Nebraska School Health Data Report:

Nebraska Student Information Systems

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Children's
HOSPITAL & MEDICAL CENTER

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Introduction

How many students in your school have asthma? Of them, how many have been chronically absent this school year? Without a useful information management system to run a report, these simple questions are difficult to answer.

The American Nurses Association and the National Association of School Nurses state that "Nurses in the 21st century are expected to be data and information literate and proficient in data management." Managing health data in school is an important responsibility of any school nurse and is greatly beneficial to the school and district, However, nurses are limited by the capabilities of the electronic student information system to manage data efficiently and effectively, as well as by the training they receive on the system. Also, there are still some nurses who do not have access to an electronic record system for health data at all.

The Nebraska School Health Data Committee

Mission:
To empower school nurses in data literacy, and to collect data and publish reports on student health and school nursing, in order to improve school health and enhance the school nursing practice.

Vision:
A strong school nursing workforce witha data-driven approach to improving student health, increasing student attendance, and enhancing student educational outcomes.

We know that Nebraska school districts mainly use one of six different electronic student information systems to manage student data. Those systems are also being used to manage health data but function differently than the electronic health records (EHRs) that most nurses are used to working with in a health care setting. While there are data that identify Nebraska schools' usage of student information systems, there are no data to describe how school nurses utilize them to manage health data and how satisfied they are with these systems. The Nebraska School Nurse Data Committee recognized this lack of information and designed a survey to analyze these points, identify gaps and barriers that prevent school nurses from utilizing their systems to full capacity, and to give nurses an opportunity to voice their preferences for the capabilities of an ideal information system.

Methods

In April 2022, the State School Nurse Consultant sent emails on the Nebraska School Nurse Listserv inviting school nurses to participate in a two-part survey. The survey was created in Redcap and a link was provided in the emails. The first part of the survey was to measure their pandemic-related activities; the second measured school nurse usage of student information systems. This report covers part 2 of this survey. The survey was anonymous, but respondents were asked to provide their zip code and nursing credentials to assess geographic reach and role. The survey consisted of questions on the school nurse's student information system, their satisfaction with it, what activities they use it for, how they would ideally use it and what barriers exist for using the system to its fullest potential.
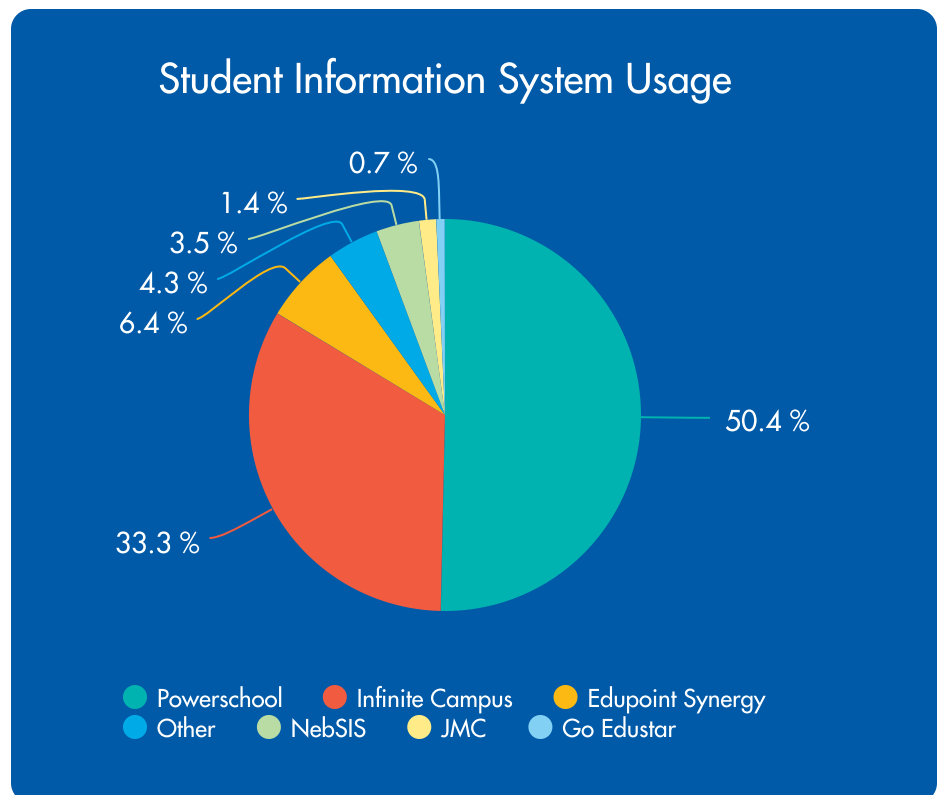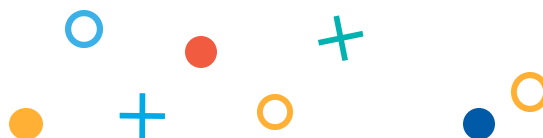
Results

