Action Plan

Discuss health literacy



Treatment - Medications

Reduce risk factors for exacerbations

- High Short Acting Beta Agonists (SABA) use
- Inadequate Inhaled Corticosteroids (ICS) use

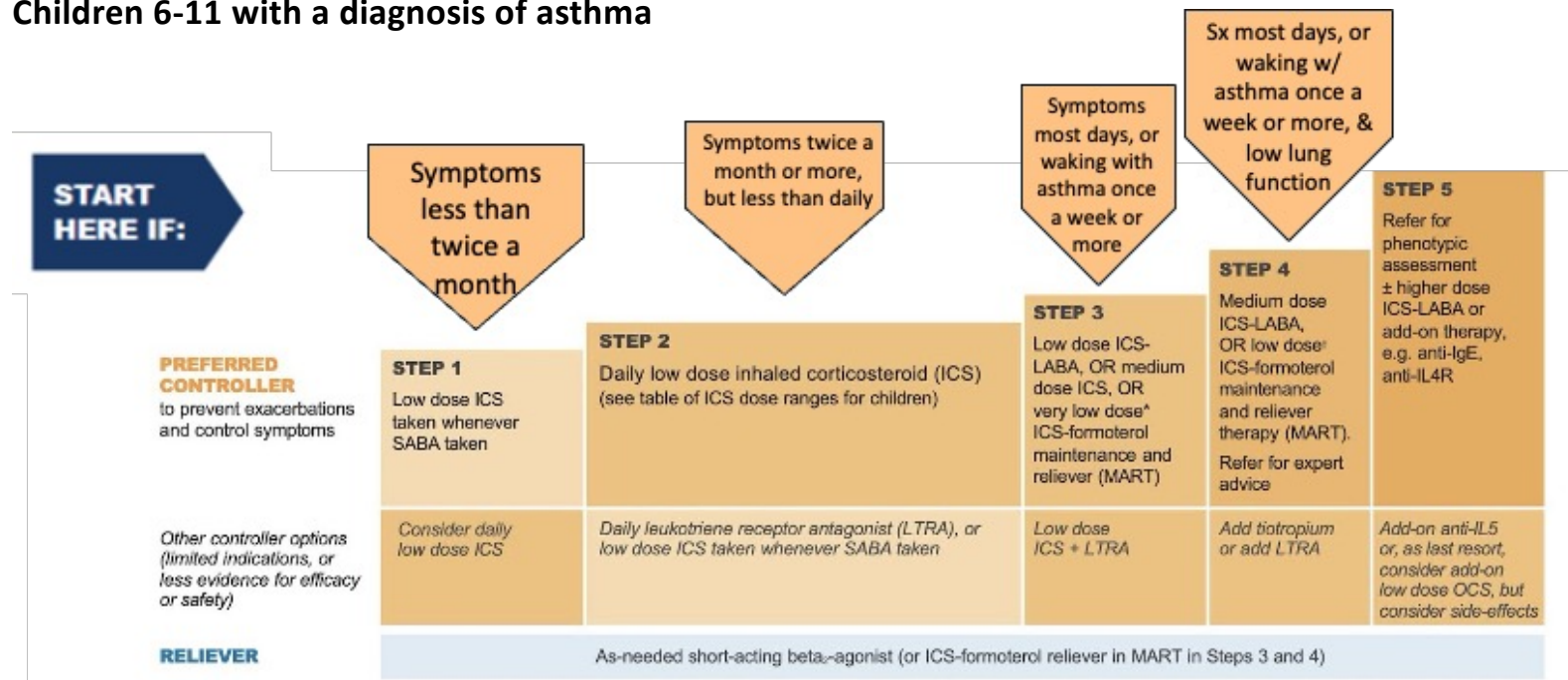
Avoid medications that may worsen asthma

- Non-selective beta-blockers
- Aspirin and Nonsteroidal Anti-inflammatory Drugs (NSAID-containing products)



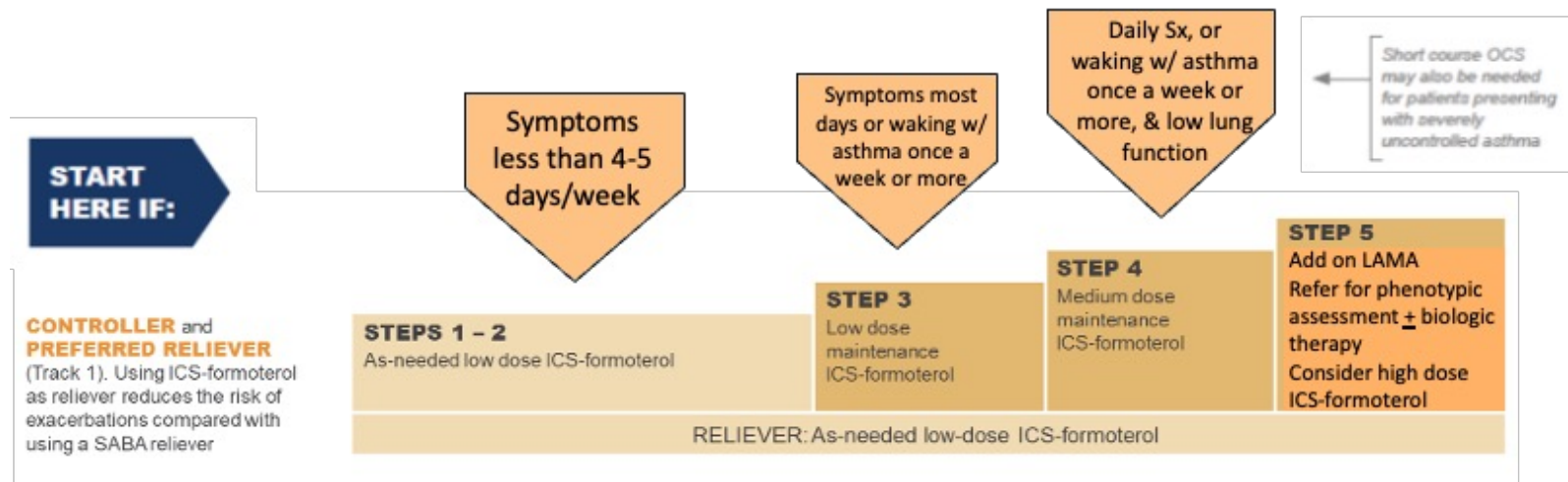
Global Initiative for Asthma (GINA) Guidelines – Starting Treatment

