

Impact of School Nurse Presence on Early Releases Due to Illness and Teacher Time Devoted to
Health Issues:

Years 1 & 2 Report

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Executive Summary

Impact of School Nurse Presence on Early Releases Due to Illness and Teacher Time Devoted to Health Issues: Years 1-2

The primary purpose of the research was to study the impact of school nurse presence on early releases due to illness and teacher time devoted to health issues. The study is a collaborative partnership among Western Carolina University, Community Foundation of Henderson County, Henderson County Public Schools Office, and the Henderson County Department of Public Department. This is a cumulative report of years one and two of a three year project with elementary schools in Henderson County, North Carolina. Survey response rates were similar both years (66.7% year two and 62.5% year 1). Year two data reflects a slightly higher percentage of regular education (96.3% vs. 91.5%) and lower exceptional class (3.7% vs. 8.0%) responses. The average class size remained stable at approximately 20 students; as did the percentage (68%) having teaching assistants (TA) with them working an average of 3-4 hours per day.

Teacher perceptions of the impact of having a school nurse present on-site indicate more than 80% each year strongly agree or agree that when the school nurse is present there are fewer early releases, less time spent on health issues, more time spent teaching, and an increased confidence that students with chronic illnesses are safer. These perceptions were also supported by teacher anecdotal notes both years. The anecdotal comments continue to focus on the need for a full time nurse and the difficulty teachers have knowing when the assigned nurse is on-site. One example of the need was summarized by this teacher as

[t]he unpredictability of diabetic children may sometimes take 1-2 hours of assistant time to monitor and support. We have grave concerns about the responsibility this involves for the best health of our children in addition to time not available for instructional support.

When there is an absence of either the T or TA, the concerns are multiplied. Just the record keeping and dietary management easily occupy 30 minutes per day. Often we have to track down the nurse at another site (school) and spend time with calls back and forth over diabetes issues.”

Adjustments were made to the survey tool following evaluation of year one data analyses. The researchers, in collaboration with the partners, determined that certain health issues needed clarification. The revised survey included adding, qualifiers or examples to the terms, allergies, bathroom, calling parents, general aches and pains, mental health, other and sleepy. For example mental health was changed to “diagnosed mental health issues” and general aches and pains specified it should be those minutes not counted elsewhere. Year one data did not discriminate between time spent on health issues by the teacher or TA; therefore, the last improvement to the survey was to differentiate the time spent on health issues by the teachers versus the TA.

The time spent on health issues in year one, in rank order, was “other, bathroom, mental health issues, calling parents and general aches and pains;” whereas in year two the top five health issues by teachers were “fever, bathroom, calling parents, stomach ache, and general aches and pains;” whereas the TAs ranked the order as “bathroom, calling parents, stomach ache, cuts & sores, general aches and pains.” Of note is the teacher’s high ranking of fever and the TA ranking of cuts and sores in their top five. Ranked number one with teachers, fever would represent a potentially higher acuity health issue; while cuts & sores could appropriately be handled by a TA or other surrogate in the classroom.

As an aggregate, teachers in year one spent an average of 80 minutes managing health issues the day of the survey compared to 46 minutes year two. The decrease in year two compared to year one may be due to a flu outbreak during the survey time period year one and the addition of

specific definitions and examples of health issues (e.g., bathroom, mental health and other) year two may have impacted the significantly reduced minutes for “other” and “bathroom”. These data do not reflect the time saved by the teacher referring the student to the nurse nor does it reflect time saved due to nurse follow up of students with chronic health issues. The data reflect only the minutes the teacher spent managing the issue in the classroom only on the survey day. The fact this particular day was a “good” day was expressed by several teachers in the anecdotal notes. One teacher explained, “[my] seizure child was absent today. I keep my cell phone on at all times and am in constant contact to see if small seizures are occurring (looks like she is day dreaming). All specialists and TA monitor class;” Another teacher wrote “[we] have diabetic students, students with kidney failure, severe allergies. Students with seizure disorders, autoimmune disorders with no full time nurse;” and “this was a calm day! Usually address more issues on a daily basis and need a nurses advice/input!”