There were 361 people on the School Nurse Listserv at the time, and 147 responded, yielding a 41% response rate. Of the 147 survey respondents, 89% (N=131) were registered nurses (RNs), 10% (N=15) were licensed practical nurses (LPNs), and one was an advanced practice registered nurse (APRN). There were 101 unique zip codes reported, which demonstrated that the survey had good geographic reach across Nebraska.

The survey revealed that 142 of 149 (95%) nurses reported their schools used a student information system. Of these, 134 (90%) reported the system includes a health module.

Of the 134 nurses reporting that their school's student information system contains a health module, 130 (97%) use the system to manage health data. The two student information systems respondents used most were PowerSchool (50%) and Infinite Campus (33%).

Student Information System Usage

- 0.7 %
- 1.4 %
- 3.5 %
- 4.3 %
- 6.4 %
- 50.4 %
- 33.3 %

Legend:
- Powerschool
- Infinite Campus
- Edupoint Synergy
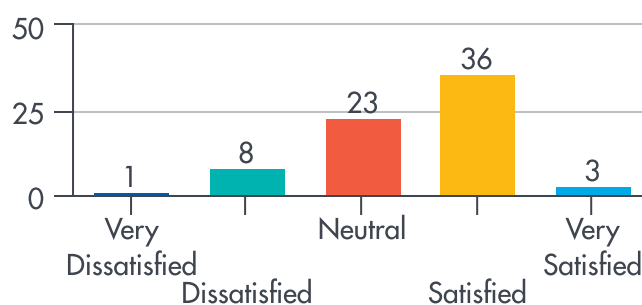- Other
- NebSIS
- JMC
- Go Edustar

Satisfaction

Fortunately, most school nurses were either satisfied or very satisfied with their student information systems. Based on school nurses' reported satisfaction with their school's student information system and how widely used each system is, Infinite Campus followed by PowerSchool had the highest reported rates of satisfaction (70% and 55% respectively) and lowest reported dissatisfaction (6% and 12% respectively).

School Nurse Satisfaction Rankings of Infinite Campus

Very Dissatisfied: 1
Dissatisfied: 2
Neutral: 11
Satisfied: 25
Very Satisfied: 8
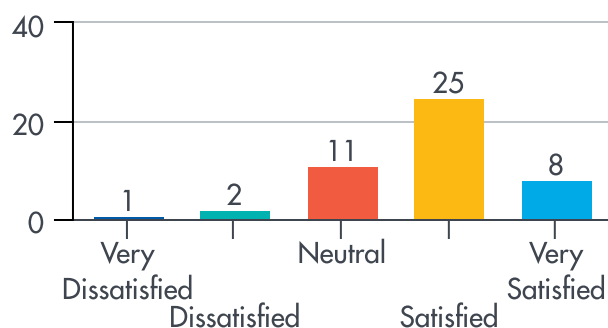
School Nurse Satisfaction Rankings of PowerSchool