Children 6-11 with a diagnosis of asthma



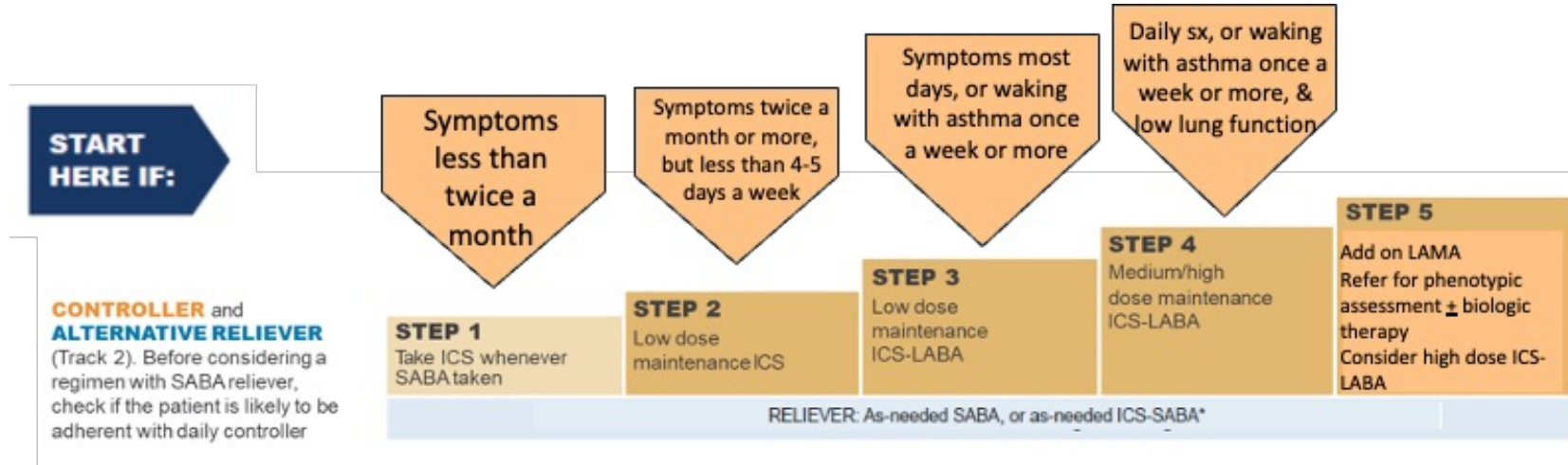
GINA Guidelines – Starting Treatment

Adults and adolescents (12+) with a diagnosis of asthma



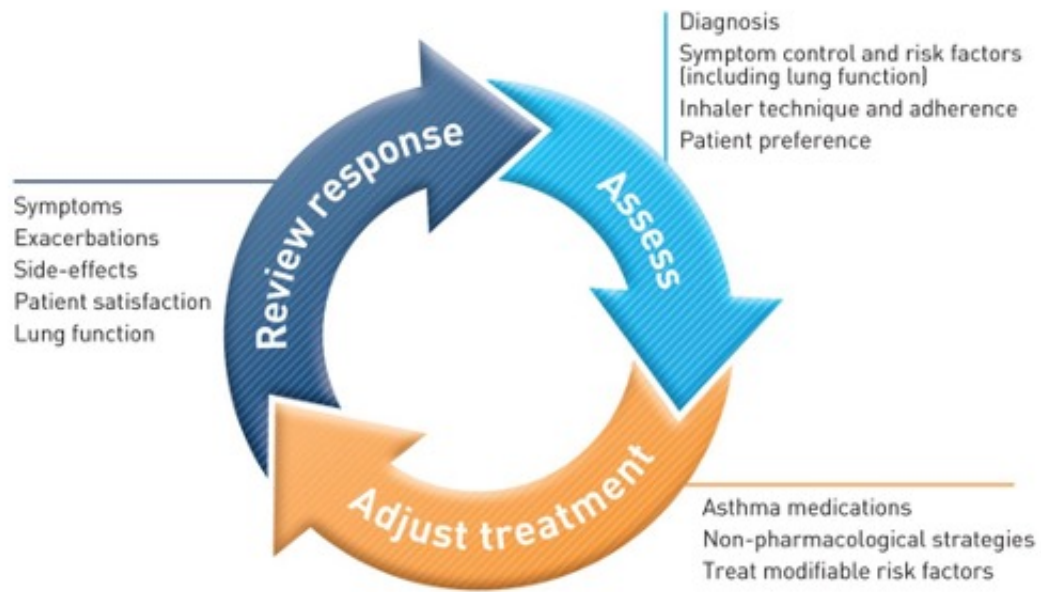
GINA Guidelines – Starting Treatment

Adults and adolescents (12+) with a diagnosis of asthma



Follow Up – Personalize Asthma Management

The GINA cycle of asthma care



Follow-Up

The GINA cycle of asthma care

Good communication is essential – establish a partnership with the patient

- Consider health literacy, personal goals and fears, and cultural issues

Treatment choices

- *Population-level decisions:* efficacy, effectiveness, safety, cost, regulations
- *Patient-level decisions for tailoring treatment:* also discuss patient characteristics (phenotype) that predict response or risk; patient preference; practical issues inhaler technique, adherence, and cost; treat modifiable risk factors; use non-pharmacological strategies where appropriate

