**“Asthma Community Network—Conversations for Advancing Action” Podcast Series**

**Episode 13 — Getting Ahead of Asthma: How States are Implementing Primary Prevention to Reduce the Onset of Asthma**

**Approximate Run Time:** 7–9 minutes

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| **Speaker** | **Content** |
| ***(Music plays at full volume and then fades into the background)***  **Narrator**  *(This paragraph is repeated on all podcasts to deliver the message that the AsthmaCommunityNetwork.org has a library of material available to enhance knowledge about asthma management programs.)* | Welcome to “Asthma Community Network — Conversations for Advancing Action,” a podcast series from AsthmaCommunityNetwork.org, an online Network designed for people committed to improving asthma outcomes in their community. This podcast series shares best practices for reducing the impact of asthma through delivery of comprehensive, community-based care, especially in underserved communities. In these podcasts you’ll learn about strategies for managing effective program delivery systems, addressing environmental triggers, and leveraging community assets through partnerships.  Joining us today are Polly Hoppin, Program Director of the Lowell Center for Sustainable Production Environmental Health Program, and Ted Schettler, Science Director of the Science and Environmental Health Network.  They will describe their work on primary prevention of asthma and how Massachusetts became the first state to pursue primary prevention of asthma in its state strategic plan.  Let’s begin with a basic question: what exactly is primary prevention of asthma? |
| **Ted Schettler** | Primary prevention is an upstream approach where the goal is to prevent the onset of asthma in people who do not have the disease by reducing risk factors. We have learned quite a lot about risk factors associated with asthma onset and propose that addressing them is likely to reduce asthma onset, even in people who may be at higher risk. |
| **Narrator** | So, why focus on primary prevention of asthma? What are the benefits of addressing asthma before onset? |
| **Polly Hoppin** | When your asthma is not well controlled, it means frequent episodes of wheezing and difficulty breathing, limitations in activity, trips to the hospital or ER, difficulty sleeping, missed school or work days, and even just living with anxiety about a potential asthma attack and having to adjust your daily activities. The health benefits of primary prevention really mean freedom from living with a difficult chronic disease. Eliminating exposure to asthma triggers and handling your medication right require constant vigilance. That is often particularly difficult for vulnerable populations like children, or the elderly, or low-income people who are often juggling two or three jobs, or may not have access to resources that would allow them to improve their home environment. The number of exposures that can trigger asthma and also the need for individual and community resources make it unrealistic to expect that everyone who has asthma will live active and healthy lives without complications. So, primary prevention spares individuals, spares communities, and spares populations from the day-to-day and long-term health impacts of having asthma. |
| **Narrator** | How did primary prevention become a priority issue in the development of the Massachusetts Strategic Plan? Were there any collaborations that were particularly important in making that happen? |
| **Polly Hoppin** | This is a big, statewide process, and the holder of it is the Massachusetts Asthma Advocacy Project – a large statewide coalition that has a contract with the Department of Public Health to develop this plan and work with people to implement it over time. The last strategic plan for Asthma in Massachusetts which ran from 2009-2014 included a goal to develop a road map which was to accelerate the understanding of the opportunities for primary prevention in the state. Until recently, there was not a MAAP committee that was focused on how to prevent new cases of asthma. My colleagues and I put a committee together, our Road Map planning group, and the committee included MAAP members as well as some people who had not before been involved in asthma, but their work was focused on risk factors for asthma. The result was a process that really built working relationships among people who operate in very different realms of the system. For example, scientists who do the research working closely with people in government and NGOs who interpret it and apply it in their decisions around policy and programs, working closely with people who are representing those who are affected by asthma. |
| **Narrator** | What new partnerships may emerge as a result of prioritizing primary prevention of asthma in the state plan? |
| **Polly Hoppin** | Since the interventions to advance primary prevention are going to target populations that don’t already have asthma, they might involve organizations that haven’t previously identified themselves as asthma organizations. An example here in Massachusetts is The Children’s Investment Fund. Three years ago, this organization successfully lobbied the Massachusetts legislature for a major infusion of funds to improve aging and unhealthy buildings that are used for after-school care. They’d done a report that just documented atrocious deterioration and exposures to things like mold, and the report got the attention of the legislature, which passed $40 million of capital funds to improve building quality. |
