

Enhancing School Nurse Confidence in Managing ▸ Diabetes Devices

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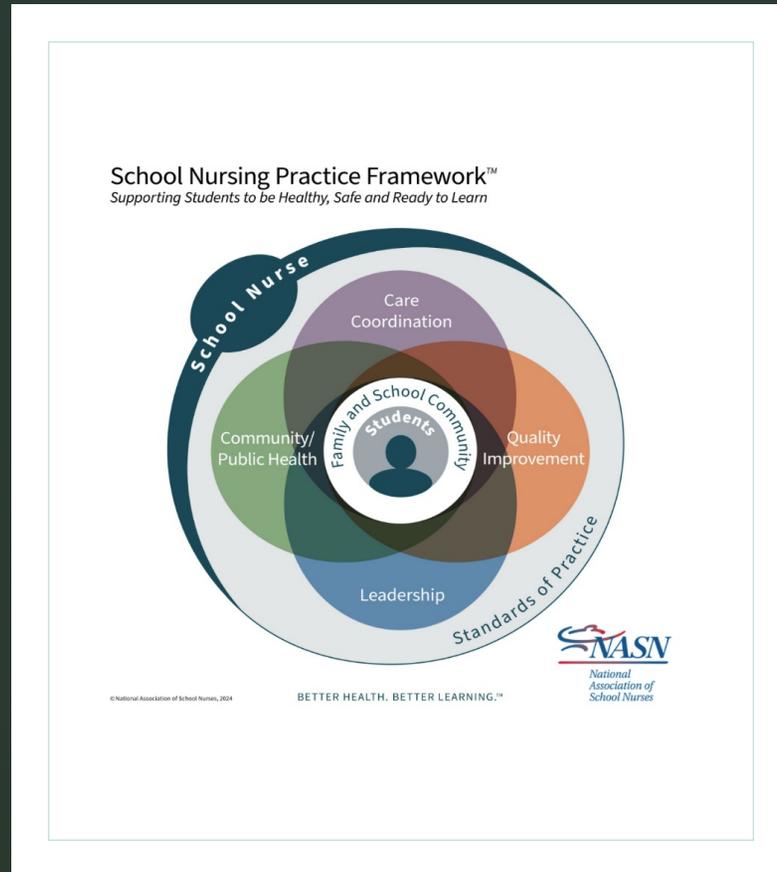
Objectives

- By the end of this presentation, learners will be...
 - Introduced to the Diabetes Device Confidence Scale (DDCS)
 - Obtaining specific information on their own confidence level with diabetes technology

Why Diabetes Device Confidence?

- Fluctuating levels of comfort and confidence
- Rapidly changing, complex nature of diabetes technology
- Educational Needs (March et al., 2020)
- In school nurses, what is their measured Diabetes Device confidence and perception of using the Diabetes Device Confidence Scale to determine the need for professional development?

School Nursing Practice Framework™



INSULIN PUMPS VS. CONTINUOUS GLUCOSE MONITORS

The overall score was 67.67 - moderately confident in device technology.

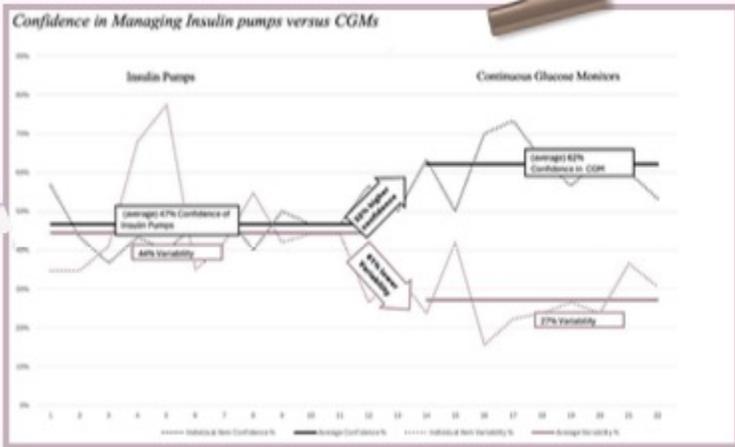
Lowest scoring items:

- Setting a temporary basal rate on an insulin pump.
- Changing an insulin pump site

Highest scoring item:

- Locating resources to teach school staff about diabetes devices.

Interestingly, nurses felt 32% more confident in management of CGMs than insulin pumps.



QUALITATIVE SURVEY THEMES

Theme	Participant Quotes
Theme 1: Positive Regard for DDCS	"Obtain a baseline determination for need." "Encourage one to learn more about the devices."
Theme 2: Barriers to Implementation	"Too vague."
Theme 3: Obstacles to Procedure Change	"Time and adapting." "Time and organization."
Theme 4: Future Utilization	"This is a good starting point..." "I would love to become more confident in using different diabetes devices."

Diabetes Device Confidence Scale (DDCS)

Diabetes devices which school nurses may encounter include:

- Insulin pumps: Devices that deliver insulin continuously under the skin using a catheter or needle
- Continuous glucose monitors (CGMs): Devices that sit under the skin and check the glucose
- Sensor-integrated pumps: Pumps that can adjust some aspects of insulin delivery based upon CGM readings

Please rate how confident you are in performing the following tasks or skills with diabetes devices independently, provided you have appropriate orders from a provider.

	Not at all Confident (1)	Slightly Confident (2)	Moderately Confident (3)	Very Confident (4)	Extremely Confident (5)
I can give a combined food and correction bolus using an insulin pump.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can override an insulin pump to give a bolus (not using the pump's calculations)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can set a temporary basal rate on an insulin pump.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can suspend insulin delivery on an insulin pump.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can change an insulin pump site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can check insulin pump settings (basal rate, insulin to carb ratio, and correction factor).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can review the bolus history.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can change a battery or charge the insulin pump.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I recognize when an insulin pump site has failed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I understand what a sensor integrated insulin pump is.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can operate a student's sensor-integrated pump if needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can adequately assess a student's knowledge about their insulin pump.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can help a student manage their diabetes with a variety of insulin pumps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can operate a student's CGM if needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know when to calibrate and when not to calibrate a CGM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can monitor the CGM tracing/graph when needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can interpret trend arrows on a CGM tracing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I understand what the different CGM alarms mean.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I recognize when to test a glucose using a meter for a student with a CGM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can adequately assess a student's knowledge about their CGM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can help a teacher/other school staff understand what to do if a student's CGM alarms in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can help a student manage their diabetes with a variety of CGMs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can learn how to use a diabetes device that I am not familiar with.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can set expectations for device use in school with parents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can easily find resources to teach school staff about diabetes devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This scale was designed for and studied with school nurses. If used, please cite:

1. March CA, Hill A, Kazmerski TM, Siminerio L, Miller E, Libman I, Switzer G. Development and psychometric analysis of the Diabetes Device Confidence Scale for school nurses. *Pediatr Diabetes*. 2022;23(6):820-30. doi:10.1111/pedi.15375
2. March CA, Hill A, Kazmerski TM, Siminerio L, Switzer G, Miller E, Libman I. School nurse confidence with diabetes devices in relation to diabetes knowledge and prior training: A Study of Convergent Validity. *Pediatr Diabetes*. 2023; in-press. doi:10.1155/2023/2162900

DDCS



Wrap - Up

- Did your score surprise you?
- Do you feel this is a helpful tool to articulate your own professional development need?
- What will you do with this information now that you have it?

References