Very Dissatisfied: 1
Dissatisfied: 8
Neutral: 23
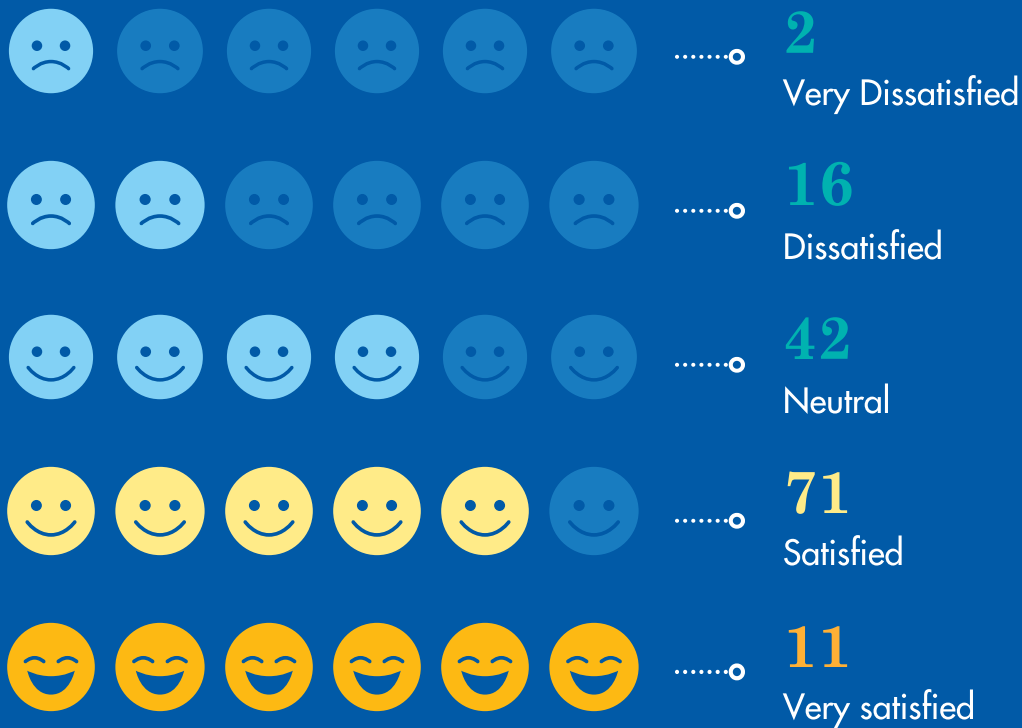Satisfied: 36
Very Satisfied: 3

"It is the position of the National Association of School Nurses (NASN) that all registered professional school nurses (hereinafter referred to as school nurses) should have access to a software platform for student electronic health records (EHRs) that includes nursing language/medical terminology and complies with standards of confidentiality, security and privacy."

National Association of School Nurses. (2019). Electronic health records: An essential tool in keeping students healthy (Position Statement). Silver Spring, MD: Author.

School Nurse Satisfaction Rankings of their Student Information System (N=142)

😟😟😟😟😟😟	**2** Very Dissatisfied
😟😟😟😟😟😟	**16** Dissatisfied
🙂🙂🙂🙂🙂🙂	**42** Neutral
😊😊😊😊😊🙂	**71** Satisfied
😄😄😄😄😄😄	**11** Very satisfied

Do you, as the school nurse, use your school's student information system to manage health data? (N=142)

Yes - 101
Yes, I use the student information system to manage health data (detailed activities outlined on the next page)

No - 7
No, the student information system cannot capture health data so all student and health office data is completed with paper charting or electronic charting not integrated with the system

Both - 34
Both (such as a mixture of electronic and paper charting)

Activities

The following table shows the activities school nurses track with their student information systems. This gives us our first glance at how these systems are utilized by school nurses across Nebraska, and the activity most often used is managing immunization records.

Manage immunization records	130	100%
Record health office visits	113	87%
Record student health conditions/health history	113	87%
Record screening results	112	86%
Document parent communication/parent contact	98	75%
Document student attendance	89	68%
Run data reports*	89	68%
Manage failed student health screening to complete follow up and referrals	76	58%
Document concussions or head injuries	70	54%
Manage Chronic Conditions**	68	52%
Log medications	60	46%
Store health plan documents	54	42%
Document or manage list of student exclusions due to COVID-19 or COVID-related symptoms or close contact	52	40%
Student 911 calls	45	35%

*If nurses selected the activity "Run Data Reports," an expanded list of additional questions was shown to determine what types of data reports the nurses were running.

