The Illinois Department of Public Health (IDPH) is pleased to share the 2015-2020 Illinois Asthma State Plan, Addressing Asthma in Illinois, 4th edition. The asthma strategic plan is regularly updated to reflect innovation in the strategies and interventions designed to address asthma in Illinois.

Approximately 740,000 people in Illinois have asthma\(^1\). In 2010, 183 people died from asthma\(^2\). That is one person every two days. Of those who died from asthma, 48 percent were 35 to 64 years old at time of death\(^2\). One in two children with asthma missed at least one day of school during the previous year due to their asthma and, during the past 12 months, Illinois adults with asthma were unable to work or carry out their usual activities for a total of 3,089,988 days\(^3,4\).

The Illinois Asthma State Plan is a framework for action, collaboration, and communication. There are three priority areas within the plan with goals and objectives that have been developed by the Illinois Asthma Partnership (IAP). Each priority area addresses specific concerns and needs using a public health approach to reflect the plan’s overarching goal to reduce the burden of asthma.

IDPH extends its appreciation to those who serve on the IAP and contributed their time and expertise to the development of this plan.

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\(^1\) Illinois Behavioral Risk Factor Surveillance System (BRFSS), Illinois Department of Public Health, 2013

\(^2\) WONDER, U.S. Centers for Disease Control and Prevention, released 2012

\(^3\) BRFSS Asthma Call-back Survey, U.S. Centers for Disease Control and Prevention, 2007-2010

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Executive Summary

Asthma is a chronic lung disease caused by inflammation of the airways and episodes of airflow obstruction. Asthma episodes or attacks can vary from mild to life-threatening. Asthma may manifest at any age, and varies greatly in the frequency, severity and duration of symptoms throughout a lifetime. People with asthma require frequent interaction with the health care system to manage their asthma. When asthma is properly managed, inpatient hospitalizations and emergency department visits can be prevented. Although asthma cannot be cured, symptoms can be controlled with appropriate medical care and combined efforts to control exposure to triggers, allowing people with asthma to lead lives largely unrestricted by their asthma.

In 1998, the Illinois Asthma Task Force was formed and developed the “Addressing Asthma in Illinois” plan. In 1999, the IDPH Illinois Asthma Program received a three-year grant from the U.S. Centers for Disease Control and Prevention (CDC) to develop a program that included a statewide asthma partnership.

The IAP was involved in collaborating with IDPH on the first Illinois Asthma State Plan, Addressing Asthma in Illinois in 2002, a second edition in 2006, and a third version in 2009. The 2009 asthma state plan priorities were: advocacy and policy; data, assessment, and outcomes; education; school; occupational asthma; and sustainability. This new edition focuses on building infrastructure, implementing home- and school-based services, and healthy systems improvement.

In September 2014, IDPH was awarded a competitive five-year grant from CDC to implement three primary activities for state-funded asthma programs:

- Building infrastructure,
- Implementing home- and school-based services, and
- Health systems interventions.

The new funding opportunity and the expiration of the third edition of the state plan laid the ground work for the re-structuring of the Illinois Asthma Partnership (IAP) and a shift in focus for the Illinois State Asthma Program. These changing priorities are reflected in this plan as partners around the state focus on asthma interventions in schools, homes, and the health care system.
Asthma is on the rise. The number of people diagnosed with asthma increased by 5.6 million from 2001 to 2011\textsuperscript{5}. Of the 25.9 million U.S. residents who reported having asthma in 2011, 12.7 million experienced an asthma attack during the previous year\textsuperscript{5}. Asthma affects people of all races, sexes, and ages, living in every region of the U.S. It occurs more often among children (among boys more than girls), women, black people, people of Puerto Rican descent, people living in the Northeast, those living below the federal poverty level, and people with disabilities.

Asthma affects approximately 6.8 million children in the U.S., is the third leading cause of preventable hospitalizations, and the leading health-related cause of school absenteeism. Children with asthma miss twice as many school days as other children, on average. Other symptoms also may restrict activities and impair the quality of life for a child with asthma.

Among adults, asthma is the leading work-related lung disease. Employed adults 18 years of age and over missed 14.2 million work days due to asthma\textsuperscript{5}. Keeping asthma under control can be expensive; it causes financial burdens, including lost work days; reduced productivity; lost income; and low quality of life for persons with asthma and disruption to family and caregiver routines.

