

ASSESSING PREPAREDNESS OF SCHOOL TEAM  
IN HEALTH MANAGEMENT OF  
STUDENTS WITH SEVERE FOOD ALLERGIES IN ELEMENTARY SCHOOL SETTING

Linda J. Johnson  
Panorama Village/Boalsburg Elementary School Nurse  
Elementary K-5  
[Ljohnnurse@aol.com](mailto:Ljohnnurse@aol.com)

May 7, 2005

# Table of Contents

Part I:	Background information Pages 3-4
Part II:	Inquiry Plan Pages 5-9
Part III:	What I Learned and Now Know Pages 10-12
Part IV:	Conclusions and Future Directions Pages 13-14
Part V:	References Page 15
Part VI:	Appendixes Page 16-18

## **PART 1: BACKGROUND**

### **Observations:**

Imagine the following scenario being played out in an increasing number of elementary schools currently each year: Parents report in a kindergarten conference that the family is “anxious” about their child entering full-day first grade (that includes a designated lunch period and school bus ride) because of their student’s life-threatening peanut allergy. The specifics of their concern include the fact that their child has less than 5 minutes from the onset of a peanut contact on his skin before the probability of an anaphylactic reaction. The student’s medical order includes administration of epinephrine, as needed if symptoms warrant, as well as a peanut-free classroom and lunch table.

The first grade teacher in a tandem conference with the school principal also verbalizes “anxiety” in maintaining a safe, healthy environment for the student in the school classroom and lunchroom.

### **Statement of Purpose**

As I daily carry out my role as school nurse promoting primary health care—working in collaboration with students, parents, and school personnel, I have recently contemplated the following statement, “teachers are decision makers and collaborators who must reclaim their roles in the shaping of practice by taking a stand as both educators and activists” (Cochran-Smith, 1991, p. 280). Focusing my attention closer, in particular, to students with health concerns, I have found myself repetitively drawn to the challenge of a small but ever increasing number of children and their families in the elementary school setting who are growing up with life-threatening food allergies.

I am a school nurse who works part-time in the State College Area School District. Two of the elementary schools (in my caseload of about 700 students) include the “sister” schools of Panorama Village Elementary (K-3) and Boalsburg Elementary (4-5) with a combined total of approximately 350 students. Obviously, I can’t be in each school all the time so I rely heavily on lay personnel (paras), faculty, and staff to be my extra eyes and ears. I currently have 4 students in those two schools alone that require the use of epi-pens if exposed to peanuts upon ingestion—and that number has doubled over the last two years. The above scenario of “observations” is my own experience duplicated several times over the past three years.

Couple this increase of severe food allergies with the trend that more children in the primary grades are experiencing longer school days at an earlier age (i.e. all-day kindergartens and day-care), and thus, it is no wonder that school nurses are working with more concerned parents and teachers alike who are nervous about the safety of these students in the elementary school setting.

Recently, as I pondered these severe food allergy trends, I found that current research substantiates the following:

1. “As funding for school nurse services decline and school nurses are required to serve large student populations at multiple school sites, nurses must **delegate** some responsibilities to unlicensed school personnel at each school site.” (Litarowsky, 2004, p. 284).

2. Attitude of school personnel being trained is crucial to consider. People tend to believe they can achieve higher levels of performance and feel comfortable in accepting responsibilities beyond the scope of their job descriptions if they **believe** they can positively make differences over events that affect their lives. (Hay, 1994, p.121.)

3. “Unlike some other disorders the school nurse may encounter, life threatening food allergies require education of the **entire** school staff about risk identification and avoidance of food allergens.” (Weiss, 2004, p. 271).

This last statement from the literature particularly stands out as a red flag to me as I realize it to be different from my interpretation of the protocol in my school guidelines that I had been following at work. Current SCASD protocol states “at least **two** staff members will be instructed by the school nurse to administer the emergency auto-injector in case the school nurse is not in the building when there is an emergency need.”(LE&SS, 8/95, P-3). “Two” staff members is much different from “66” staff members which is the total number of the **entire** school staff in the two elementary schools I serve.