**If nurses selected the activity "Manage Chronic Conditions," an expanded list was shown to measure which chronic conditions the nurses used their systems to manage.

Data Reports

The majority (68%) of survey respondents indicated that they used their student information systems to run data reports, which is a good indicator of successful use of a system. When nurses chose the activity "run data reports," they were then given options of four types of reports or "other." Immunization reports were the most frequently chosen data report with 85 nurses selecting it, followed by health office visit type, absences or exclusions and medication reconciliation.

Fourteen nurses wrote in responses for "other." The topic that emerged was that nurses also ran reports for staff who listed students with health concerns or medical alerts, with 10 nurses writing in responses along that theme. Screening reports or screening compliance was also written in five times, and running reports to track student physicals was named twice. Two nurses wrote in that they run reports for student movement (incoming and outgoing). The remaining reports written in under "other" were contact/communication log, class rosters, human growth and development class permissions, allergies, contact tracing, accident reports, medical procedure reports and total health office visits per day.

*Which data reports do you run?

|		
Immunization reports	85	65%
Health office visit types	56	43%
Absences or exclusions	32	25%
Medication reconciliation	16	12%
Other	14	11%
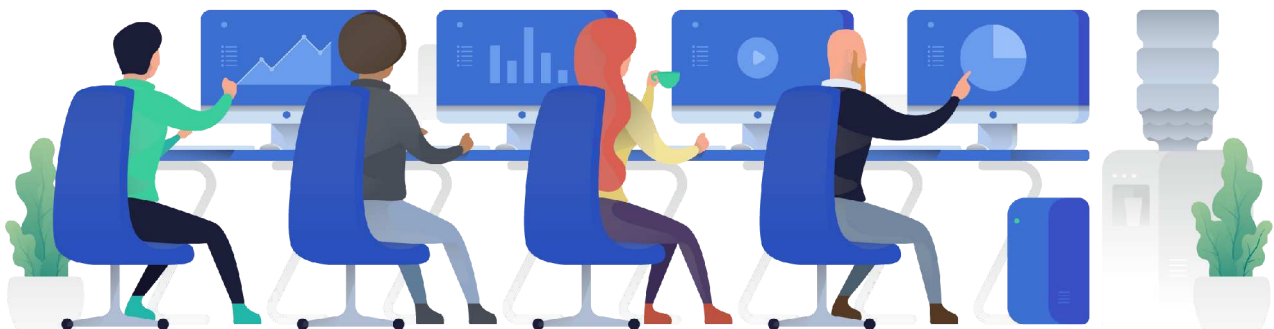
Chronic Conditions

Just over half (52%) of respondents selected that they use their student information system to track chronic conditions. The National Association of School Nurses (NASN) states the following in their document "Managing Health Conditions in Schools: Model Wellness Policy Supplement:"

"More than one quarter of children and adolescents have a chronic health condition such as asthma, severe allergies, seizure disorders, diabetes, or poor oral health... Evidence demonstrates the important link between health and academic success. Therefore, it is essential students receive support in managing their chronic health conditions so they can be present and engaged at school."

Which chronic conditions do you track?

