

Streamlining the Newborn Infant Physical Examination (NIPE) Process on the Maternity Ward to Improve Productivity

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Introduction:

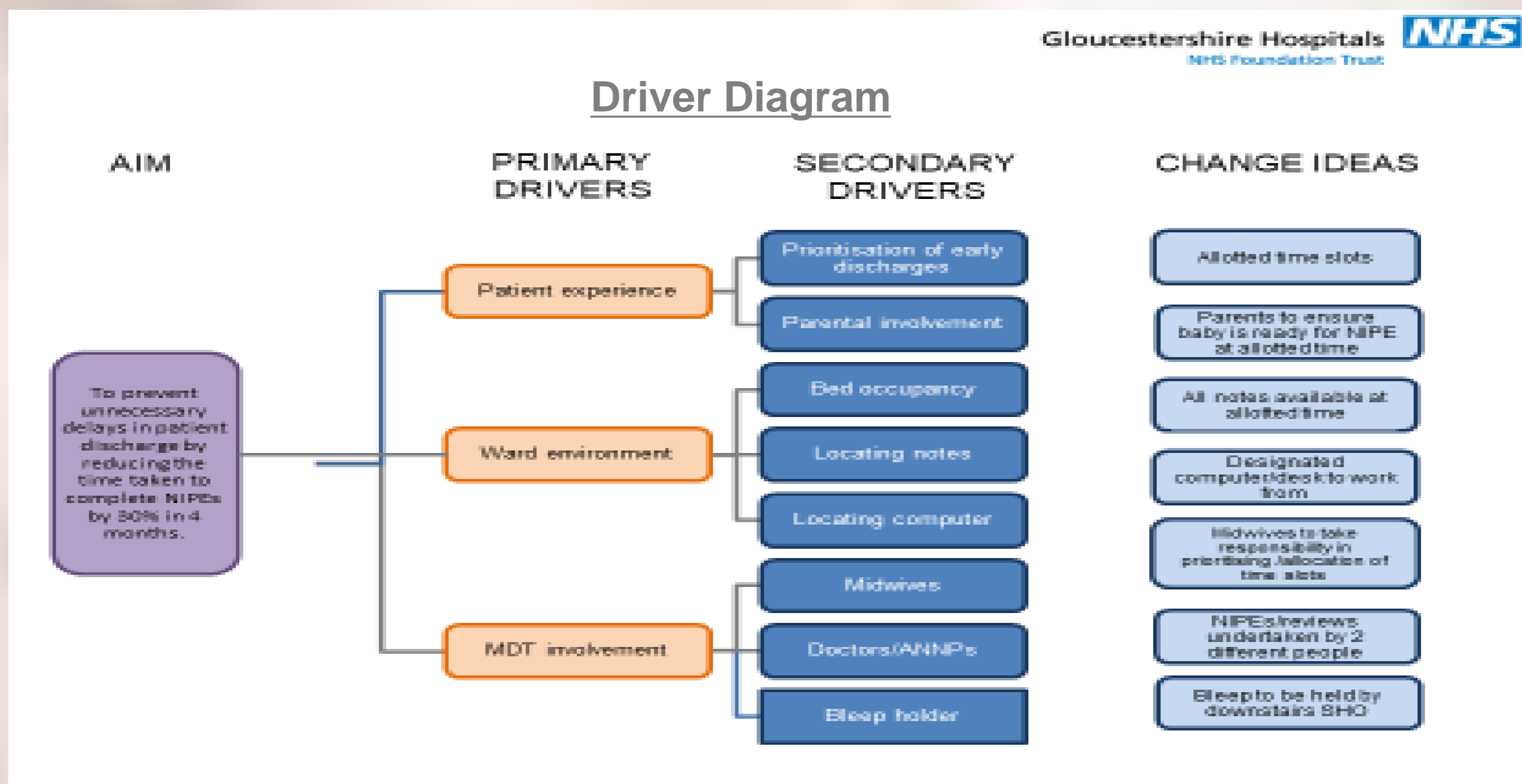
Infants should receive a Newborn Infant Physical Examination (NIPE) within 72 hours of birth (Public Health England, 2019), which on the Maternity Ward at Gloucester Royal is ideally completed before discharge. Two practitioners are allocated to the Maternity Ward daily to complete an average of 16 NIPE's, to review infants with actual / suspected pathology and to attend high – risk deliveries and neonatal emergencies.