| **Narrator** | Why are we just now starting to look at primary prevention as a means of asthma management? |
| **Ted Schettler** | When efforts at primary prevention first start for any disease, there is, to some extent, a leap of faith and then we can look back historically to see what the impact was. In the 1970s, the multifactorial attempt to reduce coronary artery disease mortality in Finland was labeled as shotgun epidemiology, meaning that you just throw the kitchen sink at it and see what works. But in fact, the multiple interventions did work, and it had a profound impact on heart disease mortality, and I think we’re at a similar place with primary prevention of asthma.  The literature is starting to develop on describing efforts and both successes and failures at preventing the onset of asthma. Probably the best source of evidence comes from a 2011 Cochran review. The combination of the dietary intervention and the environmental remediations in the home together reduced the onset of asthma in children who did not previously have the disease by 50% at age 5 or older and a slightly smaller percentage of risk reduction or onset reduction in children who were younger than 5 years old. Interestingly enough, they also found that studies in which the interventions were either dietary or environmental remediation, but not both, did not substantially reduce asthma onset when compared to the control group. The take-home message here seems to be that the multiple interventions are more likely to prevent asthma onset. |
| **Narrator** | You mentioned multiple interventions as a way to prevent asthma onset. What does research tell us are some of the most effective interventions? |
| **Polly Hoppin** | The first is to prioritize primary prevention research and interventions that focus on early childhood development, and that stems from the assumption that a high percentage of asthma cases develop in early childhood. The second is to replace chemicals that we know are capable of causing asthma, with safer alternatives especially in a work environment. The third strategy is to increase the utilization of public transportation and also active transit, but at the same time, to reduce exposures to vehicular traffic and emissions. The important point here is that both of these objectives have to happen simultaneously because if you increase physical activity without also addressing air pollution, for example putting bike lanes that happen to run right near busy highways, then you may put some people at higher risk of asthma onset and exacerbations. And then the fourth priority is to increase understanding among public health and medical professionals about modifiable risk factors that are associated with the onset of asthma and the potential benefits of reducing them and studying the outcomes so that primary prevention becomes part of common parlance, common conversation about action on asthma. The final two strategies are to target people and populations that are at high risk of developing asthma and make sure that they receive home visits that include information on environmental triggers and other risk factors. And this could be via existing asthma home visit programs, but it could potentially also be other home visit programs that are already supporting people facing other problems and those problems may also be risk factors for asthma. And for exposures that can’t be addressed via education and behavior change with an individual, this strategy also envisions developing community based resources that would improve outdoor and indoor air quality along with other risk factors for asthma, so both at the individual and more community level. |
| **Narrator** | Based on your experience in Massachusetts, is the time right for primary prevention of asthma to be addressed in other state strategic plans? |
| **Polly Hoppin** | There had been a sense among scientists, as well as asthma leaders, that the evidence base wasn’t sufficient to advance attention to the primary prevention of asthma. There was just so much to do on asthma management that they didn’t have the bandwidth to think about upstream prevention. Now, the evidence base is much more solid. There’s confidence on the part of asthma leaders in Massachusetts that programs and policies are in place for managing asthma. Asthma leaders recognize how challenging managing asthma is for some individuals and that well-controlled asthma in an entire population is important, but is really an aspirational goal. I think that people have come through a decade of a lot work trying to manage asthma, particularly in high-risk populations, and realize that it can’t be our ultimate goal to just have lots and lots of people get asthma and try and help them control it. We need to move upstream to figure out how to prevent this disease to begin with. |
| **Narrator**  *(This clip concludes the Episode and directs listeners back to AsthmaCommunityNetwork.org to access more resources.)* | Thank you, Professor Hoppin and Dr. Schettler, for sharing these valuable insights.  For additional resources on primary prevention for asthma management, and to hear other podcasts in this series, visit asthmacommunitynetwork.org/podcasts.  Do you have experience or other resources on primary prevention for asthma? Share them with the wider community! Log in to AsthmaCommunityNetwork.org and contribute to our Resources Bank, Blog, or Discussion Forum.  And for more information on asthma management, go to AsthmaCommunityNetwork.org—an online Network for people committed to improving asthma outcomes in their community. |