Since, I now reason, that an increased knowledge related to emergency health events and an increased confidence in one’s ability to respond can improve student safety in school (Litarowsky, 2004, p. 284), **I wonder:**

1. How can I as a school nurse help students with life-threatening food allergies, their parents, and the school team feel more prepared in maintaining a safe, healthy school environment?
2. If teachers/staff/paras/ were given the opportunity to receive instruction at school about food allergies, would they seek it out?
3. And if so—would the school team find this instruction helpful (i.e. increase their confidence, decrease their anxiety) as they work with these children in their classrooms?
4. What nursing/teaching interventions might help the school team feel better prepared in handling emergencies that might arise with students who have life-threatening food allergies?
5. Would parents find this added instruction about food allergies to teachers/staff/paras a benefit that eases the student’s transition into school?
6. Finally, would these nursing/teaching interventions on my part help me actually decrease my anxiety about the safety of these students at school an any given school day?

## PART 11: INQUIRY PLAN

Thus, in January 2005, emerged the birth of my present Teaching Inquiry plan based on the assumptions or claims that:

**Educating ALL elementary school team about severe food allergies—helps faculty/staff feel better prepared to deal with students with these allergies—increases parent’s confidence in the school management of these food allergies—and thus, helps to improve the student’s school experience.**

(According to the National PTA: Over 30 years’ research has proven beyond dispute the positive connection between parent involvement and student success. Effectively engaging parents and families in the education of their children has the potential to be far more transformational than any other type of educational reform (Dana and Silva, 2003, p. 80)

The title of my inquiry plan with a primary focus on life-threatening peanut allergies is:

### **ASSESSING PREPAREDNESS OF SCHOOL TEAM IN HEALTH MANAGEMENT OF STUDENTS WITH SEVERE FOOD ALLERGIES IN THE ELEMENTARY SCHOOL SETTING**

Students with **Severe food allergies:** in this study is defined as those students diagnosed by a physician and carry Epi-Pen auto-injectors with them to treat anaphylaxis.

Definition of **Anaphylaxis:** is defined as a severe, potentially life-threatening, allergic reaction—outside the hospital setting.

The **Goal** of my inquiry plan includes a two-prong longitudinal approach:

1. Develop an ongoing plan that educates and prepares the school team with a baseline of knowledge about severe food allergies
2. Develop a plan that includes ongoing assessment of comfort level of parents and school team that promotes increased team involvement and decreased anxiety in the school management of the student’s severe food allergy health plan.

**Data Collection** I plan to include:

1. Anecdotal notes from the health room logs regarding conferences with faculty, staff, parents, and students (school team)
2. Pre-surveys of above school team
3. Post-surveys of the above school team

**Nursing/Teaching Strategies** I plan to use include:

1. Listening, journaling
2. Video presentation and staff discussion on signs and symptoms of an allergic reaction
3. Role play/simulation on how to use an Epi-pen

**Literature** I plan to use include:

1. Food Allergy Program from The Food Allergy and Anaphylaxis Network
2. Videos—“Keeping Our Children Safe” and/or “It Only Takes One Bite.”
3. Medical journal documents that include articles from the Journal of School Health and nursing journals
4. Techniques for writing surveys from internet and journal articles

## Review of the Literature:

Food allergies and how to live with them seems to be a favorite health topic in the news these days. They have been blamed for everything from hyperactivity and ADD to depression. Recently, a health study showed one-third of adults **think** they have a food allergy and one-fourth of parents **think** their children have a food allergy (The School Food Allergy Program, 1995, P 3-1). In reality, however, 4 % of the general population suffers from some form of food allergy (Roper, 2005, p.32), or more than 11 million Americans (Weiss, 2004, p.268). Children are the largest population group affected by food allergies (The School Food Allergy Program, 1995, 3-1). “In a nationwide telephone survey of 400 elementary school nurses, 44 % of them reported an increase in children with food allergies in their schools over the past 5 years, and more than one third (of them) had 10 or more students with food allergies (Weiss, 2004, p. 271)... in their caseload. Thus, since children spend up to 50% of their waking hours in school (Sheetz, 2004. p155), more families with younger children are experiencing the affects of living with a food allergy or a combination of several allergies within the school setting.