Asthma	65	50%
Allergies	65	50%
Diabetes	63	48%
Seizure disorder	62	48%

Like running data reports, the authors of this report believe tracking and managing the chronic conditions of students is another indicator of a successful use of a student electronic system. Knowing how closely linked chronic condition management is to academic success, we encourage school nurses to utilize their systems to their full capacity for the health and benefit of these students.
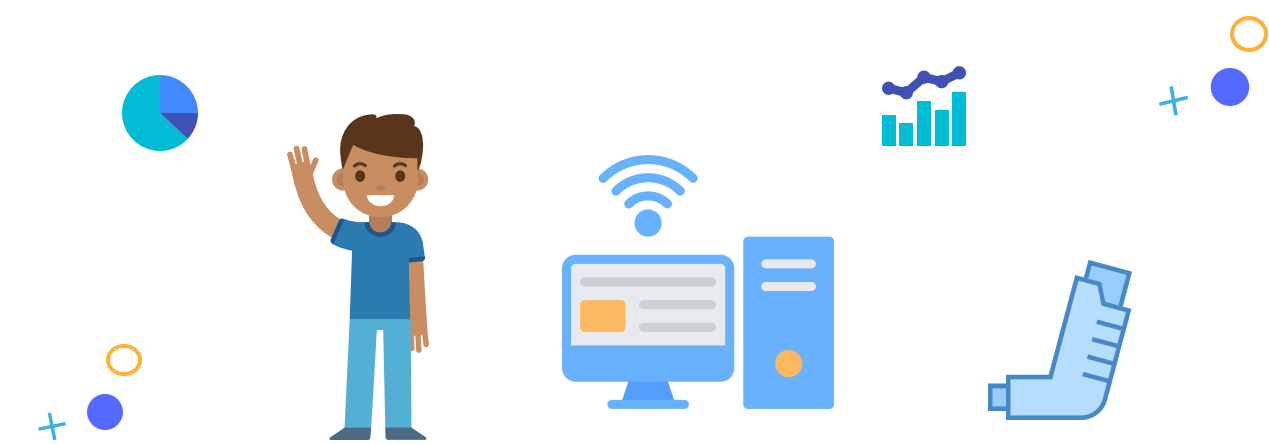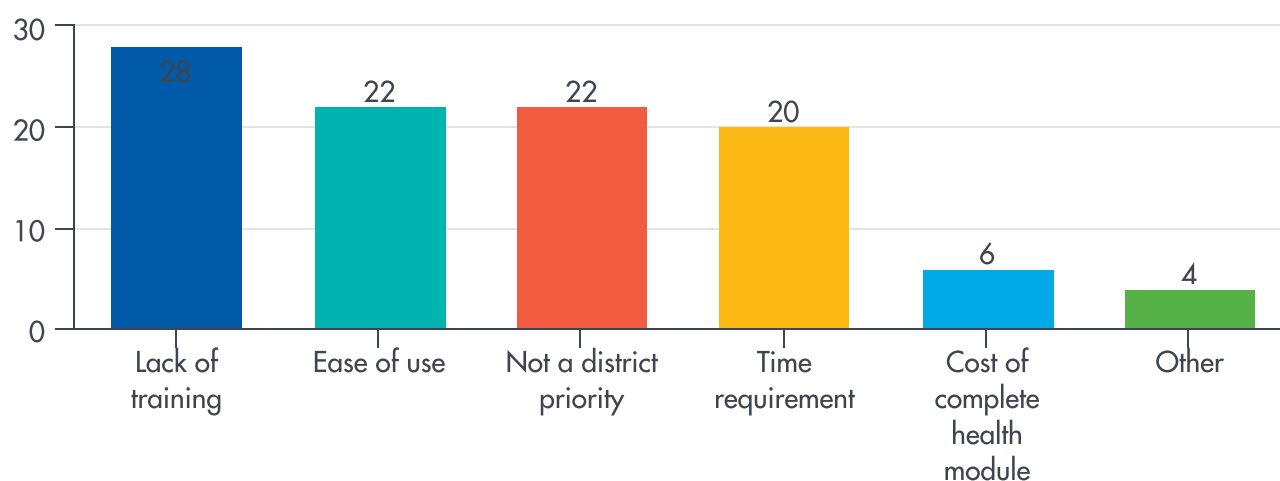
Using the system to its fullest potential

For the nurses who were using student information systems to manage health information, 55 school nurses reported health office staff are able to use the district's student information system to its fullest potential for student health data. This represents only 41% of nurses whose schools use a student information system that contains a health module.

What barriers are keeping the district from implementing the full capabilities of the student information system for student health data?

Barrier	Count
Lack of training	28
Ease of use	22
Not a district priority	22
Time requirement	20
Cost of complete health module	6
Other	4

Of the barriers listed in the survey, lack of training was identified most frequently, although only consisting of 28% of respondents. Ease of use (22%) was another barrier to using electronic systems to their fullest potential. One nurse stated, "When we implemented PowerSchool they designed "Custom" programs and so we are not utilizing the health record program that is in the program. Difficult to run any reports, for example vaccinations needed."

