## Area
### I. Pathophysiology

1. Teach students with asthma using simple language and appropriate educational aids the following concepts:
   a. normal lung anatomy and physiology
   b. changes in lungs
      i. inflammation
      ii. bronchial hyperresponsiveness
      iii. bronchial wall edema
      iv. excess mucous secretion
      v. smooth muscle contractions
   c. processes occurring in the lungs during an asthma exacerbation
   d. signs and symptoms of asthma associated with its underlying pathophysiology
   e. asthma is a chronic airway disease with varying levels of asthma severity and flare-ups/exacerbations
   f. commonly used terms such as asthma control

## Area
### II. Factors Contributing to Acute and Chronic Asthma

1. Describe to a student with asthma:
   a. differences between an allergen and an irritant
   b. common triggers that provoke asthma
   c. triggers vary according to individuals
   d. the role of active and passive tobacco smoke exposure in the control of asthma

2. Explain how specific conditions may relate to the control of asthma
   a. allergic conditions (rhinitis, sinusitis, eczema)
   b. infections

## Area
### III. Gather Information about a Student with Asthma and his/her Family

1. Perform a history for a student with asthma
   a. Using the Asthma Intake Form Interview a student/family about:
      i. Pattern of current symptoms
      ii. Impact of asthma on the quality of life, activity level, and absenteeism
      iii. Risk of experiencing unnecessary asthma burden as indicated by
         - frequent use of systemic corticosteroids
         - over use of beta agonists
         - frequent use of emergent care
         - hospitalizations
      iv. Asthma control
      v. Identify triggers and exercise induced asthma/bronchospasm
      vi. Medications used for asthma (prescribed and over the counter)
      vii. Primary source of healthcare for an individual with asthma
   b. Apply effective interviewing skills to get a richer understanding
      i. Ask open-ended questions
      ii. Maintain eye contact
      iii. Motivational Interviewing Techniques

2. Determine level of asthma control

3. Recognize signs of an acute exacerbation
   a. Cyanosis
   b. Accessory muscle use
   c. Labored breathing
iv. Clipped speech
4. Recognize a presentation that requires arranging emergent care
5. Identify how a student with asthma is currently recognizing and acting on changes in his or her asthma control level
6. Identify educational needs of student and family for planning and interventions by identifying
   a. Knowledge and skills of student with asthma and his or her family regarding asthma and treatment
   b. Knowledge of potential and known triggers in student’s home, school, or work
   c. How student with asthma is currently recognizing and acting on changes in his or her asthma control level and following Colorado School Asthma Care Plan, if applicable
   d. Readiness and ability to learn

IV. Asthma Management

Medications and Delivery Devices: Support Appropriate Use of Asthma Medications

1. Discuss:
   a. Mechanism of action (bronchodilator, anti-inflammatories)
   b. Role in therapy (quick relief, long-term control)
   c. Side effects, interactions, safety
   d. Administration route, dose, frequency, and duration
2. Demonstrate correct techniques for devices (MDI, DPI, spacers, nebulizers)
   a. Assembly
   b. Administration
   c. Cleaning
   d. Replacement
   e. Trouble shooting
3. Identify whether or not student with asthma correctly demonstrates techniques for inhaled delivery devices for same areas above
4. Coach students for accurate inhaler technique
5. Discuss options to optimize inhaler technique, such as the use of spacers
6. Emphasize importance of taking medications as prescribed to control asthma and allergic diseases
7. Discuss the purpose of preventive immunizations

Behavioral and Environmental Modifications: Support a tailored asthma management and education plan tailored to the individual/family

1. Recommend strategies, at a basic level, to reduce, avoid, or manage common triggers:
   a. management of exercise-induced asthma
   b. infections
   c. allergies
   d. irritants
2. Allay concerns and fears regarding asthma and dispel myths believed
3. Share educational resources (paper-based and internet) with students and families affected by asthma identified by school nurse by providing resource or directions for accessing the resources
4. Describe strategies to assist student/family with asthma with financial burdens associated with his / her disease (If identify that financial burden is an issue, know who to refer to within your school system to support family.)
5. Share identified community resources that may be beneficial to the needs of students/ families with asthma

Asthma Management: Implement the Colorado School Asthma Care Plan
1. Promote and facilitate completion of the CO School Asthma Care Plan for each student with active asthma as defined by symptom experience or use of asthma medications in the last 2-3 years
2. Review the CO School Asthma Care Plan with student and assess understanding
3. Provide self-management education to support implementation of individualized Colorado School Asthma Care Plan:
   a. Review inhaler technique skills and provide demonstration
   b. Instruct student with asthma to assess asthma control using symptoms
   c. Coach a student how to effectively communicate his or her asthma related needs as a partner in his or her care with school personnel
   d. Review a student’s decision-making skills and confidence for using meds, recognizing and managing worsening asthma, seeking care and overall implementation of the plan
4. Review the CO School Asthma Care Plan with other school team members
5. Provide periodic follow-up and re-evaluation of the CO School Asthma Care Plan with the student
   a. Reassess asthma control level
   b. Assess and review use of symptoms in identifying asthma control
   c. Assess and review student’s decision making abilities to implement plan
   d. Assess adherence to plan
   e. Revise plan as needed

V. Organizational Issues
1. Know and follow policies that ensure safety and privacy of individuals with asthma e.g.,
   a. HIPAA
   b. FERPA
   c. OSHA
   d. Infection control
2. Maintain a program database to assist with documenting, monitoring and tracking services provided by school health team and needs and progress of students and families affected by asthma:

VI. Referral and Professional Networking
1. Share identified community resources that may be beneficial to the needs of an individual with asthma
2. Share educational resources (paper-based and internet) identified by school nurse and provide or instruct on where to access those resources
3. Describe strategies to assist an individual with asthma with financial burdens associated with his / her disease (If identify that there are financial, use district resources)
4. Collaborate with school nurse, coaches, secretary, PE teacher, teachers and other school community members

VII. Teamwork
1. Function effectively within interprofessional teams
   a. foster open communication
   b. provide mutual respect
   c. foster shared decision making to achieve quality student care
2. Coordinate asthma care with the school community as directed by the school nurse (such as on field trips)