Asthma’s estimated total cost to society was $56 billion in 2007 (2009 dollars), including medical expenses ($50.1 billion per year), loss of productivity from missed school or work days ($3.8 billion per year), and premature deaths ($2.1 billion per year)\textsuperscript{6}.

A Snapshot of National Asthma Data

In 2012,

- 18.7 million noninstitutionalized adults have asthma\textsuperscript{7}
- 6.8 million noninstitutionalized children have asthma\textsuperscript{7}
- 14.2 million patient visits to physician offices with asthma as primary diagnosis\textsuperscript{7}
- 1.3 million patient visits to the hospital outpatient department with asthma as the primary diagnosis\textsuperscript{7}
- 1.8 million patient visits to the hospital emergency department with asthma as the primary diagnosis\textsuperscript{7}
- 3,345 asthma deaths occurred\textsuperscript{7}


Illinois Asthma Data At-A-Glance

In Illinois, the past few years have shown some promising trends—asthma prevalence has remained stable since 2000, asthma hospitalization has declined almost 20 percent, and asthma mortality has declined around 30 percent\(^8\). Despite these gains, asthma continues to affect about 1.3 million people, or 13 percent of the Illinois population (BRFSS, 2011).

According to the Illinois Asthma Call-Back Survey:

- More children (64.7\%) than adults (35.7\%) with asthma had a routine checkup in the past 12 months\(^8\);
- Emergency department visits in the past year due to asthma among adults were highest for those who were male, age 45 to 54, black and of low socio-economic status\(^8\);
- Emergency department visits in the past year due to asthma among children were highest for those who were female, ages 0 to 4, and black\(^8\);
- Less than half of adults and children (28.7\% and 45.3\%) with asthma received an asthma action plan\(^8\);
- Less than half of adults and children have been advised to change things in their home, school, or work to address triggers and improve their asthma (40.3\% and 47.1\%)\(^8\);
- Less than half of adults and children have been taught how to use a peak flow meter to adjust daily medications (44.8\% and 47.1\%)\(^8\).

A Snapshot Of Illinois Asthma Data

- 1.3 million noninstitutionalized adults have or had asthma\(^9\)
- 13.6 \% of children currently have asthma\(^10\)
- 19,968 hospitalizations with asthma as a primary diagnosis\(^11\)
- 72,810 emergency department visits with asthma as the primary diagnosis\(^11\)
- $383.3 million spent on asthma hospitalizations\(^11\)
- 183 asthma deaths in 2010\(^12\)

\(^11\) Discharge Data; Office of Policy, Planning and Statistics; Illinois Department of Public Health, 2011.
\(^12\) U.S. Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2010 on CDC WONDER Online Database, released 2012.
Asthma: A Public Health Priority

It is possible to live well with asthma. Effective, evidence-based strategies in both the health care and public health sectors are available, yet the burden of asthma remains high, and disturbing disparities in asthma prevalence, asthma control, emergency department visits, and hospitalizations persist\textsuperscript{13,14}. This paradox of continuing high burden despite the availability of effective strategies stems in part from four problems: (1) gaps in access to health care or medication, (2) inconsistent clinician adherence to practice guidelines, (3) poor asthma self-management practices by people with the disease, and (4) a lack of coordination between health care and public health sectors, which is necessary to provide comprehensive, rather than piecemeal, asthma control services\textsuperscript{15}.

A systematic review of public health interventions for asthma found that skills-based asthma self-management education is effective for both children and adults\textsuperscript{16}. Further, a Guide to Community Preventive Services review indicates that home-based, multi-trigger, multi-component environmental interventions are effective for children\textsuperscript{17}.

Asthma champions across Illinois have implemented a variety of programs in school and daycare settings and have established relationships with education agencies. While this work provides a strong foundation, few programs take a comprehensive approach—identifying children with poorly controlled asthma, linking them to health care providers and National Asthma Education and Prevention Program Expert Panel Report (NAEPP EPR-3) guidelines-based care, educating them on self-management, providing a supportive school environment, and referring to or providing home trigger reduction services for those who need them.

\textsuperscript{13} Guidelines for the Diagnosis and Management of Asthma (EPR-3) http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines publication date is July 2007.
Illinois State Asthma Plan Framework

The Illinois State Asthma Plan is a joint effort of the state asthma program and member organizations of the IAP. Led by the executive committee and state program staff, the planning process was guided by a set of agreed upon criteria and priority areas. Within the priority areas, goals were prioritized and selected by state asthma plan workgroups utilizing the established criteria.