Stepwise medication adjustment

- *Consider stepping up* if uncontrolled symptoms, exacerbations or risks, but check diagnosis, inhaler technique, adherence and modifiable risk factors first
- *Consider stepping down* if symptoms controlled for 3 months and low risk for exacerbations. For adults, ceasing ICS is not advised.

Written asthma action plan for all patients



Outcomes

Primary

- Reduction in exacerbations, Emergency Department visits, or hospitalizations
- Improvement in Asthma Control Test (ACT) score
- Improvement in asthma control questionnaire score

Secondary

- Immunizations
- Tobacco Cessation
- Medication adjustments



Implementing Informatics Solutions: Where to start?



Step 1: Identify Opportunities

There are many opportunities to implement informatics-based solutions to improve asthma outcomes:

- Create guideline-based order menus to guide clinical decision making
- Create guideline-based note templates to improve documentation
- Create informatics-based tools that are automatically triggered when a specific event occurs
- Utilize tools that integrate with EHR, such as iCare
- Create alarm-clock reminders that prompt clinicians to complete guideline-based interventions
 - Immunizations
 - Annual Screening



Step 2: Create Your Team

A successful quality-improvement team may include

- Students or pharmacy residents
 - May be able to focus their time specifically on the project
 - Quality improvement projects are excellent learning opportunities for students & residents
- Quality Improvement Department
- Project Manager
- Interdisciplinary Team of Stakeholders



