

# Using Smart Pen Platform Data to Inform Insulin Management

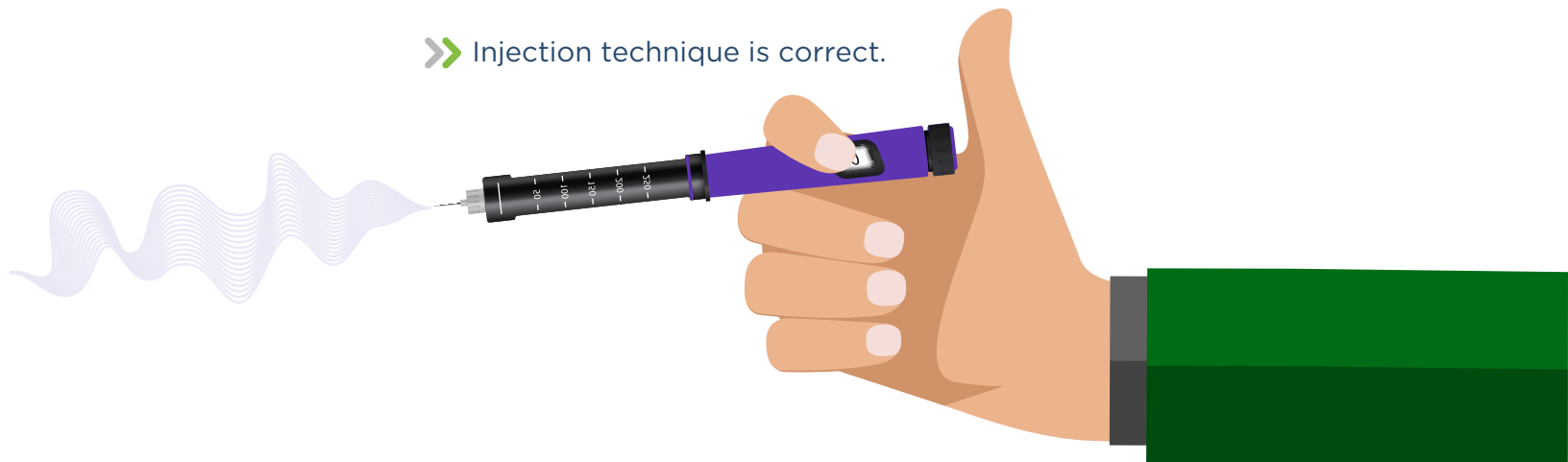
## What key data points are generated with smart pen technology to assist with clinical decision making?

- » A smart pen is an insulin pen device that communicates with a mobile app to track insulin delivery, such as the timing and dose of insulin given.
- » Smart pen technologies include reusable insulin pens or smart cap/attachments that attach to a disposable, pre-filled, insulin pen.
- » Smart pen platforms provide people with diabetes personalized information and guidance through smart pen technology integration with an app that can capture blood glucose readings, insulin dosing data, and other behavior metrics such as physical activity and carbohydrate intake.

## How can I use smart pen data with patients to determine next steps in insulin management?

### First confirm the basics, independent of smart pen technology

- » Insulin is being stored correctly.
- » Insulin is not being used past recommended time at room temperature.
- » Injection sites are in the recommended areas, do not have lipohypertrophy, and are rotated correctly.
- » Injection technique is correct.



**Use the following information from the generated pen report to determine discussion items and potential next steps for patients with diabetes in your practice.**

Identified Opportunity for Improvement <i>revealed by smart pen data</i>	Recommended Clinical Assessment/Discussion	Potential Next Steps
<b>Missed insulin doses</b>	Assess for barriers to insulin administration prior to making any insulin adjustments.	<ul style="list-style-type: none"> <li>• Address common reasons and create a plan to reduce barriers.</li> <li>• Activate alerts/reminders on the smart pen platform.</li> </ul>
<b>Overriding bolus calculator</b>	Assess reason for overriding the bolus calculator (appropriate override or not) and glucose results with and without use of the bolus calculator.	<ul style="list-style-type: none"> <li>• Address common barriers to not using bolus calculator:               <ul style="list-style-type: none"> <li>• Mistrust of the settings</li> <li>• Fear of hypo/hyperglycemia</li> <li>• Burden of carb counting</li> </ul> </li> </ul>
<b>Not entering glucose data prior to insulin dose</b>	Assess barriers to glucose monitoring (cost, access, pain of fingersticks, etc).	<ul style="list-style-type: none"> <li>• Address common barriers to glucose monitoring:               <ul style="list-style-type: none"> <li>• Consider transitioning to CGM.</li> <li>• Review cost saving options.</li> <li>• Utilize synced meter for platform integration.</li> </ul> </li> </ul>
<b>Not entering carbohydrate information for mealtime dosing</b>	Assess whether they need additional carb counting education, assess accuracy of insulin to carb ratio.	<ul style="list-style-type: none"> <li>• Refer for medical nutrition therapy visit.</li> <li>• Download carb counting app.</li> <li>• Adjust insulin to carb ratios as needed.</li> </ul>
<b>Stacking meal doses, i.e. giving them too close together</b>	Assess occurrence and if it leads to hypoglycemia.	<ul style="list-style-type: none"> <li>• Adjust insulin on board setting as needed.</li> </ul>
<b>Not giving correction doses when indicated</b>	Assess barriers to giving correction doses, occurrence, and timing.	<ul style="list-style-type: none"> <li>• Review settings.</li> <li>• Address common barriers to correction dosing.</li> </ul>
<b>Not integrating other activities into the smart pen app (e.g. physical activity, etc)</b>	Assess whether other activities are being entered in the app during times of insulin dosing.	<ul style="list-style-type: none"> <li>• Address barriers to integrating activities:               <ul style="list-style-type: none"> <li>• Review app usage or functions.</li> <li>• Refer to diabetes education for carb counting or physical activity effects on glucose, etc.</li> </ul> </li> </ul>

**How can I empower my patients to use their data?**

**Use these tips for making informed decisions**

- Look at trends in glucose patterns over 3 or more days.
- Preventing hypoglycemia is the first priority.
- Determine which insulin needs adjusting, long or rapid acting.
- Make only one change at a time, and wait to see new trend over 3 or more days.