Daily NIPE lists are not always completed within the allocated shift, which results in a backlog of NIPE's to be completed and 22% of maternity patients are not always discharged as soon as they are clinically ready.

An initial audit revealed that the average time to complete a NIPE was 34 minutes, although this varied widely from 13 – 82 minutes. This variation was due to 38% of NIPE's being interrupted at least once and 56% of NIPEs being delayed for other reasons.

Why is Improvement Necessary?

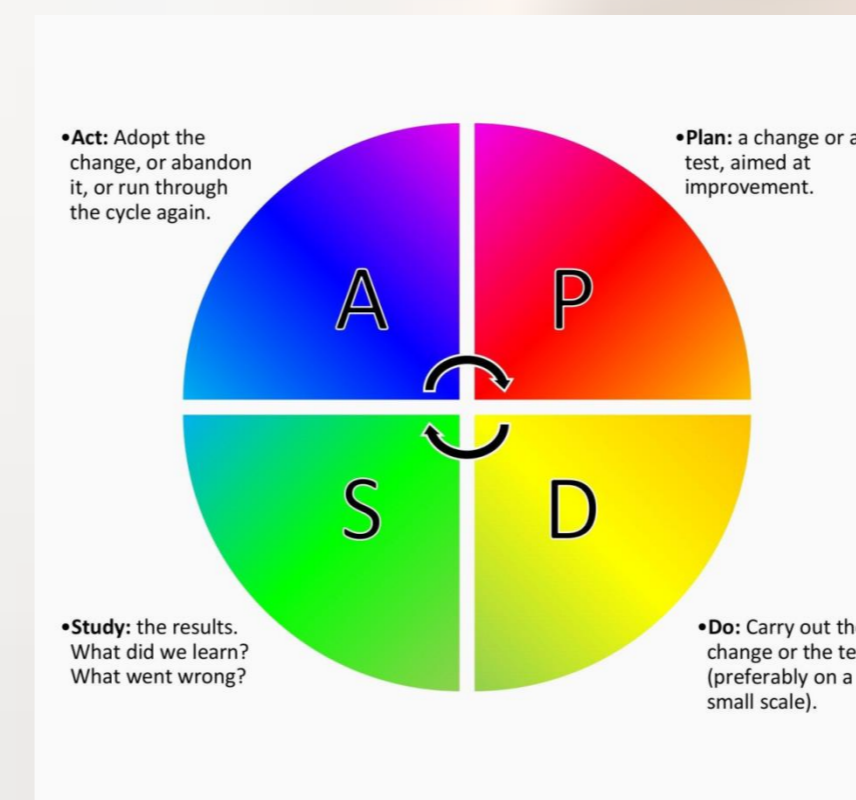
- Infant discharges are delayed as awaiting a NIPE.
- Delays and interruptions are resulting in a backlog of NIPE's / reviews to be completed.
- Staff dissatisfaction with the current system.
- Interruptions to clinical processes contribute to the incidence of adverse clinical events and negative patient experience (McGillis et al, 2010).



Aims & Planning:

The aim is to improve the efficiency of the NIPE system. This will be measured by:

- Reduce the average time taken to complete a NIPE by 30% in 4 months.
- Reduce the number of interruptions and delays to the NIPE process by 30% in 4 months.
- Reduce the number of discharges delayed as awaiting a NIPE by 30% in 4 months.



Cycle 1: Neonatal bleep to be held on NNU rather than on Maternity Ward :

To reduce NIPE's interrupted by bleep / emergencies.

Plan

- Agreement obtained for trial from Neonatal Consultants.
- Trial of 2 weeks. Then re-audit and check balancing measures (e.g. increased workload for NNU).

Cycle 2a: Separation of workload list into "NIPE List" and "Review List". A practitioner will be assigned to each list.

Concerns from midwives about other infants will be addressed to "Review" practitioner only. NIPE practitioner will be uninterrupted and so average NIPE time should decrease.

Cycle 2b: Prioritisation of infants for NIPE according to readiness for discharge:

Plan

- Documentation produced for "NIPE" and "Review" Lists, Each practitioner to identify role on board.
- Instructions for midwives to prioritise NIPEs according to readiness for discharge.
- Trial for one month, then re-audit.
- Check balancing measures (e.g. Review Practitioner workload increased).

