

Vancouver Coastal Health Recommendations **for the use of Twinject® in Schools**

Children at risk for anaphylaxis should have an automated epinephrine injector close at hand at all times. In the school setting, it is recognized that responsibility for administering the auto-injector will be that of the nearest adult caregiver. Most likely this will be a teacher, but substitute teachers, teacher aides, supervision aides, and clerical staff may be called upon to act. The recent Anaphylaxis Protection Order from the Ministry of Education mandates that School Districts provide training on the use of epinephrine auto-injectors. Although the administration of an IM injection is a task usually limited to healthcare professionals (nurses, EMTs, doctors), the urgency of an anaphylactic event, as well as the simplicity and safety of the auto-injector, makes its use by teachers appropriate in this exceptional circumstance.

Recently, organizations such as the Canadian Society of Allergy and Clinical Immunology and the Anaphylaxis Society have recommended that students have a back up dose available. This dose would be used if symptoms recurred before emergency help arrived. Vancouver Coastal Health supports this recommendation but recognizes that this is a medical decision that should be made by a child's treating physician in consultation with his/her parents or guardians.

Until recently, Epipen® was the only auto-injector on the Canadian market. It provides one automated dose of epinephrine. Recently a new product, Twinject®, has been made available at a similar cost. It provides a single automated dose in a manner similar to that of Epipen®. After this, the internal syringe can be removed from the injector and a second dose administered manually. The second dose is not automated and is given much like an ordinary intramuscular injection. Two areas of concern arise from this.

First, preparing and administering the second dose is significantly more complex and difficult than the first. Given that teachers are not health professionals and do not administer injections routinely, there is a greater possibility that the second dose will be prepared or given incorrectly. This risk would be increased by the other factors that the teacher might be dealing with during this time, such as supervising other children.

The second issue is that Twinject® does present a risk of a needle stick injury to both the caregiver and other students. After the first use, the used needle must be left exposed until such time as the second dose may be required. In a school setting, it may be difficult to ensure the safety of all, particularly during an urgent stressful event. Furthermore, preparing the second dose requires several steps that place the caregiver's hands and fingers in close proximity to the exposed needle. This could result in a needle stick injury.

It is recognized that the risks of a caregiver or another student contracting a blood borne disease from a needle stick in the school setting is extremely low. Nonetheless, if there are precautions that would reduce or eliminate additional risk to teachers and other students, while still providing all needed care to an anaphylactic student, such precautions should be taken.

Based on these issues, Vancouver Coastal Health recommends that children who are advised by their treating physician to have two doses of epinephrine available to them, be provided with two auto-injectors for use at school. These may be either two Epipens® or Twinjects®, or one of each. If necessary, the second injector will be used for a second dose. It is recognized that this is a more costly option than providing two doses in the form of one Twinject®, but this cost comes with the advantage of greater reliability and safety in the provision of a second dose.

If the child's physician, in consultation with his parents or guardians, determines that the availability of only one dose is appropriate, the child should be provided with an Epipen® auto-injector. In such cases a single Twinject® will not be deemed acceptable as this may create confusion regarding a possible second dose and an expectation that this dose will be given. To clarify, if it is deemed medically prudent that a student have two doses available, two auto-injectors need to be provided.