Step 3: Choose your Improvement Model

The Plan-Do-Study-Act Cycle is a common improvement model

Step 1: Plan

- Plan the test or observation, including a plan for collecting data

Step 2: Do

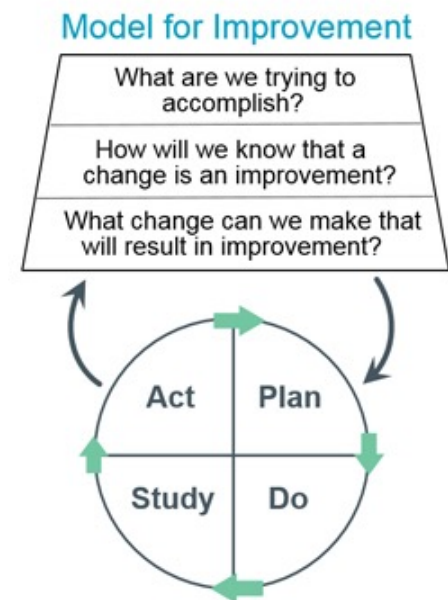
- Try out the test on a small scale

Step 3: Study

- Set aside time to analyze the data and study the results

Step 4: Act

- Refine the change, based on what was learned from the test

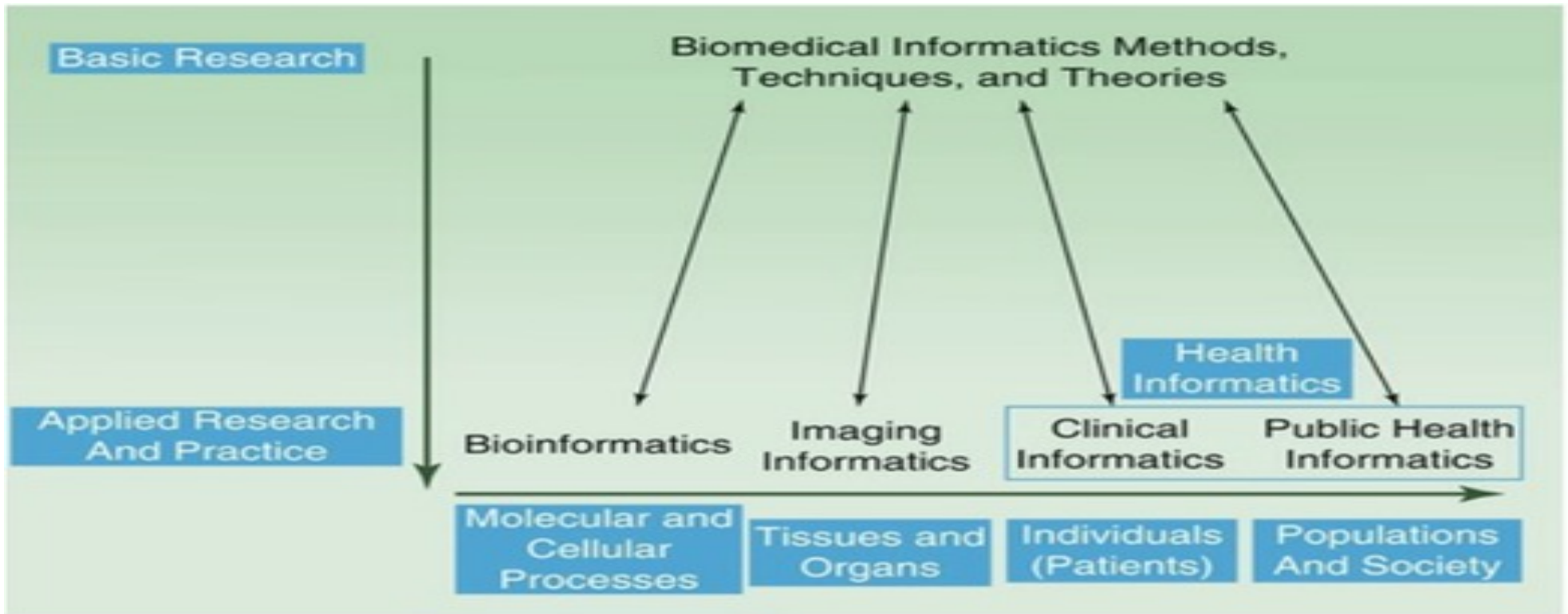


Developing an Informatics Response to Asthma

SUGGESTIONS AND OPPORTUNITIES



Informatics Concepts



Opportunities to Leverage Informatics for Asthma Management

- EHR Standardized GUI
- GUI Vitals
- TIU Note Templates
- Reminder Dialogs
- Guideline-based ordering menus



Opportunity #1: EHR GUI Standardization

- A standardized EHR GUI has been developed and deployed by CAPT John Lester, IHS Phoenix Area Office and the NCI Team
- By using the standardized GUI, facilities ensure they are equipped to utilize all available EHR tools to manage asthma



EHR Standardization Benefits

- Reduces resources dedicated to operations & maintenance
- Simplifies training, error identification & remediation
- Realizes Economies of Scale for processes
- Enhances clinical decision support pathways
- Enhances ability to inter-operate with different systems & organizations
- Enhances reliability of quality and performance reporting
- Enhances patient centricity & enhances continuity of care
- Enhances ability to span episodes of care between organizations



Asthma Control in Tribal Communities (ACT) RPMS Clinical Decision Support (CDS) Tools

- Asthma Action Plan & Asthma Care Plan Health Summaries
- Asthma Component
- Taxonomies (e.g. controllers & rescue inhalers)
- Vital Measurements
- Integrated Problem List (IPL)
- IHS 4 Directions Data Migration
- PAMPI (Problems-Allergies-Medications-Procedures-Immunizations)
- Health Factors
- Family History
- Asthma Education
- Reports
- iCare



RPMS EHR Standardization Training

- Component Functionality Series
- HIT Assessment Guide

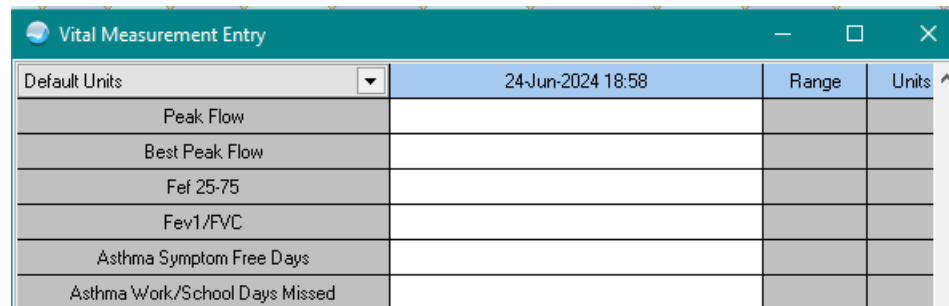
Training is available at:

<https://www.ihs.gov/rpms/training/upcoming-classes/>



Opportunity #2: GUI Vitals

- RPMS/EHR allows for several asthma-related vitals, which can be used to quantify asthma control
- Clinical staff should be trained on the location of these vitals in RPMS/EHR



The screenshot shows a window titled "Vital Measurement Entry" with a table containing the following data:

Default Units	24-Jun-2024 18:58	Range	Units
Peak Flow			
Best Peak Flow			
Fef 25-75			
Fev1/FVC			
Asthma Symptom Free Days			
Asthma Work/School Days Missed			



Opportunity # 3: TIU Note Templates

- Standardized note templates are beneficial:
 - Increase speed of documentation
 - Facilitate chart reviews by clinical staff and the business office
 - Ensure clinical staff document appropriately

- Several examples of TIU Note templates are available at:
<https://www.ihs.gov/nptc/strategic-initiatives/>



Northern Navajo Medical Center – TIU Template

SUBJECTIVE:
Here for Adult Asthma Clinic follow-up.
[V CHIEF COMPLAINT]

HISTORY OF PRESENT ILLNESS:

Asthma Symptoms
Daytime Sx:
Nighttime Sx:
Interferes w/ normal activity:
SA Beta2-agonist:

Trigger Assessment:

Paint fumes: Yes	Cold air: Yes	Illness: Yes
Exercise: Yes	Perfume: Yes	Cleaners: Yes
Smog: Yes	Car Fumes: Yes	Smoking: Yes
Pets: Yes	Flowers: Yes	Trees: Yes
Grass: Yes	Emotions: Yes	

Home Environment
Roaches: Yes Mold: Yes
Home heating source:

Time of year that is causes most asthma symptoms:

History of uranium exposure:
History of asthma related admissions:
History of intubations related to asthma:

REVIEW OF SYSTEMS:
Constitutional:
Denies: Fever, weight loss, chills, weakness, or trouble sleeping
Eyes:
Denies: Eye drainage, redness, pain, or vision change
Ears/Nose/Mouth/Throat:
Denies: Hearing loss, tinnitus, ear drainage, or pain
Nasal bleeding, congestion, sinus pressure or discharge
Mouth dryness, ulcers, toothache, or sore throat
Cardiovascular:
Denies: Chest pain, dyspnea, orthopnea, palpitations, or edema
Respiratory:
Denies: shortness of breath, cough, or wheezing
Gastrointestinal:
Denies: Abdominal pain, nausea, vomiting, diarrhea, or constipation
Genitourinary:
Denies: Any problems urinating, or any discharge
Musculoskeletal:
Denies: Stiffness, weakness, swelling, or pain
Skin/Breast:
Denies: Rash, bruising, itching, or lesions
Neurologic:
Denies: Headache, seizures, syncope, numbness, tremor, or tingling
Psychiatric:
Denies: Depression, nervousness, or mood swings
Endocrine:
Denies: Heat/cold intolerance, frequent urination, thirst, change in appetite
Hematologic:
Denies: Bleeding, bruising, lymphadenopathy

PMH: Reviewed and updated.
[ACTIVE PROBLEMS W/O DATES]

CURRENT MEDICATION LIST:
[ACTIVE MEDICATIONS]

FAMILY HISTORY:
Family history of asthma:

SOCIAL:
Occupation:
Lives with:
Marital Status:
Tobacco/drugs:
Alcohol use:

OBJECTIVE:
[VITALS FOR TODAY]
[LAST HT WITH DATE]
[LAST WT WITH DATE]
[BMI WITH CAPTION]
BP: [BPXRM BP]
PULSE: [LAST PULSE]

ALLERGIES REVIEWED:
[ALLERGIES/ADR]

EXAM
GENERAL: Alert & oriented x 3, Well-developed, well-nourished, and in no acute distress.

HEENT: External ear and TMs clear. Nasal mucosa normal. Pharynx without erythema, swelling, or exudate. No sinus tenderness on palpation

NECK: No lymphadenopathy. No masses noted. Supple with full ROM. Thyroid not enlarged.

RESPIRATORY: Clear to auscultation bilaterally. Normal respiratory effort.

HEART: Regular rate and rhythm. Normal S1 and S2. No murmurs or rubs or gallops.

EXTREMITIES: No edema, clubbing, cyanosis, ulcers, nor atrophy.

SKIN: No rashes, induration, or nodules.

Recent Labs:
[LAST LAB CHEM 7]
[LAST LAB LFT]
[LAST LAB LIPIDS]
[LAST LAB MACRO/CREA]
[LAST LAB TSH]
[LAST LAB GLUCOSE]

ASSESSMENT:
[V POV MULTI-LINE]

Last Pulmonary Function Test:

PLAN:
Medications

After this visit Asthma Step is:

Referrals:

Follow up: RTC month(s)
Follow-up prn increased symptoms



Quentin N Burdick Memorial TIU Template

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-----
Quentin N. Burdick Memorial Health Care Facility
ASTHMA MANAGEMENT CLINIC
-----

|PATIENT NAME| is a |PATIENT AGE| year old |PATIENT SEX| who presents for management of
asthma.

See consult from {FLD:BEL PROVIDER LIST2} {FLD:DATE}.

SUBJECTIVE:
{FLD:IHS WORD PROCESSING}

Asthma Control Test Score: {FLD:EDIT BOX3}
Well Controlled: >20
Not Well Controlled: 16-19
Very Poorly Controlled: Less than 15

Daytime Sx: {FLD:DAYTIME SX}

Nighttime Awakening: {FLD:NITETIME SX}

Interferes w/ normal activity: {FLD:INTERFERES ACTIVITY}

SA Beta2-agonist use: {FLD:DAYTIME SX}

Exacerbations requiring oral steroids in the past year: {FLD:EDIT 10}

Adherence:
{FLD:IHS WORD PROCESSING}

Inhaler Technique:
{FLD:IHS WORD PROCESSING}

Asthma Triggers:
{FLD:BEL RX ASTHMA TRIGGERS}
Other: {FLD:TEXT (1-20)}

Tobacco Use/Exposure:
{FLD:BEL RX ASTHMA TOBACCO}

Comorbidities:
{FLD:BEL RX ASTHMA COMORBIDITIES}

Peak Flow Monitoring:
Personal best peak flow: {FLD:EDIT BOX3}
Average peak flow past 2 - 4 weeks: {FLD:EDIT BOX3}
% Best peak flow {FLD:BEL RX ASTHMA BEST PEAK FLOW}

```

```

OBJECTIVE:

ALLERGIES REVIEWED:
{ALLERGIES/ADR}

VACCINES REVIEWED:
{IMMUNIZATIONS DUE}

Spirometry Results:
Date of Last PFT: {FLD:DATE}
FEV1% Predicted: {FLD:EDIT BOX3}
FEV1/FVC: {FLD:EDIT BOX3}

ASSESSMENT:

Asthma Severity:
{FLD:BEL RX ASTHMA SEVERITY}

Asthma Control:
{FLD:BEL RX ASTHMA LEVEL OF CONTROL}

PLAN:
1) Recommended Action for Treatment: {FLD:BEL RX ASTHMA TREATMENT}
2) Current step (After today's visit): {FLD:BEL RX ASTHMA STEP}
3) Rescue Medications: {FLD:BEL RX ASTHMA RESCUE}
4) Controller Medication:
{FLD:BEL RX ASTHMA CONTROLLER}
5) Short course of oral systemic corticosteroid indicated: {FLD:YES/NO*}

Follow-up: Patient to return to pharmacy on {FLD:DATE} or as needed for increased symptoms.