Food allergies traditionally start early in infancy and present with symptoms in 8 % of children under three years of age and 6-8 % of children during the early school years. Under age 3, milk and egg allergies occur most frequently. After age 3, peanut, tree-nut (such as almonds, walnuts, pecans), fish, and shellfish allergies become more prevalent. As people age, some individuals outgrow their food allergies so that the incidence actually decreases to about 3 % throughout adolescence and adulthood. However, this usually is not the case with people who have food allergies related to nuts--specifically peanuts. Children who develop peanut allergies rarely outgrow them and tend to suffer from a higher incidence of severe (or life-threatening) food reactions called anaphylaxis (Roper, 2005, p.32). Importantly, the national rate of these life-threatening peanut allergies in children has doubled from 1997 to 2002 (Weiss, 2004, p. 238). This increase does not include the bee-sting allergies or the mild allergic reactions to specific foods that can be alleviated with the administration orally of antihistamines, such as Benadryl.

Since there generally is no cure for these children with severe peanut allergies; the strict avoidance of the allergen (peanut or nut, in this case,) is the only way to completely avoid a reaction altogether. Sometimes, this means these students needs to just stay away from eating peanuts in any form and in any food, including classroom snacks and field trip treats. Sometimes, this means these students actually can not even have the peanut oils on their skin or come in contact with peanuts that someone else has eaten or played with and left the residue on the table, the desk, or the door knob There are varying degrees of severity of reactions for different people—it all depends on the individual’s sensitivity which is often medically diagnosed but once again sometimes changes with increased exposure.

However, the good news is: that in the event that these individuals do come in contact with foods they are severely allergic to, there is a easy, automatic, self-contained

device called an Epi-Pen that ( if quickly administered) can stall a severe reaction until further emergency medical help is received. It is critical to realize that this dose of epinephrine is not harmful to children even if it turns out that it was not actually necessary. In most cases, fatalities from anaphylaxis occur only because people with life-threatening allergies have not received any dose of epinephrine within the first 30 minutes after ingesting the toxic food (Weiss, 2004, p.269.)

Current research has found that the **attitude** of school personnel may be the single most important factor for ensuring fair and proper treatment of children with severe food allergies in the school. School personnel who:

- .....recognize that severe food allergic reactions require immediate intervention,
- .....know and recognize the signs and symptoms of anaphylaxis, i.e. throat tightness; coughing, shortness of breath, hoarseness, wheezing, difficulty talking, hives, swelling, itching, vomiting, a sense of impending doom, and loss of consciousness.
- .....and have been trained in the use of an Epi-Pen with hands-on experience would tend to be better prepared when a possible life-threatening reaction occurs (Hay, 1994, p. 119).

In one recent study that evaluated a training program designed to prepare unlicensed school personnel in San Francisco schools (similar to teachers and para-professionals in the SCASD), the training model used in teaching included 3 sources of perceived self-efficacy”: (to perceive oneself as being capable...)

1. Mastery of experience—(i.e. hands of practice with an epi- pen trainer)
2. Social modeling—which incorporates viewing efforts and successes of others (examples, showing a videotape that shows breakdown of skills required to use epi-pen and symptoms of anaphylaxis
3. Social persuasion—uses positive verbal feedback.

This study concluded by citing a **positive correlation** between the providing of knowledge and skill-training in Epi-Pen instruction and the participants perceived view of themselves responding to an anaphylactic school emergency after the training (Litarowsky, 2004, p.281).

**Data Collection:**

Retrospectively, **in 2002-03**, as school nurse I was primarily doing **1 on 1 teaching with K-5 faculty/staff** about severe food allergies. In my caseload, I had one student carrying an epi-pen during the 2002-2003 school year compared to 4 students carrying epi-pens by 2004. The chart below shows the correlation between the number of health room log accounts that denoted conference interviews I had with specific parents, teachers, staff, and cafeteria personnel involving individual students.

Nurse Contacts:	Student #1			Student #2		Student #3		Student#4	
	2002-2003-2004			'02 -'03-'04		'03-'04		'03-'04	
Joint conference	4	1	1	1					
Parent conference	4	3	2	7	3	5	3	2	2
Teacher/para/staff	13	12	4	5	3	5	6	4	6
Cafeteria contact	4	2		2	2	1	1		1
<b>TOTAL</b>	<b>25</b>	<b>18</b>	<b>7</b>	<b>15</b>	<b>8</b>	<b>11</b>	<b>10</b>	<b>6</b>	<b>9</b>

**Analysis** of above: With each subsequent year a student was in school, there appeared to be less contacts between nurse, staff and parents of students with severe food allergies (with the exception of student #4 whose diagnosis changed mid-year 2004 and thus, required more nursing intervention). Why? I wondered. Was it because:

- Students were getting older and able to self manage own health care without as much school supervision? So parents/teachers/staff feeling less apprehensive?
- The **school team** did not really know who was prepared for emergencies?
- Did **parents** think faculty/staff were prepared enough because there had been no emergencies in past recent year(s)? Was this a false sense of security?
- Did the **school team** think they were prepared enough, just because there had been no recent emergencies? Was this a false sense of security on their part?
- If **parents** truly felt faculty/staff were prepared, what were they basing their perceptions on?
- If the **school team** truly felt faculty/staff were prepared, what were they basing their perceptions on?

Unfortunately, I did not have a many answers to the above questions, because I did not have any concrete pre- or post- evaluations done by parents or faculty/staff at this time.

So, in an attempt to answer some of the above questions, **the following year in March, 2004**, I decided to **host a teacher staff meeting to expedite training of food allergies** as well as supervise some small group training of paras and food service personnel.

Attendance:	teachers	paras	parents	food service
March, 2004 staff meeting with Video, Epi-Pen instruction, food service and parent round-table participation	20	10	2	1

At this time, as shown in the above chart, I presented the anaphylaxis and Epi-Pen instruction to a total of 33 members of the school team, or about half of faculty, staff, paras. Since, I did arrange for Act 48 credits for the teachers at this training, there were a total of **20** “Act 48” standard evaluations done by teachers at this time (considered to be Survey #1 in this study). However, there still were not any evaluations of the training done by the rest of the staff (ie, paras or cafeteria staff.) and there certainly was not an attempt on my part to determine perceptions of the school team of their own skill or attitude or perceptions of parents/students about the school team’s skill level in regards to health management of severe food allergies in school.

**My analysis of my training of the school team here included that:** although the overall written statements by teachers on the “Act 48” evaluations stated that they felt more “knowledgeable” now about food allergies and the emergency implications, their responses were generally vague and not to the point--- except for one teacher who admitted she found the whole management of severe food allergies in the school to be “downright scary,” and hoped it would never happen in her classroom. Or if it did, that a “nurse would be in the school at all times” so she wouldn’t be solely responsible.

At first, in my mind, I assumed that if teachers felt knowledgeable, they must feel prepared but I soon realized that was a fallacy since I really had not measured that. Thus, I realized that even though I had done more training this year with some completed teacher evaluations; I still had no objective criteria to measure school team preparedness, other than the actual number of contacts of instruction with parents/faculty/staff documented in my log journaling. Information was still at best sketchy with no uniform data to draw any worthwhile conclusions. So, **at the conclusion of spring 2004, I still worried that there might be a false sense of security on part of faculty/staff/parents in regards to their preparedness of the health management of students with life-threatening food allergies in the elementary school setting.**

**In February, 2005, I designed a survey--Survey #2 (See Appendix 1) --** that included 6 questions, the results of which I tabulated on a grid. It took me much time and thought to formulate these 6 questions as I had specific criteria I wanted to include. For instance, I wanted a one-page survey that would be quick to complete and quick to evaluate, yet provide meaningful insight into the perceptions of the school team and some answers to my wonderings. I also wanted to design a format that could be used over again in subsequent years to add continuity to this longitudinal study if I decided to extend the training over time. I perused different survey styles from several different articles and decided to color code and use an identical format for both pre-and post-evaluations.

I worried some ahead of time about **false-positive and false-negative results**—such as: staff answering on a questionnaire that they were “prepared” in taking care of a food allergy emergency (even if they really weren’t) just to get me off their case or staff answering on a questionnaire that they were not prepared (even if they thought they were) so as not to be held accountable or be responsible in the classroom if an emergency occurred.) Because I worried that staff might not complete the surveys or return them to me because it was a topic they were uncomfortable with, **I decided to hand deliver a survey** to each and every mail box and place their name on it with a designated date for completion. I also let it be known that everyone got a survey and I was very interested in getting them all back completed. I figured staff interest and camaraderie might help here.