The number of hours the school nurse was on-site per week ranged from 7 to 15 hours year two compared to 4 to 30 hours year one. Eighty-nine percent of the school nurses who were on-site were present two hours or less ($x = 1.98$) both years. During the hours spent in the assigned school the day of the survey, the school nurses reported assessing children with lacerations, ankle pain, knee pain, vomiting, stomach ache, sore throat, hand injury, and diabetes and, in addition, doing (1) medication management, (2) immunization record reviews, (3) communications with physicians, (4) checking records, and (5) developing or updating care plans and immunization records.

Data for early releases were collected by the school nurse the day of the survey. A strong positive correlation in year one highlighted data related to the unknown reasons students were released from school. Students were more likely released early on the day of the survey in year

two for illness rather than unknown reasons and there was a strong positive correlation between the number of students seen by the nurse prior to release when the nurse was on-site (92.5%, up from 46% in year one). The strong negative correlation between nurse presence and the hours worked in year one accounted for 60% of the variance between the two. This interpretation was consistent with year one data that 58% of the schools with a nurse present on-site had fewer early releases.

Data related to teacher referrals when the nurse was not on-site were based on the teacher's recall of the average number of referrals per week and to whom they referred students. Of the total responses both years, an average of 20 referrals was made per week. Year two data specified to whom these referrals were made. In rank order, the referrals were made to office staff, including principal or TA with special training; another teacher; or a counselor.

Medical home status data categorized as (1) health department, (2) private physician, (3) emergency department or (4) other medical home situation, were sought for both years. Medical home data were unattainable years one or two due to the variation among schools of student record keeping.

In summary, teacher concerns both years ranged from insecurity about their knowledge, skill and ability to manage health issues of children in the absence of a readily available school nurse to frustration about the instructional time forfeited when dealing with health issues. Anecdotal notes continued to provide powerful statements and insights into the teacher's day. Frustrations of trying to teach and to be a "nurse", as well as concerns for the welfare of the children, are apparent. The statements reflect their belief that if a nurse were present on a daily basis students with health issues would be given the care they need, the teacher could focus on the student

learning, it would decrease their concerns about possible liability issues due to making health issue decisions, and there would be fewer early releases from school.

Based on the analyses of years one and two data the researchers, rather than repeat the same survey year three, recommend changing from a written survey sent to all teachers in Henderson County elementary schools to focus group interviews with five focus groups representing elementary teachers from the four county school districts and a group with the nurses serving those four schools. Open-ended questions for the teachers will focus on when a health issue “rises” to the level of needing a school nurse, health issues they will always handle themselves, and would the types of health issues referred change if a nurse were on-site full time. The open-ended questions for the school nurse would include similar questions but from the nurse’s point of view, e.g. health issues the teacher should always handle versus referring to the nurse?

**Project Report:
Years 1-2**

Impact of School Nurse Presence on Early Releases Due to Illness and Teacher Time Devoted to Health Issues

Introduction

The primary purpose of the research was to study the impact of school nurse presence on early releases due to illness and teacher time devoted to health issues. The study is a collaborative partnership among Western Carolina University, Community Foundation of Henderson County, Henderson County Public Schools Office, and the Henderson County Department of Public Health. This is a cumulative report of years one and two of a three year project on elementary schools in Henderson County, North Carolina. The opening of a new elementary school year two increased the total number of schools to 13 from 12 for year one. The total school nurse hours per school increased an average of 0.65 hours per week due to the addition of one school nurse and the redistribution of hours by the full-time nurse who was at one school the first year of the study. Teacher surveys were distributed by the school principals at a monthly faculty meeting in February or March both years and teachers limited their responses to the health issues seen on *that day*.

Teachers who classified themselves by class type as “regular education” and “exceptional class” were the focus of analysis. A total of 289 (66.7%) year two surveys were completed reflecting a similar response to year 1 (n=272; 62.5%). Year two data reflects a slightly higher percentage of regular education (Yr 2 – 96.3%; Yr 1 – 91.5%) and lower exceptional class (Yr 2 – 3.7%; Yr 1 – 8.0%). The average class size of both class types remained stable in year two at approximately 20 students; as was the majority (68%) with teaching assistants (TA) and those TAs worked an average of between 3-4 hours each day.