{FLD:CHECKBOX1}- Differences between rescue and controller medications

{FLD:CHECKBOX1}- Avoidance of Environmental Exposures:
{FLD:BEL RX ASTHMA AVOIDANCE OF ENV}

{FLD:CHECKBOX1}- Importance of Adherence

{FLD:CHECKBOX1}- Inhaler Technique

{FLD:CHECKBOX1}- Detailed asthma action plan provided and discussed

{FLD:CHECKBOX1}- Self-monitoring

{FLD:CHECKBOX1}- Education materials provided

Best contact number to reach patient: {FLD:TEXT (1-20 CHAR)}

Total time spent with patient: {FLD:TEXT (1-10 CHAR)}1 minutes

```



Opportunity # 4: Reminder Dialogs

Reminder dialogs empower users to document multiple pieces of information at the same time

- Write a note
- Record vitals
- Place orders for medications, labs, consults, etc
- Document health factors and education topics
- Document Vaccinations
- Add CPT codes to visit documentation



Example of a Reminder Dialog

Reminder Dialog Template: ACT reminder dialog

Asthma Intake Screening

DEMO, PATIENT H is a MALE who is 6 yrs old.

PCP: PHONE: 520-993-9010 (home)/2222222222 (office)

CHIEF COMPLAINT: Patient presents today for review of asthma.

Subjective:

Enter asthma-related vital signs:

- Best Peak Flow:
- Peak Flow Today:
- FEV1/FVC:
- Days missed work/school due to asthma:
- Asthma symptom-free days:

Asthma Triggers: (Select all that apply)

- Previously documented asthma triggers: CHANGE IN WEATHER - Jun 12, 2024
- Air pollutants
- Animals
- Change in weather
- Cockroaches
- Dust mites
- Exercise
- Menses
- Mold
- Pollen
- Strong emotional expression
- Tobacco smoke
- Viral infection
- Other trigger

Smoking / Tobacco History: (Select all that apply)

- Previously documented tobacco and smoking history: EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE - Jun 12, 2024 NEVER USED SMOKELESS TOBACCO - Dec 20, 2023 NEVER SMOKED - Dec 20, 2023 FORMER E-CIGARETTE USER - Jun 12, 2024
- E-cigarettes
- Tobacco & smoking exposure
- Smokeless tobacco (chewing or dip tobacco)
- Smoking Tobacco (Cigarettes, Cigars)

Asthma Questionnaire:

Asthma Control Test: (Optional)

Objective:

Current asthma controller medications:
None documented

Current asthma rescue medications:
None documented

Immunizations Due: DTAP,NOS (past due)
POLIO,NOS (past due)
HEP B,NOS (past due)
VARICELLA (past due)
HEP A,NOS (past due)
FLU,NOS (due)

Physical Exam:

Assessment:
Asthma severity is
Asthma control is

Plan:

Asthma action plan filled out and provided to patient
<http://https://aafa.org/asthma/asthma-treatment/asthma-treatment-action-plan/>

Education Provided (Select all that apply):

- Self management plan
- Disease Process
- Follow up

* Indicates a Required Field



Opportunity # 5: Guideline-Based Order Menus

Guideline-based order menus:

- Encourage clinicians to order the most appropriate medication
- Reduce decision fatigue
- Simplify the medication ordering process



Fort Yuma Ordering Menu

Asthma Step Up Therapy/COPD	
<p>Adult Asthma</p> <p><u>Step 1: symptoms < 2x per month</u> Budesonide/Formoterol 80mcg 1 puff PRN (max: 16 puffs per day) #120</p> <p><u>Step 2 symptoms > 2 x per month</u> Mometasone 200 mcg 1 puff QD PRN #120 AND Albuterol 90 mcg 2puffs Q6H PRN</p> <p>OR Budesonide/Formoterol 80 mcg 1 puff PRN (max 16 puffs per day)# 120 OR Montelukast 10mg po QHS (ages 15 yrs to Adult)</p> <p><u>Step 3 symptoms most days of waking with asthma >1x per week</u> Budesonide/Formoterol 160mcg 2 puffs QD#120 AND Budesonide/Fomoterol 80mcg 1 puff PRN (max: 16 puffs per day) #120</p> <p>OR Budesonide/Formeterol 160 mcg 2 puffs QD #120 AND Albuterol 90 mcg 2puffs Q6H PRN</p> <p>OR Mometasone 200mcg 2puffs BID #120 and Albuterol 90 mcg 2puffs Q6H PRN</p>	<p>Pediatric Asthma</p> <p><u>Step 1: symptoms <2x per month</u> Albuterol 90mcg 2puffs Q6H PRN</p> <p><u>Step 2 symptoms or need for reliever > 2x per month</u> Mometasone HFA 100 mcg 1 puff every evening and Albuterol 90 mcg 2puffs Q6H PRN</p> <p><u>Step 3: symptoms most days or waking with asthma > 1x per week</u> Budesonide/Formoterol 160mcg 1 PUFF BID and Albuterol 90mcg 2puffs Q6H PRN</p> <p>OR Mometasone 100 mcg 1 puff BID and Albuterol 90 mcg 2puffs Q6H PRN</p> <p>OR Mometasone HFA 100 mcg 1 puff every evening and Montelukast 5mg Chewable QHS (if 6yo to 14 yo) Montelukast 4 mg Chewable (if 1yo to 5 yo) and Albuterol 90mcg 2puffs Q6H PRN</p>



Opportunity #6

Build an Asthma Health Summary

Available Reports	Health Summary Asthma
Imaging (local only)	***** CONFIDENTIAL PATIENT INFORMATION -- 7/12/2024 2:35 PM [LTL] *****
Report	***** ZANY,CHILD J #38338 <D> (ASTHMA SUMMARY) pg 1 *****
Clinical Reports	
Graphing (local only)	
Health Summary	----- BRIEF DEMOGRAPHICS -----
Adhoc Report	
Adult Regular	ZANY,CHILD J DOB: DEC 5, 2011
Alter Visit Summ	CASS LAKE HOSPITAL HEALTH RECORD NUMBER: 38338
Anticoagulation	1245 MAPLE AVE, CASS LAKE, MN, 56633
Asthma	Home Phone: 218-987-0004 Work Phone: None
Cass Lake Hea	Cell Phone: None Other Phone: None
CL Dental Heal	Preferred Language: ENGLISH
Current Medical	
Diabetes	
Diabetic Values	
Ehr	
Health	***** CONFIDENTIAL PATIENT INFORMATION -- 7/12/2024 2:35 PM [LTL] *****
Immunizations At	
Lab List	ASTHMA PATIENT CARE SUMMARY Report Date: Jul 12, 2024
Med List / Well	
Medication Rec	ZANY,CHILD J HRN: 38338
Medication Rec	DOB: Dec 05, 2011 Age: 12 M Asthma Diagnostic Tag: Accepted
Med - Most Rec	DESIGNATED PRIMARY CARE PROVIDER:
Med - Active Op	
Optometry	
Patient Problem	Asthma-Related Problem List:
PQRS 15	CL6 Asthma (J45.909)
PQRS DM 15	Asthma Severity: 2-MILD PERSISTENT
PQRS Mav 14	Date of Onset: JUL 02, 2024
Pre Diabetes	Date Last Updated: JUL 02, 2024@14:05:41
Prenatal	
PwH	Most Recent Control: Jul 02, 2024 WELL CONTROLLED
Visit And Vitals	
Womens Health	
Daily Order Summar	Asthma-Related FAMILY HEALTH HISTORY:
Order Summary for	Date Last Mod Relation/Status/Diagnosis
Chart Copy Summar	07/02/24 NATURAL MOTHER Status: LIVING
Outpatient RX Profi	Family history of asthma Diagnosed as a child (282.5); Age at Onset: None
Eye/glass Prescrip	07/02/24 BROTHER Status: LIVING
	Family history of asthma Multiple hospitalizations for asthma exacerbations (282.5); Age at Onset: 6
	Personal Best Peak Flow 95 liters/minute on Jul 12, 2024
	Peak Flow Zones Green (80-100%) 76-95 liters/minute
	Yellow (50-79%) 48- 75 liters/minute

Visit Vitals

6 Vital Measurements Available

Default Units	24-Jun-2024 18:58	Range	Units
Peak Flow			
Best Peak Flow			
Fef 25-75			
Fev1/FVC			
Asthma Symptom Free Days			
Asthma Work/School Days Missed			

This example is using 4 of the 6 vital measurements

Asthma Work/School Days Missed	3		
Asthma Symptom Free Days	14		
Peak Flow	90		
Best Peak Flow	95		

Last 5 Visits w/LUNG FUNCTION Measurements			
DATE	FEV1/FVC	Highest Visit Peak Flow	FEF 25-75
Jul 12, 2024		90	

Asthma Symptom-Free Days:	
Visit Date	Symptom-Free Days
Jul 12, 2024	14
Jul 02, 2024	14

Asthma Work/School Days Missed:	
Visit Date	Work/School Days Missed
Jul 12, 2024	3



Integrated Problem List

Asthma Diagnosis

Integrated Problem Maintenance - Add Problem

Problem ID: CL-6 Priority: [dropdown] Use as POV Primary Save Cancel

* SNOMED CT: Asthma [dropdown] asthma [dropdown] Get SCT Pick list

* Status: Chronic Sub-acute Episodic Social/Environmental Inactive Personal Hx

* Required Field

Provider Text: [text box]

Asthma J45.909

Date of Onset: 07/02/2024 [calendar icon]

Qualifiers: Severity: Mild to moderate Clinical Course: [dropdown] Episodicities: Ongoing episode [dropdown]

Asthma Classification: MILD PERSISTENT [dropdown] Control: [dropdown]

Comments: [dropdown menu: WELL CONTROLLED, NOT WELL CONTROLLED, VERY POORLY CONTROLLED] Add Delete

Is Injury:

Narrative: [text box] Date: [text box] Author: [text box]

Care Plan Info: Add Visit Instruction / Care Plans / Goal Activities

Goal Notes	Care Plans	Visit Instructions	Care Planning Activities
			Asthma monitoring Follow-up 1 month

- Choose an Asthma ICD code from the IPL
- Date of Onset
- Qualifiers
- Classification
- Control
- Add Visit Instructions/Care Plans/Goal Activities

Asthma-Related Problem List:

```
CL6 Asthma | (J45.909)
Asthma Severity: 2-MILD PERSISTENT
Date of Onset: JUL 02, 2024
Date Last Updated: JUL 02, 2024@14:05:41
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Most Recent Control: Jul 02, 2024 WELL CONTROLLED
```



Family History

The screenshot shows an EHR interface with a 'Family History' dialog box open. The dialog box contains the following information:

- Relation: NATURAL MOTHER
- Status: LIVING
- Age at Death: (empty)
- Multiple Birth: (empty)
- Multiple Birth Type: (empty)
- Condition: Family history of asthma | Diagnosed as a child
- ICD: Z82.5

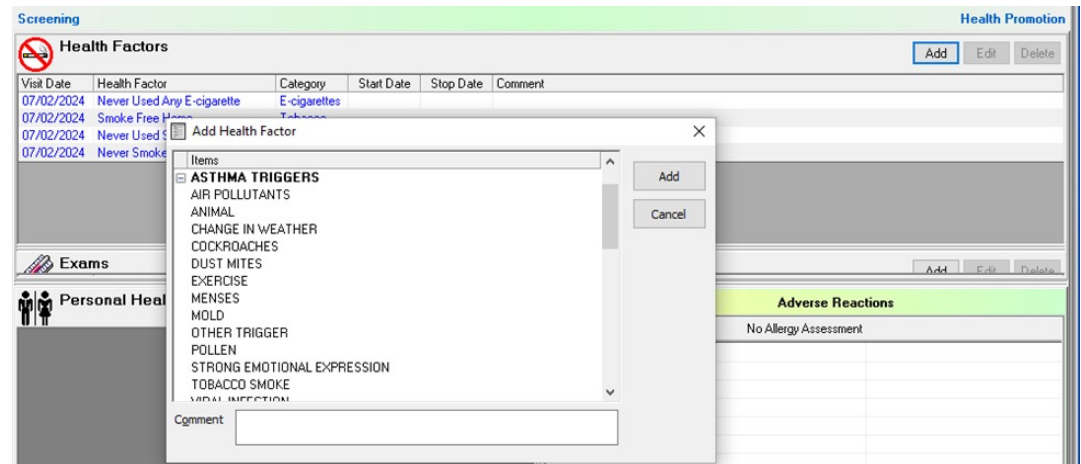
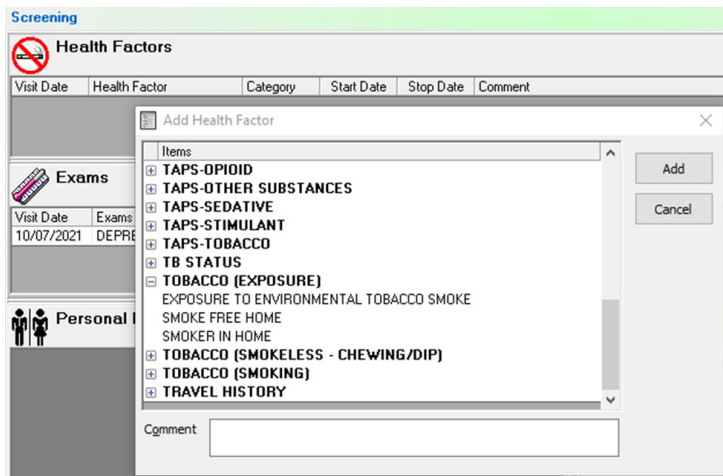
The background table shows a 'BROTHER' relation with a status of 'LIVING' and a provider narrative: 'Family history of asthma | Multiple hospitalizations for asthma'. The age at diagnosis is listed as 6.

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Asthma-Related FAMILY HEALTH HISTORY:
Date Last Mod Relation/Status/Diagnosis
07/02/24     NATURAL MOTHER   Status: LIVING
              Family history of asthma | Diagnosed as a child (Z82.5); Age at
              Onset: None
07/02/24     BROTHER       Status: LIVING
              Family history of asthma | Multiple hospitalizations for asthma
              exacerbations (Z82.5); Age at Onset: 6
    
```



