Issue Brief: Evaluation Project Results Report
School District Adoption of Policy to Maintain Stock Supply of Asthma-related Rescue Medication

Missouri Asthma Prevention and Control Program
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For More Information

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Enacted August 28, 2012, Section 167.635.1, RSMo (formerly HB 1188) permits school districts in Missouri to maintain a stock supply of “asthma-related rescue medications” for use in the care of any student who is having a life-threatening asthma episode. More specifically, it allows a school nurse or other trained employee to administer such medication. Refer to the appendix for the full text.

The State School Nurse Consultant and Missouri Asthma Prevention and Control Program (MAPCP) conducted a survey of public school districts in Spring 2014 to: a) better understand the degree to which HB 1188 was adopted statewide approximately 18 months after its enactment, b) identify implementation challenges, and c) estimate how many students may have benefited. As an organization committed to building capacity for asthma care in the school setting, MAPCP also sought information about HB 1188 adoption among schools connected to MAPCP during the four years prior to the survey through its sponsored training activities and other evidence-based interventions, such as Teaming Up for Asthma Control and Asthma School Nursing Award.

“The benefit...is that students...can obtain rapid access to rescue medicine. The majority can get back to class to participate in their school day activities.”

—School Nurse Respondent #24
Methods

Between February 18 and April 3, 2014, MAPCP distributed a brief web-based survey via email to 478 lead school nurses through the State School Nurse Consultant. A reminder email followed three weeks later. After three more weeks, project staff reached out to non-responding districts with phone calls and personally-addressed emails to request participation with the survey.

“Nurses feel that they have something in their office to help a student when they present with a life-threatening asthma episode. This means so much to us.”

—SchoolNurseRespondent#253
At the close of the data collection phase, completed surveys reported data for 434 of the 521 public school districts, yielding a total response rate of 83.3%. Responding school districts accounted for 834,722 (or 96.0%) of the total student enrollment in public school districts (869,585) during the 2013-2014 school year. All of the top 50 school districts, by enrollment, responded to the survey. This project did not survey the public charter, specialty schools (e.g., blind, deaf, juvenile justice) or private/parochial schools.

“Time is a major factor when dealing with asthma problems; stock medications need to be available.”

—SchoolNurseRespondent#253
1. Approximately 18 months after Missouri state law enabled schools to stock rescue medication for asthma, 37% of local school districts had adopted the policy thereby making stock rescue medication available to at least 46.3% of the state's public school students.

2. Fifty-six percent (56%) of responding districts reported that at least one student had been given stock rescue medication to treat an asthma episode since the beginning of the surveyed school year. It is estimated that 2% of children with asthma in Missouri benefited directly from the availability of stock rescue medication during the surveyed school year.

3. Of the 160 school districts with stock asthma rescue medication available, 48 created a new policy for school board approval, 58 amended or applied an existing policy, yielding a total of 106/160 (or 66.3%) with specific or general school board authorization.

4. Albuterol was the most common medication stocked, with the majority of school districts approved for its delivery by nebulizer. Two districts reported they had approved levalbuterol hydrochloride (Xopenex®) by nebulizer.

5. While many districts reported injectable epinephrine as an approved rescue medication along with albuterol (inhaler and/or nebulizer), 11 districts (or 6.9%) reported injectable epinephrine was the only approved stock rescue medication for asthma.

6. Large school districts (> 4,000 students) that had participated in MAPCP activities were 2.4 times more likely to adopt HB 1188, 60% vs. 25%. Across all school districts, linkage to MAPCP’s public health approach to asthma, as measured by activity participation, was associated with a 1.5 times greater likelihood of having stock asthma rescue medication available to students in need.

7. The higher adoption of HB 1188 by school districts participating in MAPCP activities suggests MAPCP’s work may have improved asthma care capacity and readiness at the community-level.

8. Overall, 34% of responding school districts identified cost as a challenge by both school districts with and without available stock asthma rescue medication. Interestingly, cost should not be a material barrier to implementation because nebulizer-administered albuterol costs less than $5 per treatment. Among the other leading challenges reported by school districts that had not adopted HB 1188: policy authorization by the school board (26%), development of written policies or procedures (25%), obtaining written prescription for stock medication (25%), lack of equipment (e.g., nebulizer, peak flow) (22%), and no template for preparing a prescription or standing order (19%).
Approximately 466,000 of Missouri’s public school students do not have access to stock asthma rescue medication as part of the school’s planned response against a life-threatening episode. Tens of thousands of additional students enrolled in charter and private/parochial schools are likely to lack access as well.

“[Prior to] implementing this policy where a student was having an asthma episode and we did not have rescue medication on hand that was prescribed for that person, we called the parent and they also did not have any rescue medication for the child. Without medication, our only option was to call 911. The police arrived first and administered oxygen to the student until EMS arrived. The student was transported to the ER and ended up being admitted overnight. If we had had stock Albuterol on hand at that time, a 911 call may have been avoided and the student may not have had a hospital stay.”

—SchoolNurseRespondent#198
Asthma-related rescue medications, school nurse may be authorized by school board to maintain, procedure.

167.635. 1. Each school board may authorize a school nurse licensed under chapter 335 who is employed by the school district and for whom the board is responsible to maintain a supply of asthma-related rescue medications at the school. The nurse shall recommend to the school board the quantity of medication the school should maintain.

2. To obtain asthma rescue medications for a school district, a prescription written by a licensed physician, a physician's assistant, or nurse practitioner is required. For such prescriptions, the school district shall be designated as the patient, the nurse's name shall be required, and the prescription shall be filled at a licensed pharmacy.

3. A school nurse or other school employee trained by and supervised by the nurse shall have the discretion to use asthma-related rescue medications on any student the school nurse or trained employee believes is having a life-threatening asthma episode based on the training in recognizing an acute asthma episode. The provisions of section 167.624 concerning immunity from civil liability for trained employees administering lifesaving methods shall apply to trained employees administering an asthma-related rescue medication under this section.

(L. 2012 H.B. 1188)
Missouri Asthma Prevention and Control Program