A study comparing the effectiveness of two different teaching strategies on safe insulin administration presented to nursing staff within an acute hospital

Welayah Ali
Supervisor: Ryan Fawcett

South Tees Hospitals NHS Foundation Trust

Introduction

In response to growing numbers of insulin administration errors within hospitals, steps were taken to facilitate the learning of nursing staff within one trust, surrounding insulin administration to prevent future administration errors and to support nurses to complete their annual nursing revalidation portfolio.

Purpose of this study

The purpose of this study was to identify the most effective form of teaching within a hospital setting through both quantitative and qualitative data collection. A face-to-face insulin teaching session versus a virtual teaching aid on the topic of insulin were presented to nursing staff on different wards. Both teaching strategies were complemented with the same pre- and post-assessment to measure the effectiveness of the two teaching strategies.

Method

The face-to-face teaching was presented to a total of 20 nursing staff members. The virtual teaching aid was emailed to a total of 14 nursing staff on a different ward. The same assessment was provided before and after each session for both teaching methods. The assessment comprised of 10 questions regarding the different types of insulins, the gathering of insulin doses from appropriate sources, and the identification of appropriate and inappropriate insulin prescribing.

REFERENCE

[1] Nmc.org.uk. 2021. [online] Available at: https://www.nmc.org.uk/globalassets/sitedocuments/revalidation/nmc-revalidate-during-c-19-v5-sept-20202.pdf> [Accessed 9 March 2021].
[2] Swift, A., Banks, L., Baleswaran, A., Cooke, N., Little, C., McGrath, L., Meechan-Rogers, R., Neve, A., Rees, H., Tomlinson, A. and Williams, G., 2020. COVID-19 and student nurses: A view from England. *Journal of Clinical Nursing*, 29(17-18), pp.3111-3114.
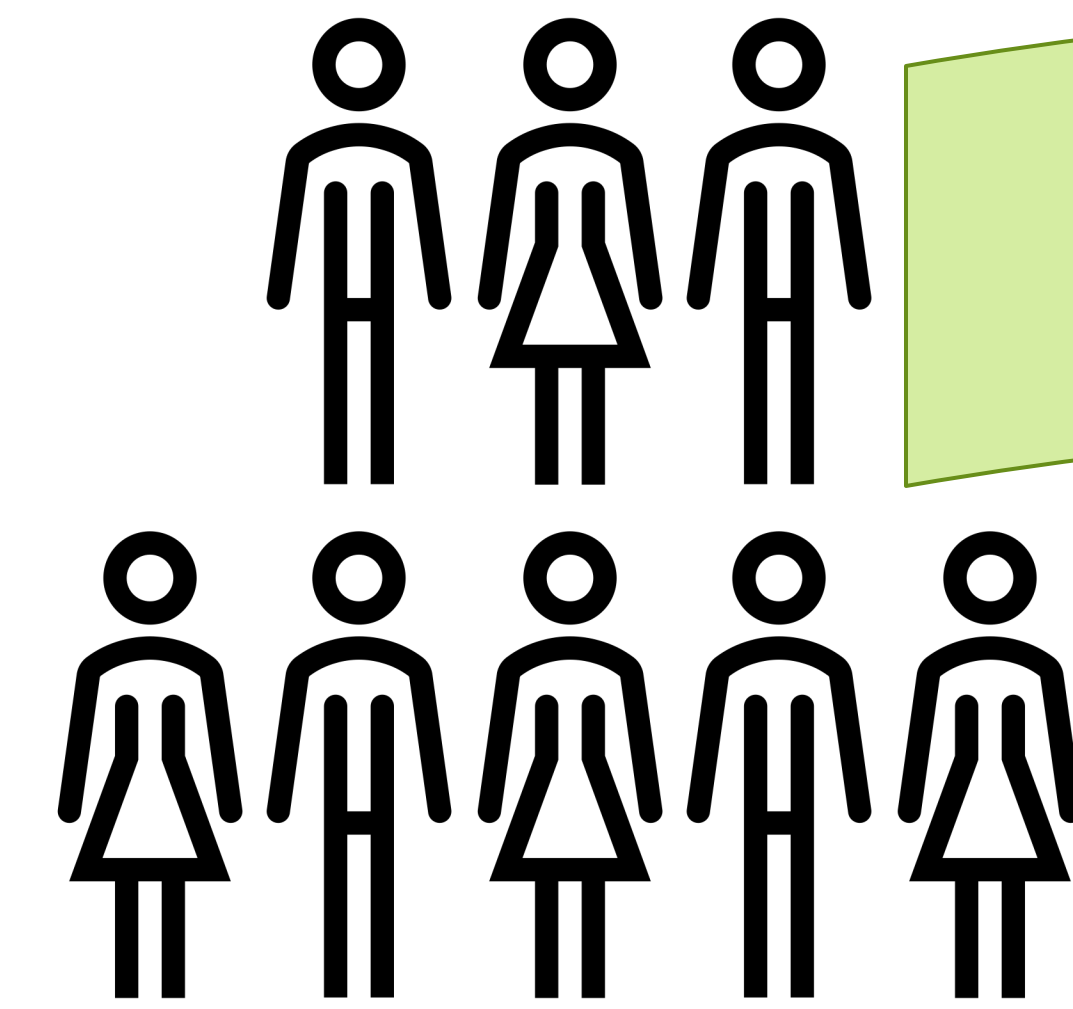
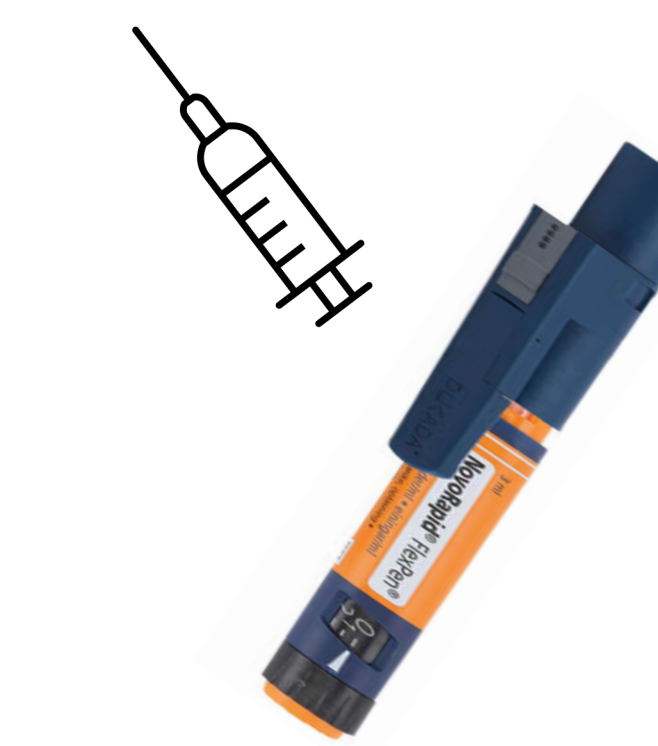## Content covered during both the face-to-face teaching session & virtual teaching session