Health Factors



Triggers:
 AIR POLLUTANTS Yes, documented on Jul 02, 2024
 EXERCISE Yes, documented on Jul 02, 2024

Last TOBACCO (SMOKING) Screening: HF: NEVER SMOKED 07/02/24

Last TOBACCO (SMOKELESS) Screening: HF: NEVER USED SMOKELESS TOBACCO 07/02/24

Last TOBACCO (EXPOSURE) Screening: HF: SMOKE FREE HOME 07/02/24



Asthma Medications

Action	Chronic	Outpatient Medications	Status	Process	Issued	Last Filled	Expires	Refills Remaining
	✓	BUDESONIDE-FORMOTEROL 80-4.5 MCG (120S) (BRAND) Qty: 10.2 for 30 days Sig: INHALE 2 PUFFS BY MOUTH TWICE DAILY AND INHALE 1 PUFF FOUR TIMES A DAY IF NEEDED - RINSE OUT MOUTH AFTER EACH USE DBP	Active		03-Apr-2024	03-May-2024	03-Apr-2025	4
	✓	ALBUTEROL 0.083% SOLN,NEB Qty: 90 for 30 days Sig: INHALE CONTENTS OF ONE (1) NEB BY MOUTH FOUR TIMES A DAY IF NEEDED FOR SHORTNESS OF BREATH DBP	Active		12-Jul-2024	12-Jul-2024	12-Jul-2025	3

Patient medication list has 2 asthma medications but the Asthma Health Summary only has 1 medication. Taxonomy at the site needs updating.

Number of Reliever Fills in past 6 months: 1

Number of Controller Fills in past 6 months: 0

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-----RELIEVER MEDICATIONS (FILLED IN THE PAST 6 MONTHS)-----
7/12/2024 (C) ALBUTEROL 0.083% SOLN,NEB #90 (30 days)
    INHALE CONTENTS OF ONE (1) NEB BY MOUTH FOUR TIMES A DAY IF
    NEEDED FOR SHORTNESS OF BREATH DBP 3 refills left.
    
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-----CONTROLLER MEDICATIONS (FILLED IN THE PAST 6 MONTHS)-----
    
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Asthma Taxonomies

- Multiple **asthma taxonomies**
- Site updated based on local drug file
- Update in iCare or RPMS

BAT ASTHMA CONTROLLER MEDS
BAT ASTHMA INHALED STEROIDS
BAT ASTHMA LEUKOTRIENE MEDS
BAT ASTHMA SHRT ACT INHLR MEDS
BAT ASTHMA SHRT ACT RELV MEDS



Questions & Discussion