Criteria for the Plan
This plan was developed using these guiding principles:

- Existing infrastructure
- Evidence of effectiveness
- Potential to improve CDC’s National Asthma Control Program outcomes
- Feasibility to implement within five years
- Sustainability
- Political and economic support

Priority Areas

In alignment with the national asthma priorities set for the nation by the CDC, the Illinois Asthma State Plan has identified three priority areas:

Building Infrastructure
Asthma partners will develop and advocate for asthma-friendly policies at a systems level. The IAP will work to transform the working relationships between public health and health care systems by forging new relationships in the health care sector. Additionally, surveillance data will be used to drive decisions around policy, asthma control services, and partnership recruitment.

Implementing Home- and School-based Services
Asthma partners will expand access to comprehensive asthma control services through home-based and school-based strategies by offering asthma self-management education resources for patients, caregivers, and health care providers. Home- and school-based services will include the implementation of practice or evidence-based programs and should include information on controlling exposure to asthma triggers.

Health Systems Improvement
Asthma partners will build relationships with health care organizations to improve coverage, reimbursement, delivery, and use of clinical and other services. Quality improvement activities based on national guidelines will be utilized to assist asthma patients in achieving and maintaining control.
Addressing Asthma in Illinois
Mission - Goals - Priority Areas

Mission

Improve the quality of life for people with asthma and their caretakers through building infrastructure, implementing home- and school-based services, and health systems improvements.

Goals

- Increase the number of people with asthma who have better control of their disease and better quality of life
- Expand comprehensive asthma control services statewide
- Decrease disparities in asthma care, management, and health outcomes
- Reduce morbidity and mortality from asthma
- Sustain and improve asthma prevention, control, and education efforts statewide

Priority Area: Building Infrastructure

Asthma partners will develop and advocate for asthma-friendly policies at a systems level. The IAP will work to transform the working relationships between public health and health care systems by forging new relationships in the health care sector. Additionally, surveillance data will be used to drive decisions around policy, asthma control services, and partnership recruitment.

Goal 1: Expand and sustain comprehensive and effective asthma control services to priority populations. In Illinois

- By December 31, 2016, identify best practices in community-based approaches to promote coordinated, optimal asthma care.

- By December 31, 2020, disseminate community-based asthma approaches targeting areas of Illinois with a disproportionate burden of asthma through targeted outreach.

- On an ongoing basis, increase membership/participation on the IAP by identifying and recruiting new members to support a seamless alignment of asthma control services across the public health and health care sectors.
Goal 2: Raise awareness about the burden of asthma in local communities

- On an ongoing basis, maintain and enhance existing statewide surveillance data sources.

- On an ongoing basis, disseminate surveillance and evaluation findings tailored to key stakeholder audiences.

- By December 31, 2016 and annually thereafter, monitor and improve the efficacy of asthma control services, through the implementation of individual evaluation plans for priorities areas identified in the Illinois Asthma Strategic Evaluation Plan.

Goal 3: Identify and address key policy issues regarding asthma

In the summer of 2015 an Asthma Policy Forum was held in Chicago.

- By December 31, 2016, develop a comprehensive list of evidence-based policies supportive of asthma control and disseminate to stakeholders across the state.

- By December 31, 2017, and every other year thereafter, convene an Asthma Policy Forum to explore evidence-based policies for Illinois.

- By December 30, 2017, and every other year thereafter, explore current policies at the state- and local-levels and identify where gaps remain.

- By December 31, 2017, and annually thereafter, develop/update an asthma policy agenda to share with IAP and key stakeholders for action.

Priority Area: Implementing Home- and School-based Services

Asthma partners will expand access to comprehensive asthma control services through home-based and school-based strategies by offering asthma self-management education resources for patients, caregivers, and health care providers. Home- and school-based services will include the implementation of practice or evidence-based programs and should include information on how to control exposure to asthma triggers.
Goal 1: Educate patients, caregivers, (e.g., family members, school staff, home visitors) and health care providers using evidence-based program or products based on National Asthma Education and Prevention Program (NAEPP) guidelines.