School nurse hours

The number of hours the school nurse was on-site per week ranged from 7 to 15 hours year two compared to 4 to 30 hours year one (due to a “full time” nurse 30 hours per week at one school). This “full time” position was discontinued year two and the nurse was present 12 hours per week rather than 30 hours. The average number of hours school nurses are present at each elementary school per week year two was 11 hours, a slight increase from 10.35 hours year one. On the day of the survey 45% of the school nurses were present at 7 of 13 schools compared to 58% year one (7 of 12 schools). Eighty-nine percent of the school nurses who were on-site were present an average of two hours or less ($x = 1.98$) both years. The redistribution of the full time nurse and the addition of a new full-time nurse position accounts for the increase in hours per week and consistent average hours on-site.

Teacher perceptions

Teacher perceptions of the impact of having a school nurse present on-site indicated both years that more than 80% of the teachers strongly agree or agree that when the school nurse is present there are (1) fewer early releases, (2) increased communication, (3) less time spent on health issues, (4) more time spent teaching, (5) increased confidence that students with chronic illnesses are safer, and (6) teachers have a resource available to them for health information. These perceptions were consistent both years and were supported by teacher anecdotal notes. Anecdotal notes year two continued to focus on the need for full time nurses and the difficulty knowing when the assigned nurse is on-site. One example of the need was expressed by this teacher as:

[t]he unpredictability of diabetic children may sometimes take 1-2 hours of assistant time to monitor and support. We have grave concerns about the responsibility this involves for the best health of our children in addition to time not available for instructional support. When there is an absence of either the T or TA, the concerns are multiplied. Just the record keeping and dietary management easily occupy 30 minutes per day. Often we have to track down the nurse at another site (school) and spend time with calls back and forth over diabetes issues.

Survey form

The survey for the school nurse was modified year two to more clearly define the data requested (Appendices A & B). Specific questions related to the number of students seen, the type of health issues assessed, and other duties performed if on-site the day of the survey. The school nurses reported assessing children with lacerations, ankle pain, knee pain, vomiting, stomach ache, sore throat, hand injury, and diabetes. In addition to the health issues, the nurses activities included (1) medication management, (2) immunization record reviews, (3) communications with physicians, (4) checking records, (5) developing/updating care plans and immunization records, and (6) attending meetings. It should be noted that the time the nurse spent with children's health issues are not reflected in the teachers report, only the time the teacher may have dealt with the issue *prior to* sending the child to the nurse, thus increasing the time the teacher and TA could devote to classroom teaching.

Improvements were made to the survey tool following evaluation of year one data analyses. Based on anecdotal notations the partners determined that certain health issues and the term Other needed to be defined. Clarifications included adding definitions and/or examples of specific terms. For instance, in year one other was the highest ranking category but due to lack of

descriptive information was not useful. The revised survey required specific information if minutes were assigned to other; thus allowing analyses of this open-ended category. In addition, qualifiers or examples were added to the terms, allergies, bathroom, calling parents, general aches & pains, mental health and sleepy. For example mental health was changed to diagnosed mental health issues and general aches and pains specified it should be those minutes not counted elsewhere. Year one data did not discriminate between time spent on health issues by the teacher or teacher assistant (TA); therefore, the last improvement to the survey was to differentiate between the two (Table 1)

Table 1: Top Five Health Issues by Time Spent for Years One and Two

Health Issues	Year 1 (x minutes)	Year 2 (x minutes)		
	Teacher/TA (time undifferentiated)	Teacher	TA	Total Y2
Bathroom	10.31	4.62	1.95	6.43**
Calling Parents	5.30	2.95	1.34	4.18
Cuts & Sores	3.63	1.99	1.28	3.21
Fever	3.08	4.70	0.84	2.03
Aches/Pains	4.98	2.37	1.17	3.37
Mental Health	6.02	1.05	0.18	1.22
Stomach Ache	4.40	2.64	1.31	3.98
Other	15.26	1.11	0.23	1.28**
Total (20) Issues	80.33	33.13	13.85	46.11

