

Script for pain QI

Slide 1- Hello friends, in this webinar we shall see a quality improvement project done at St Johns medical college entitled: Procedural Analgesia in the Neonatal Intensive Care Unit

We all know the neonates feel pain and that they are subjected a many painful procedures every day in the NICU. This repeated painful stimulus had adverse long term neurodevelopment consequences. Fortunately, we have methods to decrease this procedural pain; however they are very much underutilized.

Therefore, the team formulated a SMART aim to increase the use of procedural analgesia in neonates from baseline 11% to 75% over a period of 6 months.

Slide 2 We formed a QI team consisting of the head nurse, 3 other nurses, 2 senior residents and 1 faculty. This was chosen to keep a balance of people who actually do procedures as well as more senior staff. We then had monthly meetings and a whatsapp group and due the pandemic many meetings were online. A baseline audit was done. This and other audits, were all done bedside by direct observation of a procedure to see if any analgesia was used or not. Seeing a poor baseline incidence, we did a root cause analysis. This was followed by PDSA cycles, and then audits.

Slide 3- Now, if we look at this fish bone diagram and I am sure you all know how we draw this, we can see that there are four bottle necks; the access to a swaddle cloth was poor and often there was no breast milk at the bed side.

Regarding the second important point was that the residents and nurses that do procedures and we realized they lacked knowledge about analgesia. The rapid nurse turnover was another problem along with sub optimal nurse to baby ratio. The procedures were often done in a hurry - or at the end of a shift which led to analgesia being skipped. Most people had not seen or read the pain protocol while it was actually in place for nearly 10 years.

Slide 4- PDSA 1 – based on the fishbone we realized that we needed to improve awareness. The pain protocol was printed and laminated at put up at places of easy visibility. We made posters with slogans about analgesia, which were displayed at places where procedures are done. – e.g. dressing trolley. Process indicator was defined as the percentage of people who read the protocol or posters.

Slide 5 – PDSA 2

To assess knowledge on analgesia, a pretest was done. This was followed by a power point presentation with 10 slides. This was shown at the beginning of the shift, soon after the prayer. It was shown twice a day for a week, so that all nurses and residents could be covered.

After this, a post test was given. The process indicator for this was the % of residents and nurses who saw the presentation and the change in pre and post test scores.

The second component of the PDSA cycle was to write orders for analgesia in the medication chart of the baby. The process indicator was the % of charts that had orders for pre procedural analgesia.

Slide 6 – the 3rd PDSA was to remind people to use analgesia. For this a video was shown in the beginning of a shift showing neonates with and without procedural analgesia. This was to serve as a reminder and to show that babies feel pain, which is preventable. We also printed stickers for the dressing trays which are centrally sterilized but opened in the unit, just before a procedure is done.

We had 2 process indicators - % of people who watched the video and the % of trays that had the stickers.

Slide 7 – We had a total of 145 procedures audited. A majority were heel pricks and venepunctures. The run chart shows a low baseline incidence, an increase, a plateau and then a sustained level.

Slide 8 – the baseline incidence was only 11%, which increased to 40% after the first PDSA. 100% of the residents and nurses had seen the protocol and posters. After the second PDSA, this stayed at 40%, with 90% taking the test, but only 70% of charts had written orders for analgesia. The third PDSA resulted in an increase to 80% with 75% of people watching the video and 80% of dressing trays having the sticker.

During the sustenance phase for 2 months – 75% of all procedures audited were done with analgesia.

Slide 9 – sustaining the QI is always a challenge. We have the posters displayed; new residents and nurses are shown the protocol. We try to keep breast milk bedside.

Slide 10 – we learnt that while the baseline use of procedural analgesia was very low, it can be improved and sustained by simple measures.