

# Best Practice on Insulin Injection Therapy.

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# Best Practice on Insulin Injection Therapy

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## Background/Triggers

Nurses frequently do not administer insulin according to best practice guidelines.

## PICO QUESTION

- Would educating nurses on current best practice regarding Insulin site choice and administration techniques increase compliance with appropriate site selection and proper administration of Insulin?
- **P:** Nursing staff on medical/surgical unit 6C LVH-CC.
- **I:** Education on proper technique and site location of insulin administration.
- **C:** Current practice versus updated information regarding insulin administration.
- **O:** Staff nurses will utilize the same site for insulin administration for one week and perform appropriate technique based off of most updated evidence based research.

## Evidence

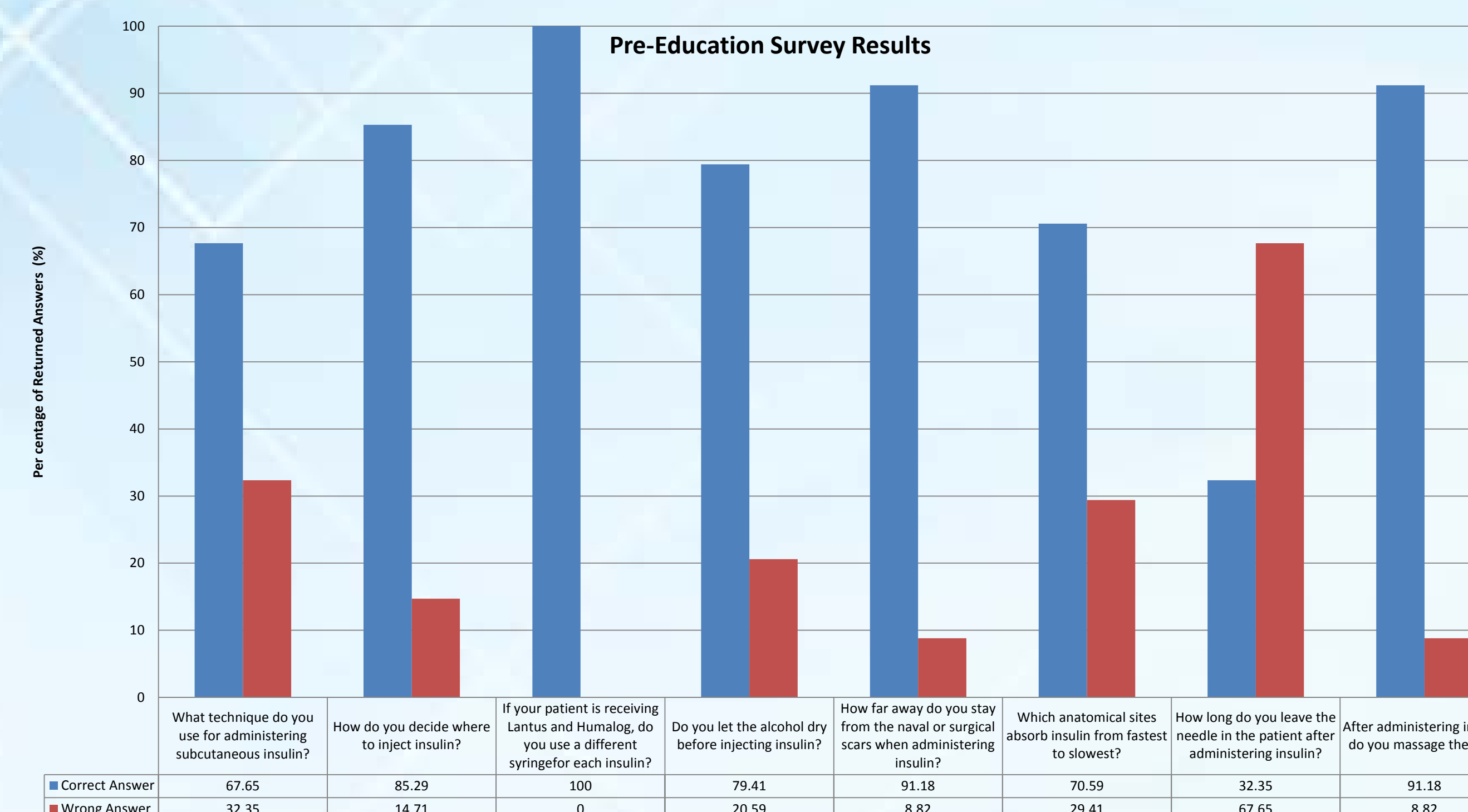
- Health Care Providers need to reevaluate how to provide instructions to patients receiving insulin therapy. Accurate insulin administration manages insulin variability and allows for affective control of diabetes (Saltiel-Berzin et al. 2012).
- Following the provided recommendations will allow for injection free complications of insulin administration (Frid, A. et al 2010).
- Many adults with diabetes present with erratic blood glucose levels and need to be taught correct injection technique when injection therapy is started (Diggle, J. 2015).
- An effective means of site selection is to divide injection sites (abdomen, arms, thighs, buttocks) into quadrants and to move clockwise within that quadrant for a week (Diggle J. 2015).
- Methods of insulin injection play a greater role in management of blood sugars in diabetic patients (Diggle J. 2015).
- Further education is needed to eradicate certain myths about injection therapy (Strategies for Insulin Injection Therapy in Diabetes Self-Management 2011).