** p< .01 Issues in red represent top 5

Health issues: Outcomes

The time spent on health issues in year one in rank order was other, bathroom, mental health issues, calling parents and general aches and pains; whereas in year two the top five health issues in relation to time spent were bathroom, calling parents, stomach ache, aches and pains, and cuts/sores, The top five health issues year two showed variation from the top five issues in year one, Year two, teachers spent in rank order the most time on: fever, bathroom, calling parents, stomach ache, and general aches and pains; whereas the TAs ranked the order as

bathroom, calling parents, stomach ache, cuts & sores, general aches and pains. Of note is teachers high ranking of fever and TA ranking of cuts & sores in their top five. Ranked number one with teachers, fever would represent a potentially high acuity health issue potentially requiring referral to the nurse, if present; while cuts & sores could appropriately be handled by a TA or other surrogate in the classroom.

As an aggregate, teachers in regular and exceptional classrooms year one spent an average of 80 minutes managing health issues the day of the survey compared to 46 minutes year two. The decrease in average minutes year two compared to year one may be due to a flu outbreak during the survey time period year one. Specific definitions and examples of health issues (e.g., bathroom, mental health and other) in the year two resulted in significantly reduced minutes for other and bathroom. These data do not reflect the time saved by the teacher referring the student to the nurse nor does it reflect time saved due to nurse follow up of students with chronic health issues. The data reflect only the minutes the teacher spent managing the issue in the classroom. Anecdotal notes may further explain the difference in time spent on health issues. One teacher explained

My seizure child was absent today. I keep my cell phone on at all times and an in constant contact to see if small seizures are occurring (looks like she is day dreaming).

All specialists and TA monitor class.

Another teacher wrote:

We have diabetic students, students with kidney failure, severe allergies. Students with seizure disorders, autoimmune disorders with no full time nurse” (regular classroom teacher response); and “this was a calm day! Usually address more issues on a daily basis and need a nurses advice/input!

Early release findings

Data for early releases were collected by the school nurse for the day the teachers completed the survey. Descriptive analyses indicated significant differences on four of the variables when comparing the average numbers of students released early from the elementary schools in years one and two (Table 2). The average number of children who were seen by the nurse on the day of survey and released early for unknown reasons decreased in year two. The average number of children increased from year one in categories total released early on the day of the survey and those released early for illness.

Table 2: Early Release (ER) Findings by Grant Year

Early Release (ER) survey items	Year 1 (n=272)			Year 2 (n=288)		
	n	x	SD	n	x	SD
Total seen by nurse on day of survey (DOS)	30 ^a	3.18	8.61	16	1.14*	1.98
Total ER on DOS	177	16.29	8.60	191	14.45*	6.58
Total ER unknown reasons	114	10.88	8.52	93	7.09*	4.11
Total ER illness	51	4.51	4.11	98	7.36*	6.07
Total ER while nurse present	14	1.31	1.71	27	1.32	3.68
Total ER seen by nurse prior to release	6	0.65	1.23	8	0.53	1.26
Nurse present on DOS?	Yes - 58% of schools			Yes- 46% of schools		

^a – 28 students seen at 1 school; * p < .001

Correlation analyses examined the relationships among the six early release variables and indicators of school nurse presence and hours on-site (Table 3). Comparison between years one and two revealed changes in the relationships between children released early and the presence of the nurse. In year one there was a very strong positive correlation between the total number of students seen by the nurse and those seen who were then released early ($r=.954$; 91%). The

remaining variance, approximately 9% were not seen by a nurse. In year two that correlation was decreased but still significant ($r=.774$, 60%) indicating that fewer students were seen by the school nurse prior to release. While the overall number of students released early increased from year one; the number seen by the nurse on the day of the survey was decreased. This is most likely due to the number of children seen in year one at one school with a full-time nurse on site the day of the survey (28 seen and only 4 released early); which was not the case in year two. Other factors may be the result of fewer nurses being on-site during the data collection days or the additional school coverage required in year two.