Cycle 3a: Midwives to be encouraged to return medical notes to slot:

Cycle 3b: Allocation of specific time-slots for NIPE, for midwives & parents

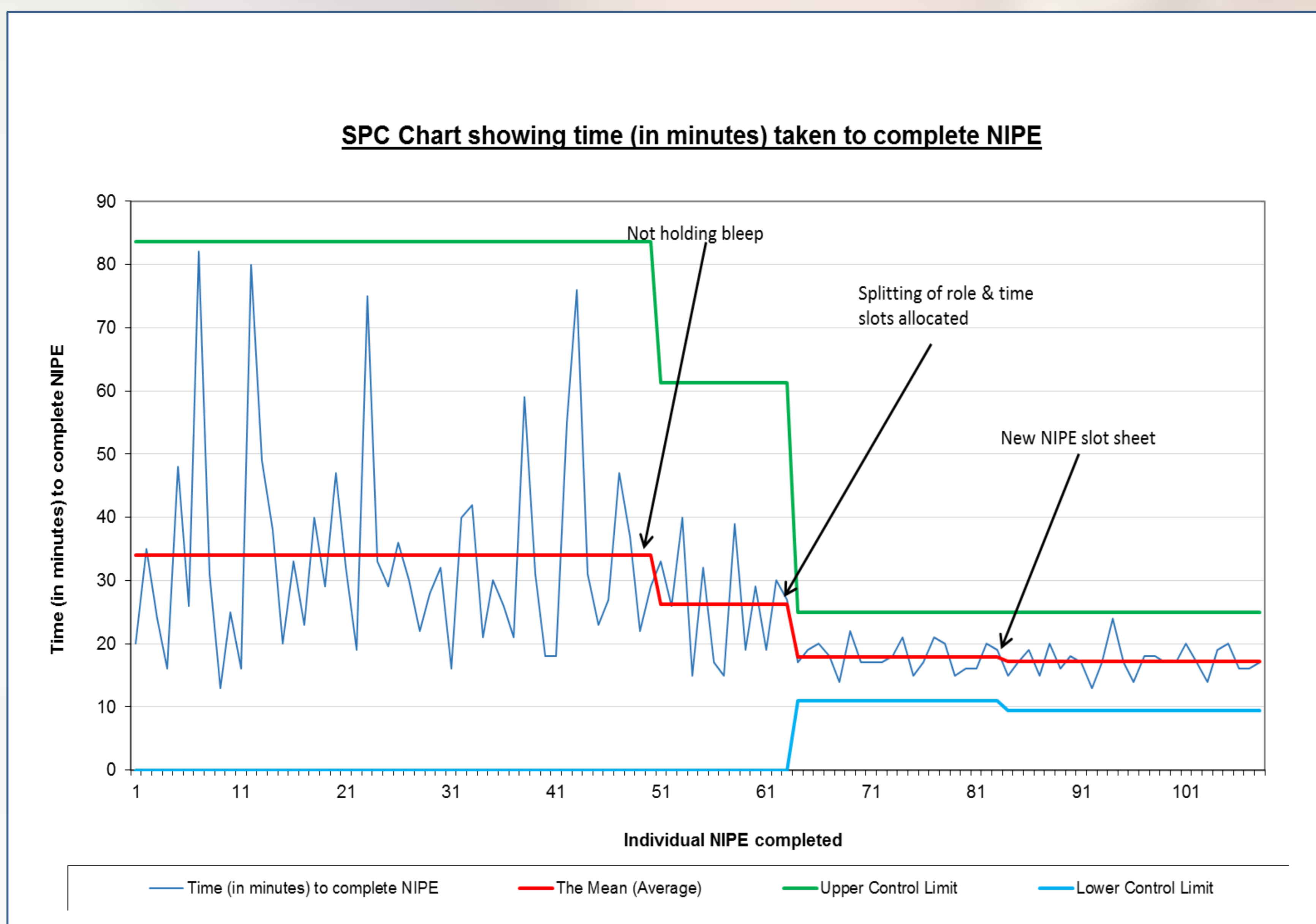
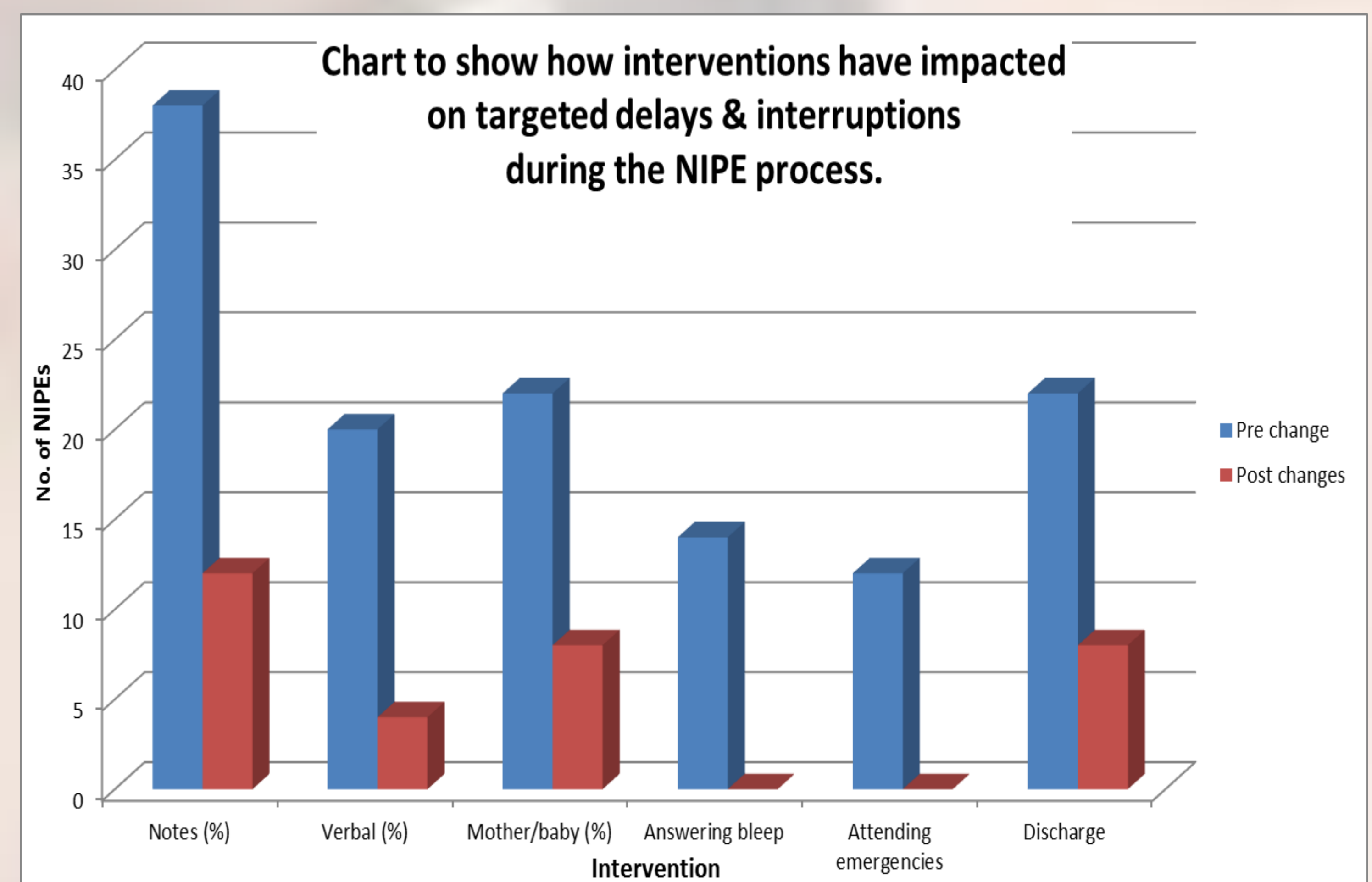
Plan:

Documentation introduced with allocated time – slots. Midwives to inform parents of time – slot. Re-audit after 1 month.

Results

This project resulted in significant improvements and all aims were achieved:

1. The average time taken to complete the NIPE process reduced from 34 minutes to 17.2 mins, a relative reduction of 50%.
2. The number of NIPEs being interrupted or delayed at least once reduced from 76% to 20%, a relative reduction of 77%.
3. The number of discharges delayed because an infant is awaiting a NIPE reduced from 22% to 8%, a relative reduction of 63%.



Barriers to Change

- Consultant objection to change in bleep holder citing trainees would object. Survey of trainees was overwhelmingly in favour of making the change.
- Difficulties in getting midwives to prioritise babies on the new NIPE sheet. Introduced new sheet to ensure more clarification.

Next steps

- Facilitate midwives to become NIPE trained and competent.
- Reinforcement to midwives about prioritisation of infants for NIPE.
- Implementation of a NIPE clinic.