- By December 31, 2015, and every other year thereafter, use statewide surveillance to identify areas in Illinois which have a disproportionate asthma burden.

- By December 31, 2017, design strategies to promote effective, evidence-based asthma self-management programs targeted to areas previously identified as having a disproportionate asthma burden (e.g., provide education in clinic /primary care /community /school / home settings).

- By December 31, 2018, promote the use of asthma training programs (e.g., academic detailing, train-the-trainer, etc.) for primary care providers, nursing personnel, allied health workers, community-based health workers, and peer educators about self-management education for people with asthma, their care providers, and community supports (e.g., teachers).

Goal 2: Increase linkages to information about guideline-based care for people with asthma

- Explore the feasibility of an online asthma information clearinghouse that is culturally appropriate and user friendly (i.e., accessible to people with disabilities, with low literacy, or who are multi-lingual) for people with asthma, their care providers and community supports, and health care professionals which identifies and describes effective, evidence-based asthma education programs, self-management strategies, and resources.

- By December 31, 2018, strategically disseminate information about the statewide asthma education/self-management clearinghouse resources to asthma partners.

Goal 3: Inform stakeholders about evidence-based policies supportive of asthma control including trigger reduction and improved air quality
• By December 31, 2018, provide information to professional/association websites and newsletters and speak at local and regional professional conferences (e.g., medical conferences, nursing conferences including school nurse conferences, respiratory health conferences, etc.) to educate health care professionals about evidence-based asthma control policies and their role in advocating for policies that reduce exposure to known asthma triggers and improve overall air quality.

• By December 31, 2018, utilize the online asthma information clearinghouse to inform those interested in community/public health issues, including local health departments, schools, and other community organizations and businesses, about asthma control policies particularly in the reduction of known asthma triggers and improvement in overall air quality statewide.

Priority Area: Health Systems Improvement

Asthma partners will build relationships with health care organizations to improve coverage, reimbursement, delivery, and use of clinical and other services. Quality improvement activities based on national guidelines will be utilized to assist asthma patients in achieving and maintaining control.

Goal 1: Increase linkages between public health and health care entities in Illinois to provide quality comprehensive asthma control services

• On an ongoing basis, advocate with hospitals and health departments for the inclusion of asthma treatment and control strategies in Community Health Improvement Plans and in community health needs assessments.

• On an ongoing basis, support community- and home-based programs to establish referral linkages with healthcare entities and health plans.

Goal 2: Promote proper diagnosis and treatment of asthma aligned with guideline-based care.
• By December 31, 2018, promote the use of clinical quality measures to support and direct guideline-based care within health systems.

• On an ongoing basis, improve and standardize care for students with asthma through a continuous quality improvement approach in Illinois’ school-based health centers.

**Goal 3: Increase coverage and reimbursement for comprehensive asthma control services (including asthma medications, devices, intensive self-management education, and home visits) in Illinois**

• By December 31, 2016, collect and analyze data to define the burden of asthma in Illinois and analyze health care coverage available for comprehensive asthma control services in Illinois including for the Medicaid eligible population.

• By December 31, 2018, disseminate information to insurers about health care coverage policies that are consistent with guidelines-based care for asthma.

• By December 31, 2018, develop policies encouraging appropriate qualifications/certifications for providers of comprehensive asthma control services in community- and home-based programs.

**Communication**

The Illinois State Plan 2015 – 2020 demonstrates a renewed commitment to effective use of communication resources to achieve identified goals. Strategies will be directed to areas defined as health communication (changes in knowledge, attitudes, and behavior), policy/stakeholder communication (coordination and replication of recommended activities), and dissemination of surveillance and evaluation findings.
The IAP recognized that excellent resources are available both on the national- and state-level to educate people with asthma in self-management skills. Initial steps are to identify relevant, guideline-based resources and explore the feasibility of an online information clearinghouse that is easy for targeted audiences to access. The use of social media and technology can also expand access and outreach efforts. Through the online information clearinghouse, training resources will support various medical and public health professionals, care givers, and community programs/workers in their efforts to inform and support people with asthma.