Table 3: Interrelationships among Early Release and School Nurse Presence Variables (Y1_Y2)

	# Students Seen by SN	# Students ER Day of Survey (DOS)	# Students ER – Unknown	# Students ER – Illness	# Students ER while SN present	# Students ER seen by SN prior	Hours SN Present
Nurse present	-.258** -.627**	-.583** -.219**	-.457** -.151**	-.318** -.134*	-.641** -.441**	-.370** -.458**	-.770** -.926**
# Seen by SN		-.469** .171**	-.423** .198**	-.025 .051	.620** .741**	.954** .774**	.790** .611**
# ER DOS			.882** .416**	.333** .795**	-.073 .643**	-.269** .562**	.095 .278**
# ER – Unknown				-.094 -.221**	-.136* .180**	-.196* .375**	-.013 -.013
# ER – Illness					.598** .649**	-.042 .353**	.328** .306**
# ER while SN present						.676** .962**	.766** .534**
# ER seen by SN prior							.823** .456**

* $p < .05$, ** $p < .01$

A very strong positive correlation between the total number of early releases and those released for unknown reasons was revealed in year one ($r=.882$, 78%). The same correlation in year two was only a moderately positive one; accounting for only 17.3% of these events ($r=.416$). This change reflects a decrease in the overall number of early releases for unknown reasons from year one to year two (Y1=114, Y2=92) There was also a corresponding shift in

the positive relationship between students released early for illness and the total number of students released on the day of the survey from 11% ($r=.333$) in year one to 63.2% ($r=.795$) in year two. This is consistent with the increase in the total number of students released for illness in year two (Y1=51; Y2=98). Students were more likely released early on the day of the survey in year two for illness rather than unknown reasons.

A very strong positive correlation was noted in year two ($r=.962$) between the number of students seen by the nurse prior to release and the number of students released while the nurse was on-site; accounting for 92.5%, up from 46% in year one. This is corroborated by the relationship between students released for illness and those released while the nurse was present, which rose from 35.7% in year one to 42.1% in year two. There was also an upward shift in the likelihood that children that were released early on the day of the survey while the school nurse was present (Y1= 5%; Y2= 41.5%).

However, as concluded by the descriptive analyses in both years, early releases for unknown reasons continue to represent a meaningful proportion of all releases (Y1-64%; Y2-48.6%). While no causal conclusions can be drawn, these analyses provide evidence of issues of concern for early release activities in the elementary schools including the reason for early release.

Another factor that must be considered in the analyses of these early release indicators is the data collection quantity and quality between year one and two. More data was provided in year two and may represent a truer picture of these relationships. Also the addition of another school and redistribution of school nurse services impacted the early release factors as they relate to school nurse presence and hours worked per school.

The strong negative correlation between nurse presence and the hours worked in year one accounted for 60% of the variance between the two. A negative correlation indicates an inverse relationship: that as one variable increases, the other one decreases. That interpretation was consistent with year one data that 58% of the schools with a nurse present on-site had fewer early releases. During year one there was also a full-time nurse at one school who saw 28 of 30 total students seen on the day of the survey. This interpretation is also consistent with anecdotal comments by teachers that fewer releases occur when the nurse is present.

In year two this negative correlation became stronger, increasing to 85.7% indicating the more a nurse is present at any one school, the fewer hours can be spent at other schools. While the average hours worked per week increased slightly in year two, the impact of an additional school, redistribution of nurse services and improved early release data acquired in year two suggests that on the day of the survey the total number of students authorized to leave early was higher year two than year one and, of those students released early for illness, they were more likely to be seen by a nurse in year two. The number of students released for illness was actually higher year two and the number released for unknown reasons decreased; possibly due to the high rate of “unknown” early release data year one and improved data collection process year two; for example, year one there was a flu epidemic year during the data collection period and, if the nurse wasn’t present, release from school may have been expedited due to concerns related to cross-contamination.

Teacher referrals

Data related to teacher referrals were based on the teacher’s recall of the average number of referrals per week and to whom they referred students when the nurse was not present. Of the total responses both years an average of 20 referrals were made per week. Year two data

specified to whom these referrals were made. In rank order, the referrals were made to office staff, including principal or TA with special training; another teacher, or a counselor. Teacher comments indicated they seldom refer students to the school nurse because the nurse is there so few hours, they do not know or are unable to remember the nurses' schedule. Several indicated that when the nurse is present "there's a line" so they handle health issues the same as if the nurse were not present.