**PART 111: WHAT I LEARNED AND NOW KNOW**

**I distributed Survey #2 to all school personnel-- no matter if they attended any past instruction—a total of (principal (1), teachers (37), para staff (24), cafeteria staff (4) on 2-21-05. Total: 66 entire school team members**

**Analysis of Survey #2: (see Appendix 1)**

1	Those who “needed refresher” class		37
	Those who had attended previous session	10	
	Those who had not attended previous session	27	
	Those “not sure” what they attended	1	
	Those who wanted refresher both on		
	Signs and symptoms and epi-pen	33	
2	Those who “felt prepared”--did not “need refresher”	15	
3.	Those who “felt prepared” but wanted refresher again		5
	Those who had attended previous session	13	
	Those who had not attended previous session	6	
	Those unsure	2	
4.	Those undecided whether they are prepared—want refresher		5
5.	Those who did not return survey	3	
6.	Those who had previous experience with allergies	5	

**Results of Survey #2:**

--95% of the entire school team **returned** the survey,

    Since 3 out of 66 (or 5%) of total did not return the survey,

--15 out of 66 (or 23%) of total felt “prepared” and didn’t want a refresher

--47 out of 66 (or 72%) of total faculty/staff wanted a refresher class

**(25 teachers, 22 para and staff) 47**

Or in-other-words **72%** of the school team felt **not prepared** at this time

Therefore, based on the above overwhelming number (47) of school team members stating they wanted a severe food allergy refresher class, I conferred with the principal and based on her recommendations, I designed and scheduled a refresher class, in March 2005, to be held at 7 different times between the 2 schools to best fit into the work schedule of all the people involved.

To expedite time and efficiency, since most of the lay personnel had to be taken out of their classroom responsibility during the school day for the time involved, I planned one 25-minute session that included:

- Presentation of Food allergy network video, entitled, “It only Takes One Bite.”
- Review of “Standing Orders for Allergic Emergencies,” (LE&SS, HS-47, 6/98)
- Epi-Pen trainer Directions—review with hands-on-session. (LE&SS, HS-41, 4/02)

Between **March 21 and 23, 2005**, I presented the **Refresher class 6 times in small discussion groups** to the staff and paras. On **March 28, 2005**, I presented the refresher class of the same content to the faculty at the monthly **staff meeting** after school. I had all team members sign in and directly following the refresher class, I asked them all to complete another survey, Survey #3, (which is identical to survey #2 but color-coded green, instead of blue), the results which are below:

**Survey #3 (See Appendix 2)**

**A. Analysis: of Paras, Staff, and Cafeteria staff surveys (total 28)**

- 1. Those who attended refresher 23
- 2. Those who did not attend because “already prepared” 4
- 3. Those who did not return survey 1

**Results:**

- 1. **96%** of above staff returned the completed survey #3.
- 2. Those who attended refresher and who now feel “prepared” 23  
**...or 23 of 28 (or 82%) paras/staff feel “prepared” from refresher**
- 3. Since 4 staff did not attend because they already felt prepared, 4  
**...Total of 27 of 28 (or 99%) paras/staff now feel “prepared”**

**B. Analysis: of Faculty (teachers, principal) surveys (total 38),**

- 1. Those who attended faculty refresher 26
- 2. Those not present at staff meeting 10  
Of those absent, 4 were “already prepared” 4
- 3. Those who did not return survey 2

**Results:**

- 1. **80%** of above faculty returned the completed survey #3
- 2. Those who feel “prepared” upon completion of refresher 24
- 3. Those absent who have made up the refresher-feel “prepared” 4  
**So ...28 of 38 (or74%) faculty feel “prepared” from refresher**
- 4. Those who still need to take the refresher (only “specials” teachers left) and “feel unprepared” at this time -- **6 of 38 (or 15%)**
- 5. Since 4 faculty did not attend because they already felt prepared, 4  
**...32 of 38 (or 85%) faculty now feel “prepared”**

**Bottomline: 59 of 66 of the entire school team feel they are prepared to handle food allergy emergencies in their school at this time (or 90%).**

My next step of the inquiry plan included **parents and students (Survey #4)**.

**On 4-18-2005**, with the principal’s consent, **I sent home surveys by U.S. mail to 4 sets of parents who have students with severe food allergies in my two elementary schools.** (“severe”--defined as children who carry Epi-Pens in school.) I designed this survey with 5 questions to be completed in the home by both parents and children, with the parents supervising the correspondence. Within, a week, all 4 surveys had been returned to the school to me by the parents. **(See Appendix 3)**. (Unfortunately, I did not have the benefit of a pre-survey of the same population group done at an earlier time.)

