## **Case Study: "The Buzzing Mystery"**

**Student Profile:**

* **Name:** Tina
* **Age:** 4 years old (Preschool)
* **Gender:** Female
* **Known Medical History:** No known allergies, no history of asthma. Tina is a typically developing student with no significant medical history on file.

**The Incident:**

It's a sunny afternoon at Sunflower Preschool. Tina is enjoying playtime on the outdoor playground with her classmates. Her teacher, Ms. Anna is supervising the children. Ms. Anna observes Tina, who usually giggles and runs around, sitting quietly on a bench by herself. She seems unusually still and withdrawn.

**Teacher's Observation & Initial Assessment:**

Concerned, Ms. Anna walks over to Tina. As she approaches, she notices that Tina's face is noticeably red. "Are you feeling okay, sweetie?" Ms. Anna asks gently. Tina just shakes her head slightly, appearing a little flushed and teary-eyed. Recognizing that something isn't right, Ms. Anna immediately escorts Tina to the school nurse's office.

**Presentation to the Nurse's Office:**

In the nurse's office, Ms. Anna explains her observations to the school nurse, Nurse Bridget.

* **Nurse Bridget:** (Observing Tina) "Hi Tina, what's going on?"
* Tina appears anxious, clutching a small toy. She's not actively crying, but her breathing seems a little faster than usual.
* **Nurse Bridget:** (Gently assessing Tina) As Nurse Bridget begins to check Tina's skin, she notices widespread, raised, red, itchy welts (hives) rapidly appearing on Tina's chest, abdomen, and back.
* **Nurse Bridget:** (Looking closely at Tina's face) "Hmm, I'm wondering if her lips are starting to swell..." Nurse Bridget carefully examines Tina's mouth area, noting a subtle puffiness that wasn't immediately obvious.

**New Information Arrives:**

Just then, another preschool teacher, Mr. Ben, rushes into the nurse's office looking concerned.

* Mr. Ben: "Nurse Bridget, Ms. Anna! There's a bees' nest right near the swing set on the playground! We just discovered it. We're getting all the children inside now."

Nurse Bridget immediately connects the dots.

* Nurse Bridget: (Turning back to Tina) "Tina, did anything hurt you on your leg? Did you see a bee?"
* Tina doesn't explicitly recall being stung, perhaps due to her young age or anxiety. However, as Nurse Bridget checks Tina's legs, she finds a distinct red, swollen area on Tina's lower left leg, consistent with an insect sting.

**What should the nurse do now?**

Given all this information, here's what Nurse Bridget should do, prioritizing Tina's safety:

1. **Immediate Assessment of Airway, Breathing, Circulation (ABCs):**
   * **Airway:** Reassess Tina's lips and look inside her mouth for any swelling of the tongue or throat. Ask Tina if she feels like her throat is itchy or "tight."
   * **Breathing:** Listen to Tina's breathing. Are there any wheezing sounds? Is her breathing labored or shallow? How is her respiratory rate?
   * **Circulation:** Check Tina's skin color and temperature. Is she pale or clammy? Check her capillary refill.
2. **Recognize Potential Anaphylaxis (Even Without Known Allergy):** Even though Tina has no *known* allergies, the rapid onset of widespread hives, facial swelling (lips), anxiety, and the presence of a sting site are strong indicators of a severe allergic reaction (anaphylaxis). Anaphylaxis can be life-threatening and can progress very quickly.
3. **Activate Emergency Protocol:**
   * **Call 911 immediately.** Do not delay. Anaphylaxis requires immediate medical attention and, often, epinephrine. Explain the situation clearly: "We have a preschool student with signs of a severe allergic reaction, possibly from a bee sting. She has widespread hives, her lips are swelling, and she's anxious."
   * **Notify Tina's Parents/Guardians:** While 911 is being called, or immediately after, someone (Nurse Bridget or another staff member designated by her) should contact Tina's parents to inform them of the emergency and that EMS is en route.
4. **Administer Epinephrine (If Available and Permitted by School Policy/Standing Orders):**
   * If the school has a standing order for epinephrine auto-injectors (EpiPens) for emergencies where the cause is unknown but anaphylaxis is suspected, Nurse Bridget should prepare to administer the EpiPen. In this scenario, Tina's symptoms (widespread hives, possible lip swelling, anxiety) strongly suggest an escalating reaction. *Even without a prior known allergy, epinephrine is the first-line treatment for anaphylaxis.*
   * **If an EpiPen is not available or not permitted by policy for "unknown" reactions:** Nurse Bridget must still call 911 and closely monitor Tina until paramedics arrive.
5. **Position Tina:** Help Tina into a comfortable position that supports her breathing. If she's having trouble breathing, sitting upright might be best. If she feels faint, lying down with her legs elevated might be more appropriate, but prioritize airway safety.
6. **Monitor Closely:** Stay with Tina constantly. Continue to monitor her ABCs, the progression of her hives, and any changes in her breathing, level of consciousness, or anxiety. Be ready to provide rescue breaths or CPR if necessary.
7. **Gather Information for EMS:** Have ready any information about Tina's medical history (even if limited), the exact timeline of symptoms, and what was observed. The location of the sting and the bee's nest information are also crucial.
8. **Support and Reassurance:** While taking urgent medical action, continue to speak calmly and reassuringly to Tina to help reduce her anxiety.

**Why these steps?**

Tina's symptoms are classic signs of an allergic reaction, and the progression (rapid onset, widespread hives, potential lip swelling, anxiety) points towards anaphylaxis. Even without a known allergy, a first exposure can trigger a severe reaction. Time is critical in anaphylaxis; delaying treatment can lead to life-threatening complications like airway obstruction and shock. Epinephrine is the only medication that can stop anaphylaxis. Calling 911 ensures immediate advanced medical care and transport to a hospital.