Medical home

Medical home status data categorized as (1) health department, (2) private physician, (3) emergency department or (4) other medical home situation, were sought for both years. Medical home data were unattainable years one or two due to the variation among schools of student record keeping.

Summary

The primary purpose of the research was to study the impact of school nurse presence on early releases due to illness and teacher time devoted to health issues. Early release data indicate that on the day of the survey, if the school nurse was present, more students who were released early were seen by a nurse. Teacher concerns both years ranged from insecurity about their knowledge, skill and ability to manage health issues of children in the absence of a readily available school nurse to frustration about the instructional time forfeited when dealing with health issues. Anecdotal notes continued to provide powerful statements and insights into the teacher's day. Frustrations of trying to teach and to be a "nurse", as well as concerns for the welfare of the children, are apparent. The statements reflect their belief that if a nurse were present on a daily basis students with health issues would be given the care they need, the teacher could focus on the student learning, and it would lessen their concerns about possible liability issues due to making health issue decisions.

Based on the analyses of years one and two data the researchers, rather than repeat the same survey year three, recommend changing from a written survey sent to all teachers in Henderson County elementary schools to focus group interviews with five focus groups representing elementary teachers from the four county school districts and a group with the nurses serving those four schools. Open-ended questions for the teachers will focus on when a health issue “rises” to the level of needing a school nurse, health issues they will always handle themselves, and would the types of health issues referred change if a nurse were on-site full time (Appendix C). The open-ended questions for the school nurse would include similar questions but from the nurse’s point of view (Appendix D).

This qualitative approach promises to add more in depth knowledge and understanding of the differing perspectives of these two groups of professionals; each of whom is committed to the education and well being of elementary school children. Such detailed information can be the basis for further innovation and support of teachers and school nurse services in Henderson County

APPENDICES

Appendix A

APPENDIX A: Year 1 Teacher Survey

Teacher Survey
 Winter/Spring Semester 2008

The Impact of School Nurse Services on Early Release Absences

Henderson County Department of Public Health and Western Carolina University, with support from the James H. Cummings Foundation, are conducting a study on 12 Henderson County Public Schools related to school nurse services at each school. The research results may impact future school health services and students and may be used in reports to government officials, journal articles, and presentations.

Your participation is important. Please complete the survey; it takes approximately 10 minutes. Responses will be collated data per school and reported as school data only. Your identity is confidential and all responses anonymous. ***Do not put your name on this sheet.***

Please answer items 1- 6 below by placing a check in the box to the left of the choice that best represents your opinion. The choices are:

SA = Strongly Agree A = Agree N = Neutral D = Disagree SD = Strongly Disagree

It is my impression when the school nurse is on-site

1. There are fewer early releases due to illness.

- SA A N D SD

2. There is increased communication about student health needs between school, parent, and health care providers.

- SA A N D SD

3. I spend less time on student health problems

- SA A N D SD

4. I have more teaching time in the classroom

- SA A N D SD

5. I feel more confident that students with chronic problems are safer.

- SA A N D SD

6. I have a resource for obtaining information related to my personal wellness and health.

- SA A N D SD

Please respond to items 7-11 about you and your class.

7. Which type of class do you teach?

- Regular education Exceptional children class Other (specify) _____

8. How many students do you have in your class? _____

9. Do you have a Teacher Assistant(s) in your class?

- No Yes If yes, how many hours per day _____

10. On average, how many times each week do you refer students to the nurse? _____

11. On average, how many times each week do you refer a student with health issues to someone other than the school nurse (e.g. counselor or office when the school nurse is not present)? _____

12. Please estimate the number of minutes you spent TODAY on these health issues.

Example:

Allergies	10
Calling Parents	60

Health Issues	Total Minutes
Allergies	
Asthma	
Bathroom	
Calling Parents	
Chapped or cracked lips	
Congestion	
Cuts/sores	
Dental Issues	
Diabetes	
Fever	
General Aches & Pain	
Injuries/First Aid	
Lice	
Medications	
Mental Health Issues	
Seizures	
Sleepy	
Sore throat	
Stomach Ache	
OTHER Health Issues not listed above. Please specify.	