**Analysis of Survey #4:**

- |   |                |
|---|----------------|
| 1. Those <b>parents</b> who felt <b>health room staff</b> knowledgeable...  | 4              |
| Those <b>children</b> who felt health room staff knowledgeable...   | 4              |
|   | <b>or 100%</b> |
| 2. Those <b>parents</b> who felt <b>teachers/classroom</b> knowledgeable..  | 4              |
| Those <b>children</b> who felt teachers/classroom knowledgeable..   | 4              |
|   | <b>or 100%</b> |
| 3. Those <b>parents</b> who felt <b>cafeteria/lunchroom</b> paras knowledgeable   | 2              |
| Those <b>children</b> who felt cafeteria/lunchroom paras knowledgeable  | 2              |
|   | <b>or 50%</b>  |
| Those <b>parents</b> who were “unsure” of cafeteria/lunchroom....   | 2              |
| Those <b>children</b> who were “unsure” of cafeteria/lunchroom...   | 2              |
|   | <b>or 50%</b>  |
| 4. Those <b>parents</b> who feel “presently comfortable in how their child’s <b>school team</b> has maintained the child’s food allergy plan at school” | 4              |
|   | <b>or 100%</b> |
| Those <b>children</b> who feel “presently comfortable with how their <b>school team</b> has maintained their food allergy plan at school”               | 4              |
|   | <b>or 100%</b> |
| 5. Suggestions from parents:  |                |
| a. one mom to brainstorm how communication can continue to be improved between school team members and family   |                |
| --i.e. PTO display on food allergies  |                |
| --her need for conference with food director  |                |
| --she plans to discuss nonperishable snack suggestions with teacher   |                |
| b. another mom speaks to her need to communicate better with M.D. about food allergy plan   |                |
| c. another mom discusses her need to keep in touch with school team   |                |
- Thus,..... 75% of parents stress need for continued communication**

**Bottomline: 100% of above parents and their children presently “feel comfortable with how their school team has maintained their child’s food allergy plan at school.”**

## PART IV: CONCLUSIONS

### Assumptions/Claims

1. **Regardless of their different educational backgrounds, most all elementary school personnel** (teachers and paras alike), will seek out the opportunity to receive instruction at school about food allergies **if they** think they can **positively** make a difference in a food allergy emergency.
  - a. I did not seek to test academic performance; rather, I sought perceptions of staff.
  - b. The literature cites, “**ATTITUDE** of school personnel may be the single most important factor for ensuring fair and proper treatment of children with food allergies in school (Hay, 1994, p.121).

I realized as I got deeper into this project that the above assumption or claim on my part was critical to ascertain for this research study if I was going to have results that could be replicated and meaningful. I did not originally identify the above as a claim in the beginning but I quickly saw the challenge as I began to design survey questions and weigh the pros and cons of possible false-negative and false- positive results. (see Data Collection). I assumed that if staff felt they could make a difference, they would write that they were “prepared” on the surveys, although I worried about whether in the end, they would actually be honest with their own feelings and me. I also, worried if they would really complete the surveys or attend the refreshers. I felt from the start that I needed to encourage an enthusiastic camaraderie school spirit with this study which actually ended up being easier than I thought once the staff knew they were **all** going to be included and I was not going to let anybody fall through the cracks and the school principal was very supportive with the plan. In the end, the false-negatives or false-positives that I worried about in the beginning did not seem to materialize.

2. Educating **all elementary school personnel** (teachers, classroom, health-room, lunchroom staff) about severe food allergies that includes:
  - training in signs and symptoms of allergic food reactions
  - and Epi-Pen instruction—
  - helps **them** feel **better prepared to deal with students with severe allergies**
  - **increases parent’s comfort level** about their children being in elementary school with life-threatening food allergies—
  - And ultimately, helps to **improve** these **students’** school experience.

The above assumptions or claims were multi-faceted and the basic focus of my study. I believe my analysis of the survey results already listed on the preceding three pages substantiates the above claims.

- a. The key here, I believe, is educating **all** faculty/ staff—this is a change from what’s been done in the past in many school districts, including my own.
  - b. The literature helps to substantiate the above by citing, “... food allergies require education of the **entire school staff** about risk identification and avoidance of food allergens” (Weiss, 2004, p.271).
3. **When I help school staff**, parents and students feel more knowledgeable and better

prepared in meeting the emergency needs of students with severe food allergies, **I personally feel, as their school nurse, less anxious** about the safety of these students at school on any given school day.