Policy/Stakeholder Communication

The IAP is committed to promoting best practices in community-based approaches to promote coordinated, evidence-based asthma care and disseminate these approaches, targeting areas of Illinois with a disproportionate burden of asthma. In an effort to align asthma control services across public health and health care sectors, the IAP will expand its membership and leverage member resources. In addition, it will review current policies at the state-and local-levels, identify gaps, and develop a list of evidence-based policies supportive of asthma control. The IAP will provide this information to medical professional and association websites and newsletters and speak at regional professional conferences to educate health care professionals about asthma control policies. It will also utilize the online asthma information clearinghouse to inform local health departments, schools, and other community organizations and businesses about asthma control policies. Information about the Illinois asthma burden, the impact of comprehensive asthma control services, and guidelines-based care will be shared with the Medicaid system and other health insurance programs to promote coverage and reimbursement for asthma control services.

Dissemination of Surveillance and Evaluation Findings

The IAP recommends the use of the existing surveillance systems (Hospital discharge, behavioral risk factor surveillance survey (BRFSS), and asthma call-back survey (ACBS)) to identify areas of disproportionate asthma burden, to define and inform about the burden of asthma in Illinois, and to monitor and improve programs through evaluation. The IAP will continue its lead role in the comprehensive publication “The Burden of Asthma in Illinois” as well as the development asthma burden briefs utilizing an enhanced list of statewide surveillance data sources. The IAP will be actively involved in the development of the Illinois Strategic Evaluation Plan and in the development and monitoring of individual evaluation plans for priority areas. Each of these plans will include a communication plan to ensure lessons learned are shared with targeted stakeholders.
The Illinois Asthma Partnership (IAP)

The IAP was created in 2000. The partnership has met consistently during this time and currently meets face-to-face twice a year. The partnership is comprised of three workgroups and an executive committee, with each meeting every other month via conference call.

**IAP Member Roles**
- Implement the Illinois asthma state plan
- Identify and analyze data sources for asthma surveillance and evaluation
- Develop professional knowledge and skills in asthma
- Communicate with IDPH and grant recipients
- Advise IDPH staff on issues related to asthma in Illinois

**Asthma Program Staff Roles**
- Guide the implementation of the Illinois asthma state plan
- Serve as a vehicle to coordinate communication between the local asthma consortia, Illinois’ evidence-based asthma interventions, and the IAP
- Coordinate the activities of the IAP workgroups and face-to-face meetings
- Communicate state program priorities
- Address needs voiced by IAP workgroups and members
- Provide technical assistance and resources for programs implemented through the IAP
- Document workgroup meetings

**IAP Executive Committee**
Two members serve as chair and co-chair. Members of the executive committee include the two co-chairs of each workgroup and designated members at large. Annually, Executive Committee members confirm their commitment to continue leadership roles with the IAP. When vacancies arise in chair or co-chair positions of the Executive Committee or co-chair positions of the workgroups, nominations are requested from participating members, with individuals selected by Asthma Program staff based upon input from participating members and in consultation with the chair and co-chair of the Executive Committee. Members at large are selected by Asthma Program staff in consultation with the chair and co-chair of the Executive Committee, with the number and expertise of members at large reflecting the needs and priorities of the program.
Duties:
- Assist with planning the partnership meetings twice per year
- Provide direction on annual priorities, strategies for leveraging health care reform for comprehensive asthma control services, and policies supportive of comprehensive asthma control.
- Lead in the development of the state asthma plan (every five years) and updates the plan as needed.
- Provide input to the Asthma Program’s strategic evaluation plan development and implementation.
- Facilitates respective workgroup conference calls, including agenda development.

Workgroups

**Surveillance and Evaluation Workgroup:** This workgroup compiles scientific information related to asthma, disseminates information to those who are interested and who need to know, guides the process of program evaluation by the Partnership and its collaborators, and promotes the use of information as the foundation for action in alleviating the burden of asthma.

**Environmental Asthma Workgroup:** This workgroup supports efforts to reduce exposure to multiple indoor asthma triggers and implement other environmental management strategies as part of comprehensive asthma control services. It promotes best practices and identifies technical resources to assess and improve indoor home environments and educate individuals with asthma and their families. The workgroup identifies strategies to increase awareness among health care professionals, employers, and the general public of work-related asthma. It identifies policies to support the reduction of indoor and outdoor asthma triggers and endorses coverage for in-home asthma care services.

**Education and Training Workgroup:** This workgroup promotes education and awareness using the NAEPP EPR-3 guidelines. The workgroup will promote evidence-based programs that provide materials and resources to increase asthma awareness and promote consistent guideline-supported messages on the management of asthma.

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