Other comments you wish to share:

Thank you for taking the time to complete this survey. Your responses will be reviewed only by the principal investigator and research assistant(s). If you have questions or concerns, please call Jean Hill, EdD, RN, C, Principal Investigator, Western Carolina University School of Nursing at 828-243-4441.

Appendix B

APPENDIX B: Year 2 Teacher Survey**Teacher Survey**
Winter 2009**The Impact of School Nurse Services on Early Release Absences: Year II**

Henderson County Department of Public Health, Henderson County Public School Office, and Western Carolina University, with support from the Community Foundation of Henderson County, are collecting year two data on 13 Henderson County Elementary Schools related to school nurse services. The research results may impact future school health services and may be used in reports to government officials, journal articles, and presentations.

As a teacher in a regular or self-contained exceptional classroom, your participation is important. Please complete the survey; it takes approximately 10 minutes. Responses will be collated per school and reported as county school data only. Your identity is confidential and all responses anonymous. ***Do not put your name on this survey.*** Return the survey to your school office and they will forward it to the County School Office.

Please answer items 1- 6 below by placing a check in the box to the left of the choice that best represents your opinion. The choices are:

SA = Strongly Agree A = Agree N = Neutral D = Disagree SD = Strongly Disagree

It is my impression when the school nurse is on-site

1. There are fewer early releases due to illness.

SA A N D SD

2. There is increased communication about student health needs between school, parent, and health care providers.

SA A N D SD

3. I spend less time on student health problems.

SA A N D SD

4. I have more teaching time in the classroom.

SA A N D SD

5. I feel more confident that students with chronic problems are safer.

SA A N D SD

6. I have a resource at school for obtaining information related to my personal wellness and health.

SA A N D SD

Please respond to items 7-11 about you and your class.

7. Which type of class do you teach?

Regular education Exceptional children (self-contained class)

Other (specify) _____

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8. How many students do you have in your class? _____
9. Do you have a Teacher Assistant(s) [TA] in your class?
 No Yes If yes, how many hours per day _____
10. On average, how many times each week do you refer students to the nurse? _____
11. a. When the school nurse isn't present at the school, how many times each week on average do you refer a student with health issues to someone else at the school? _____.
 b. To whom do you refer the student with health issues when the school nurse is not present (please specify)? _____ (use positions/titles; no personal names)
12. Please estimate the number of minutes you and the TA spent TODAY on the health issues listed below.

Student Health Issues Addressed by the Teacher or TA in the Classroom

Health Issues: (parentheses indicate possible examples)	Teacher minutes	TA minutes	Total minutes
Allergies (peanuts, bee stings)			
Asthma			
Bathroom (excluding routine breaks)			
Calling Parents (due to health issue)			
Chapped or cracked lips			
Congestion			
Cuts/sores			
Dental Issues			
Diabetes			
Fever			
General Aches & Pain (not counted elsewhere)			
Injuries/First Aid			
Lice			
Medications			
Diagnosed Mental Health Issues			
Seizures			
Sleepy (due to suspected illness)			
Sore Throat			
Stomach Ache			
OTHER Health Issues not listed above. Please specify.			

Other comments you wish to share:

Thank you for taking the time to complete this survey. Your responses will be reviewed only by the principal investigator and research assistant(s). If you have questions or concerns, please call Jean Hill, EdD, RN, C, Principal Investigator, Western Carolina University School of Nursing at 828-243-4441.

Appendix B: Year 2 School Nurse Survey

Impact of School Nurse Presence on Early Releases Due to Illness and Teacher Time Devoted to Health Issues

School Nurse: _____ School: _____

Date of Data Collection: _____

1. How many children were released early the day of the survey?
 ___ for health reasons and ___ total releases (including for health reasons)
2. How many children identified a medical home?
 _____ Identified a medical home Data unavailable or incomplete

If medical home identified what type of facility was it?

