

School Health Issues

A Systems Approach to Reducing Risk and Strengthening Quality in School Medication Management

Introduction

This paper and the invitational meeting for which it has been prepared make certain assumptions about the challenge of strengthening the quality of medication management in school.

- We believe that recent research on improving the safety and quality of patient care has relevance for health services in school, particularly the safety of medication management practices.
- We propose to focus on the systems that make it least likely that errors will occur in the management of medications and most likely that the needs of students will be met.
- We acknowledge that medications may be administered in schools in conditions not anticipated in nurse practice acts or other professional guidance.
- Our objective is to identify how risk can be minimized and quality of care assured in the administration of medications or provision of therapeutic interventions in a setting that may not be a health care facility

In the past 30 years there have been major changes in health care, including an increased reliance on prescription drugs. There have also been changes in the school systems, with a federal mandate created in the 1970s obligating schools to provide certain children with medical services, including medication. Medications that schools are asked to manage may include controlled substances, psychotropic medications, and a range of therapeutic interventions for chronic illnesses such as diabetes and asthma. With more children receiving increasingly powerful drugs during the school day, the school system's liability for safe management of medication has increased. This is a whole new situation. No one planned it and no one planned for it. But now is the time to look at the issue and see what changes need to be made.

The Context

Some fortunate schools in the United States have a health care professional, usually a nurse, on site at all times. But for many elementary and secondary schools, this is not the case; schools may share an itinerant nurse who is present only one or two days a week in any one school, or districts or individual schools may employ no nurses at all. In the absence of a licensed medical professional, the responsibility for supervising or dispensing medication is in most cases assigned to a non-medical person on the school staff, sometimes a teacher but more often the school secretary or other administrative aide. The school district or the state nursing policy board may require that non-medical person handling these responsibilities receive some training, and nurse practice regulations may require "supervision" by medical professionals. The nature and extent of the supervision is frequently undefined.

But whether medication is managed by a delegated non-medical person or by a registered nurse, the school is at risk of failing to follow proper procedures in handling potentially dangerous medications unless systems are in place that will make errors less likely.

Systems to Reduce Risk

That human beings are fallible and prone to error is recognized in industries such as the airlines in which error can result in disaster. In many such industries, and more recently in health care, an emphasis is placed on designing and implementing systems, or ways of performing routine tasks, that minimize the opportunities for mistakes and strengthen the ability of workers to make good judgments and carry out appropriate procedures.

Applying such preventive thinking to schools and the medication of students might involve addressing a number of factors. These might include, for example:

- **Policy.** Policy guidance might include the following: The school or school district would have a clear, written policy on medication that is transmitted to all school personnel, parents, and students. The policy might specify what responsibility for medication the school or district is willing to assume and which school personnel will provide medications. The policy might also specify the responsibilities of parents, such as providing medication in original containers with the names of the prescribing doctor and the patient for whom the drug is prescribed. The school or district could also specify its policies with regard to over-the-counter medications, whether kept at school or carried by students. The policy statement might also make clear the school or district's position on self-medication by students and whether students are allowed to carry such equipment as asthma inhalers or insulin injectors.
- **Delegation.** If state law or nurse practice regulations allow medication administration to be delegated by licensed medical personnel to non-medical personnel in a school, it is reasonable to assume that the persons to whom the medical tasks are assigned would be recognized, trained, and protected from liability. One approach that recognizes the importance of delegation would be to require that the names and responsibilities of all personnel who are authorized to provide medications be registered and their duties specified by the agency responsible for school health.
- **Documentation.** "If it isn't documented, it didn't happen." To protect themselves from liability and to provide a record for parents, schools would want to have in place a method of recording each administration of medication to a child. This might be a written log, or a computer entry. It should specify the name of the child, the medication that was provided, and the date and time of the medication, plus any other information the school believes relevant.
- **Process.** A core principle of systems to minimize risk is that the tasks people are asked to perform are analyzed to determine if the environment in which they work is conducive to error. For school medication, whether by a licensed health professional or a non-medical person who has been delegated the function, such analysis might include asking the following questions: Are there safeguards to prevent dosage errors, such as asking each student his or her name and comparing it with the label on a prescription package or attaching the student's photo to the medication package and comparing the photo to the presenting student? Is a written or computer log kept of each dose administered, to whom, and at what time of the day? Is the physical environment conducive to error—for example, do groups of students tend to appear for their medications at the same time, as when they are out of class for lunch, and if so, does that create noise, confusion, and jostling in the office or nurse station? If medications are administered by a school secretary, does he or she also have to answer telephones, hand out student materials, or field questions while dispensing medication?
- **Security.** Schools wanting to shield themselves from liability for misuse of prescription or other medications should take steps to assure that drugs provided by parents are stored in secure locations to prevent theft. The keys to locked cabinets must be secure, but it should be known who has access to them. Schools might develop protocols for who will treat a student who requires medication while on a field trip or athletic event, and how that individual will access the necessary drugs or devices.
- **Quality.** Some drugs have special storage or handling requirements. Some may need to be refrigerated; others have a limited shelf life. Does the school have procedures for verifying refrigerator temperatures, or for assuring that a medication is still within its "use by" date?
- **Self-Medication.** A school or school district might determine if state law or nurse practice regulations permit self-medication by students, and if so, whether self-administered medications should be monitored by a member of the school staff. The school or district may also want to make clear to parents who request self-medication that the school assumes no responsibility for the student's use of or failure to use the pharmaceuticals. Self-medication often involves a decision by the school or district that students may or

may not carry on their persons inhalers or other asthma devices, or kits for measuring blood sugar in diabetes.

- **Privacy.** The major federal legislation to protect the privacy of student records, including health information, is the Family Educational Rights and Privacy Act (FERPA), which allows unauthorized release of student health information to those who have been determined by the school or district to need that information in order to provide education. FERPA places no restrictions on how those who receive the information may use it, but a school or district may choose to impose its own requirements for teachers and others to keep health records confidential. Unauthorized release of health information "to the school community" has been challenged as a denial of student rights under other federal laws in recent court cases.
- **Prescribing.** The pediatrician or primary care provider who writes a prescription for a child requiring medication during school hours should know who will be administering it, in order to assess whether a licensed medical professional will be available to evaluate a potential adverse reaction or to administer a drug on an "as needed" basis. Schools or school districts generally require that student medications be brought to school by parents or guardians, in original containers. In order to provide the school with an original container, a pharmacist may need to fill a prescription in two containers, one for home and one for school, both with package inserts. All drugs should be administered at home or in a clinical setting before being provided to a school, to guard against unexpected reactions.
- **Standards.** When widely accepted professional standards exist for the management of a medical condition-such as the national standards for asthma management, for example-a school is at risk of liability if it cannot document that such standards were followed in its medication management program.
- **Communication with Medical Professionals.** The issues outlined above are difficult for schools to deal with, since the primary mission of a school is education, not medical care. This makes it important that schools reach out to medical professionals in their communities for advice and assistance, and it is imperative that the public and private health care systems regard the schools as partners in the management of medication and other health issues.

Key Questions:

The research literature devoted to patient safety, quality improvement, and error reduction has focused on inpatient and adult settings. Are these approaches to improving patient safety and the quality of care applicable to medication management in schools?

There are additional critical questions to be addressed. What research is needed to create a knowledge base sufficient to make recommendations for systems changes? Or, do we already have the research sufficient to make recommendations?

What are the downsides of assuming that a safer system can be created when unlicensed personnel perform medical functions?

What are the politics that will impact the capacity of community, state, and national institutions to implement any recommendations? Are there strategies that could be developed to build a foundation for quality improvement in medication management at school?

This paper aims to begin a dialogue that explores what we know, what we can learn from the risk-reduction literature, and how we might strengthen the capacity of providers, researchers, and institutional leaders to reduce risk and strengthen quality in medication management at school.

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