Some nurses wrote in responses such as, "I have asked for more of the health capabilities and have been told it will take too much data and too much space on the site." Another nurse wrote, "I cover two schools and each school uses different tabs and sections to view data/medical information because there are multiple facets that can be used within the program. I end up charting things in three different places, so there is a much greater opportunity for error."

Ideal Use

When nurses were asked what activities would be ideal for their current information system, the large majority selected "Interface with NESIIS," the abbreviation for the Nebraska State Immunization Information System.

Interface with NESIIS	121	82%
Store health plan documents	53	36%
Log medications	53	36%
Interface with an EHR (electronic health records)	44	30%
Manage failed student health screening to complete follow up and referrals)	41	28%
Interface with absenteeism monitoring system	40	27%
Manage Chronic Conditions	39	27%
Document concussions or head injuries	36	24%
Document or manage list of student exclusions due to COVID-19 or COVID-related symptoms or close contact)	34	23%
Document parent communication/parent contact	34	23%
Run data reports	34	23%
Record student health conditions/health history	31	21%
Record screening results	31	21%
Record health office visits	28	19%
Manage immunization records	28	19%
Student 911 calls	22	15%
Document student attendance	21	14%
Assist in Medicaid billing	16	11%

Discussion

The study provided the first record of how school nurses in Nebraska use their student information systems. While not every activity nurses do could be listed as an option, we sought to capture the major themes by providing a list of 14 choices of activities. One theme that emerged from the data was the need for health systems to manage immunization data. Managing immunizations was the most popular activity tracked by school nurses using student information systems. It was also the most popular data report that school nurses ran. While school nurses can access information from NESIIS, if their information systems could interface and populate with NESIIS information, it would make the tracking of missing student immunizations and state-required annual immunization reporting much easier.

The authors of this report recognize that in 2022 there were still schools that did not have an electronic student information system (7 out of 149 respondents), and of those that had a system, some systems did not contain a health module (8 out of 142). While these numbers are small, we see this as problematic because it adds a considerable time and administrative burden to the nurse to record data manually and prevents them from being able to run health data reports.

Even among those who did have a student information system with a health module, it surprised the authors that only 46% of them used their systems to log medications electronically.

Lack of training was the biggest impediment to using student information systems to their fullest potential. Because most of the schools that responded to the survey used one of two systems (PowerSchool or Infinite Campus), training on both systems could help many districts and their nurses optimize their health data management.

With these data we can take steps to address barriers and design systems that can easily run reports, communicate with other systems, save nurses time, prevent the errors of double (or triple) data entry and optimize student population health management. The importance of this information is far reaching. By using a better system, or by using a system better, nurses can address student health issues such as chronic condition management, absenteeism and infectious disease surveillance by running simple reports. With a good system, this could be done without having to sacrifice time away from other tasks, and could give the school nurse and administration better insight as to the needs and issues of the student population. This would benefit the nurse, students, families and administration.

Recommendations

1.   All schools should have an electronic student information system with a health module capable of recording immunizations, screening results and medication logs at a minimum, and ideally capable of running data reports and tracking absenteeism and chronic conditions.

2.   Integration or communication between student information systems and the Nebraska State Immunization Information System (NESIIS) should be explored and worked toward as a long-term goal supported by school health stakeholders.

3.   Districts, Educational Service Units (ESUs) and state agencies should strive to provide training to school nurses and other school staff on the student information systems used in their area. In addition to training, they can also create and implement peer-to-peer support networks to collaborate and learn from each other.

4.   School nurses should make it a priority to learn how they can use their systems to their fullest potential and meet with district, ESU and state stakeholders to address barriers when they cannot do so. School nurses who are able to run data reports should share these with their administration and school boards to inform them of the work of health services, identify concerns and advocate for more resources when needed.

5.   Stakeholders should meet with PowerSchool and Infinite Campus with these data and work toward developing nurse-friendly health modules.

Acknowledgements

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