## Evidence/ LVHN Policy

- LVHN Policy
  - The abdomen has the fastest and most consistent absorption. The arms have fast absorption as well. The thighs have slow absorption, followed by the buttocks which is the site of the slowest absorption.
  - It is acceptable to give rapid acting analog insulin (Humalog) in any of the SQ sites mentioned above. Long acting basal insulin (Lantus) in thin adults is best administered in the buttocks “to slow absorption and allow insulin to last longer.”
  - It is recommended to administer insulin at room temperature. LVHN policy states that insulin vials that have already been open can be stored at a “controlled” room temperature of less than 86 degrees or may be refrigerated (LVHN policy, 2015).

## Implementation and Plan

- A pre-test was sent to RN's to determine baseline knowledge of best practice.
- Direct observation of insulin administration pre and post-education
  - Nurse residents determined who was receiving insulin based on which patient's with diabetes were receiving insulin in their MAR. Staff nurses reported to nurse residents which of their patient's was receiving insulin.
- A power point was created and uploaded in to TLC to educate RNs on best practice for insulin injection therapy.
- Chart audits of patient's receiving insulin were selected at random to determine site selection both pre and post education.



## Findings and Conclusion

- Based on pre-test results, most nurses were aware of best practice techniques for insulin injection. See table.
- Direct observation pre-education revealed:
  - Three staff nurses were observed pre-education. Of the three nurses observed, 67% picked a site at random. 100% of nurses used pinch-up technique when administering insulin. 67% of nurses retracted the needle immediately after administering insulin.
- Direct observation post-education revealed:
  - Three nurses were observed post education. Of the three nurses observed, 100% picked a site at random. 100% of nurses used pinch-up technique when administering insulin. 100% of nurses retracted the needle immediately after administering insulin.
- BARRIERS to observations:
  - Since the nurse resident performing observations works on night shift, only night shift nurses were observed.
  - There were multiple nights where staff nurses weren't administering insulin.
  - Only one of two nurse residents were available to perform observations.
- 20 total chart audits were completed:
  - Pre- education 15 chart audits were completed. 87% of chart audits showed sites being selected at random. 13% of chart audits showed more consistency in site selection.
  - Post- education 5 chart audits were completed. 80% of chart audits showed sites being selected at random. 20% of charts showed more consistency in site selection.
- BARRIERS to chart audits:
  - Charts that showed more consistency in absorption may have to do with patient preference for where they like to receive insulin.
  - Only 5 chart audits were completed post education.
- During bedside shift report, nurses will be encouraged to discuss where patients have been receiving insulin injections.

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