- ___ Health Department
- ___ Private Physician
- ___ Emergency Room
- ___ Other (specify)

3. Were you present at this school the day the survey was distributed to the teachers?
 No Yes, I was present for _____ hours from _____ to _____.

If you answered NO you have finished the survey. Please return it via email to jhill@email.wcu.edu or via mail at address below.

If you answered YES to # 3, please answer the following:

4. How many students were released early for health reasons during the time you were present? _____
5. How many of the students released early due to illness did you see prior to them being released? _____
6. How many students did you see the day of the survey? _____
7. List the different types of health issues you addressed that day.
8. If you did not see students this day, what duties (e.g. immunization record review) did you perform that day?

Thank you for completing the survey form./Jean Hill

APPENDIX C

Appendix C
Teacher Survey/Focus Group
Spring 2010

Impact of School Nurse Presence on Early Releases Due to Illness and Teacher Time Devoted to
Health Issues: Year 3

[READ TO INTERVIEWEES AT BEGINNING OF SESSION]

On behalf of the study partners, Western Carolina University (WCU), Community Foundation of Henderson County, Henderson County Department of Public Health, and Henderson County Schools, thank you for agreeing to participate in the third and final year of a study about the *Impact of School Nurse Services on Early Release Absences*. The primary purpose of this final year is to do a focus interview to determine when a health issue ‘rises’ to the level of being a referral to the school nurse, school-based clinic, or to another person. Participation in the focus interview requires you be a teacher from a self-contained, regular or exceptional classroom and that you completed the *Impact of School Nurse Services on Early Release Absences* survey the previous two years of the study.

Your participation is vital to this study because you are the person with day-to-day contact with students and their health issues. You are one of twenty elementary teachers county-wide participating in a focus group representing four elementary schools, one school in each school district. Your group will have a total of five teachers representing a self-contained exceptional classroom and four from regular classrooms (K-1; 2-3; or 4-5).

Participation is voluntary and your presence today confirms consent to participate. Interviewee responses will be recorded and transcribed by a professional transcriptionist. Your identity is confidential and all responses are anonymous. *Do not mention your name or school during the interview recording - identify yourself or this school; however, should you inadvertently do so, the transcriptionist will omit your name and/or the name of the school.* Data will be collected per school selected and reported as aggregate data.

If you have questions or concerns, please call Jean Hill, EdD, RN, C, Principle Investigator, WCU School of Nursing at 828-243-4441 or Marianne Hollis, PhD, RN, Co-principle Investigator, WCU School of Health Sciences at 828-227-2660. *[Provide business card to each participant with phone number and address of each investigator]*

Appendix C
School Nurse Survey/Focus Group
Spring 2010

Focus Interview

1. When you were asked to come to this meeting to discuss student health issues, what did you think would be discussed?
2. When you are present at the school:
 - (a) What are some examples of health issues you think the teacher should always handle?
 - (b) When does a student health issue “rise” to level of being a nurse referral versus the teacher handling the issue?
3. What types of health issues would you anticipate you would need to refer to others, if you were at the school full-time? If you were present at a school with a school-based clinic:
 - (a) What are some examples of health issues you would expect to always handle yourself?
 - (b) When does a student health issue “rise” to level of being a direct school-based referral by the teacher versus sending the student to you first?
 - (c) What types of health issues would you anticipate you would refer to the school-based clinic if you were there full time?
4. Is there anything you would like to share that we did not ask?

[Please complete the written survey].

[Once survey is complete]:

Thank you again for their participation. If you think of further comments or if you have questions of us, please contact us by the email address or phone number on our business card.

Appendix C
School Nurse Survey
Spring 2010

Please complete the following about yourself and your school:

1. How many hours per week are you on-site at this school? _____
2. How many children on average do you see at this school per week? _____
3. Of the children seen how many on average do you send home or to the school-based clinic? a) Home _____ b) _____ School-based clinic
4. List the top five health issues you see with most frequently on a “regular day”:
 - a.
 - b.
 - c.
 - d.
5. What types of health issues do you “case manage” at this school?