Regarding the above claim, I can safely say I do feel less anxious now about the safety of these children with life-threatening food allergies at school on any given school day. I realize there will be always circumstances that are beyond my control, but I feel I have helped prepare the school team better about severe food allergies than I have done before.

## **FUTURE DIRECTIONS**

This research project has impacted greatly my practice of nursing—specifically, as I examine relationships between myself, students, their parents, and the school team. It has been a type of longitudinal study over time that has allowed me the luxury to sort out how I can best approach the management of teaching health topics that interest people in learning more about current health issues and their bodies.

I have learned that the concept of “Attitude” is far more complex in the education process than I originally imagined. Certainly, the attitude of the teacher as well as the attitude of those being taught directly affects the amount of education that takes place. However, it also is the hidden agenda behind peoples’ motivations to learn and broaden their skills to grow and improve more than they ever thought they could. It is an understatement to say that: attitude affects training to be done; training done affects attitude.

In regards to project design, I purposely developed the school surveys so I could use them over again—which is exactly what I plan to do next year. I am very interested in finding out how many of the same faculty and staff feel they are still prepared for food allergy emergencies in the new school year to come without the need of a refresher. I already have informed them of this ongoing plan and I have received positive feedback. I anticipate or hypothesize that most of the school team will want a refresher since they now know it can be a quick and easy review – similar to taking an annual CPR re-training class. I also plan to share my study with my school nurse colleagues in my school district and discuss my findings regarding the education of the entire school team about life-threatening food allergies at any given time.

In conclusion, with toddlers and preschoolers, parents are able to somewhat control the health environment of their children. However, as these young children with severe food allergies emerge from the nuclear environment controlled by their parents and move into more socially expansive settings outside the family, such as day care, nursery school, all-day kindergarten, and after school programs, those of us school nurses, teachers, school staff and para-professionals who are everyday closely working with these school children are finding ourselves dealing with a whole new expanded range of health concerns. School nurses must listen carefully to parents of children with severe food allergies and obtain the necessary medical information; then initiate a coordinated health plan between parent, nurse, teacher, food service, and auxiliary staff. It is important that the entire school team understands that if they are open, willing, and knowledgeable in learning more about life-threatening food allergies, their contributions may not only improve their student’s school experience and parent’s comfort level but also, perhaps make a difference between life and death for a specific student in their elementary school.

## PART V: REFERENCES

- Cochrane-Smith, M.(1991). "Learning to teach against the grain." Harvard's Educational Review, 61 (3) p. 280
- Dana, Nancy and Kendol-Silva, Diane. (2003). Reflective Educator's Guide to Classroom Research. p. 80
- The School Food Allergy Program. (1995). The Food Allergy and Anaphylaxis Network.  
<http://www.foodallergy.org>.
- Hay, G.H.; Harper, Thomas B.and Coursen, F.H. (1994). "Preparing School Personnel to assist students with life threatening food allergies." Journal of School Health. 64 (3). pgs.119-121.
- "How to write Surveys." Available @ <http://www.google.com/search>
- "It only takes One Bite." (1995). The Food Allergy and Anaphylaxis Network, Video.
- "Keeping Our Children Safe." (2001) The Food Allergy and Anaphylaxis Network.Video
- Klariti; Writing Services of Ireland. "Surveys that Work-How to get Answers for those Questions." Available @ <http://Klariti.com/business-writing/how> to write surveys. shtml.
- LE&SS, "Severe Allergic Reaction Procedure," (P-3, 8/95), Health Services, "Standing Orders for Allergic Emergencies," (HS-47, 6/98), "Food Allergy Action Plan," (HS-41, 4/02), State College Area School District.
- Litarowsky, JA.; Murphy, SO; Canham, DL; (2004 Oct.). "Evaluation of an anaphylaxis Training program for unlicensed assistive personnel." Journal of School Nursing. 20 (5). p.279-84.
- Roper, Jeanne. (2005 March). "What's New in the Treatment of Management of Food Allergy." School Nurse News. 22 (2). pp. 32-34.
- Sheetz, Anne; Goldman, Patricia; Millett, Kathleen; Franks, Jane C. et.al. (2004). "Guideline for Managing Life-threatening Food Allergies in Massachusetts Schools." Journal of School Health. 74.5. p. 155-160.
- "Techniques for Writing Surveys." (2005). Available @ <Http://www.lhs.logan.k12.ut.us/njsmart/survey/pages3.html>.
- Weiss C; Munoz-Furlong A; Furlong TJ; Arbit, J. (2004 Oct.). "Impact of food allergies on school nursing practice." Journal of School Nursing. 20 (5). P. 268-78.