Objectives

To recognize inappropriate prescribing of insulin

To be able to differentiate between the different types of insulin preparations and forms

To discuss previous insulin administration incidents

Use of insulin cards

How should insulin be prescribed?

All insulin doses must now be prescribed in both *words* and *figures*

Signed by the prescriber

The letter U or word UNITS, should NOT be written on the drug chart

Approved name of insulin

Start date and time of administration

How to administer insulin correctly?

Injection sites

ROTATE BETWEEN INJECTION SITES ON EACH ADINISTRATION

- Abdomen
- Top and outer regions of thighs
- Upper arms
- Upper buttocks
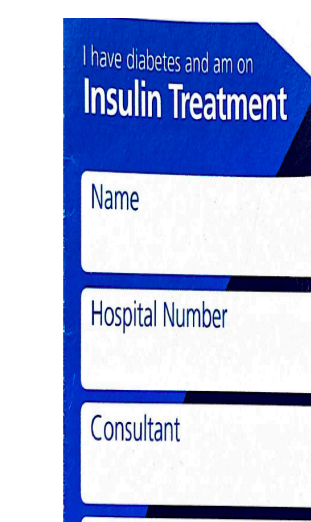
Findings

Overall, results determined that the face-to-face teaching method was most favourable and nursing. staff on average had a greater difference in mean score between the pre- and post-assessment provided (4.45) when compared to the virtual aid (3.67). Moreover, greater participation was achieved in the face-to-face teaching with attendance of a total of 20 nurses in three different teaching sessions during nursing 'breakfast breaks', in comparison to only 6 responses from staff nurses emailed regarding the online teaching session. In the face-to-face teaching method, there is strong evidence (t=-8.62, p=<0.00001) that the teaching intervention made a difference and the assessment scores of the nursing staff improved

Conclusion

This study has shown that face-to-face teaching is potentially more useful and engaging in comparison to virtually led teaching. However due to the size of this study more work is required in the future to establish a solid foundation.