**APPENDIX 1 (SURVEY #2)**

TO: School Principal  
Classroom Teachers/Special Teachers  
Classroom Paras/Lunchroom Paras  
Cafeteria Staff  
FROM: **Linda Johnson, School Nurse**  
DATE:  
SUBJECT: **SS #2-----Health Maintenance of Life Threatening Food Allergies in the school**

In an attempt to assess the ongoing preparedness of school staff in maintaining the health management of students with severe food allergies, **please complete the following questionnaire and return to Linda Johnson/health room within a week.** Thanks in advance for your cooperation. I need all your help. (If you need further writing room, use the back page.)

1. In your life or past experience with others, have you ever witnessed first hand a life threatening allergic response that required the use of an Epi-pen? **Yes No**
  - a. If the answer is yes, **please briefly** describe the situation.
  - b. How do you feel the situation ended?
2. At this time, please circle below, how well prepared you feel you know the symptoms of an allergic reaction.  
**1—unsure/need refresher, 2—prepared**
3. At this time, please circle below, how well prepared you feel you are in the administering of an Epi-pen in an emergency situation?  
**1—unsure/need refresher, 2—prepared**
4. At school, are you in contact with at least one student who has a severe food allergy? **Yes No**
  - a.. If the answer is yes, please **briefly describe** the situation(s).
  - b. How **often** do you have contact with the student(s)?
  - c .What do you understand your role, if any, to be in working with the student(s)?
5. At this time, please circle below, how well-prepared you feel you are in meeting the overall emergency health care needs of student(s) at school with severe food allergies?  
**1—unsure/need refresher, 2--prepared**
6. Have you attended a school staff in-service in the last year that focused on:
  - a. Food Allergies? **Yes No**
  - b. Epi-Pen instruction? **Yes No**

Thanks so much for your help.

**Name Date School Position**

**APPENDIX 2 (SURVEY #3)**

TO: School Principal  
Classroom Teachers/Special Teachers  
Classroom Paras/Lunchroom Paras  
Cafeteria Staff  
FROM: **Linda Johnson, School Nurse**  
DATE:  
SUBJECT: **SS #3-----Health Maintenance of Life Threatening Food Allergies in the school**

In an attempt to assess the ongoing preparedness of school staff in maintaining the health management of students with severe food allergies, **please complete the following questionnaire and return to Linda Johnson/health room within a week.** Thanks in advance for your cooperation. I need all your help. (If you need further writing room, use the back page.)

1. In your life or past experience with others, have you ever witnessed first hand a life threatening allergic response that required the use of an Epi-pen? **Yes No**
  - a. If the answer is yes, **please briefly** describe the situation.
  - c. How do you feel the situation ended?
2. At this time, please circle below, how well prepared you feel you know the symptoms of an allergic reaction.  
**1—unsure/need refresher, 2—prepared**
3. At this time, please circle below, how well prepared you feel you are in the administering of an Epi-pen in an emergency situation?  
**1—unsure/need refresher, 2—prepared**
4. At school, are you in contact with at least one student who has a severe food allergy? **Yes No**
  - a.. If the answer is yes, please **briefly describe** the situation(s).
  - b. How **often** do you have contact with the student(s)?
  - c .What do you understand your role, if any, to be in working with the student(s)?
5. At this time, please circle below, how well-prepared you feel you are in meeting the overall emergency health care needs of student(s) at school with severe food allergies?  
**1—unsure/need refresher, 2--prepared**
- 6... Have you attended a school staff in-service in the last year that focused on:
  - a. Food Allergies? **Yes No**
  - b. Epi-Pen instruction? **Yes No**

Thanks so much for your help.

<b>Name</b>	<b>Date</b>	<b>School</b>	<b>Position</b>
-------------	-------------	---------------	-----------------



