

### Background

- Prolonged jaundice is defined as jaundice persisting beyond two weeks in term infants and three weeks in preterm infants.
- It is important to carry out jaundice screening at two weeks of age with clinical examination and relevant investigations to identify those patients who may need intervention.
- It is also important to determine the ratio of conjugated (direct) bilirubin from unconjugated (Indirect) bilirubin to rule out obstructive jaundice.



### Problem

- Prolonged jaundice assessment is inconsistently documented.
- This poses risk of missing serious underlying conditions and delayed follow up of babies at risk.
- This generates anxiety for parents and anxiety for staff concerned.

### Aims

- To implement the use of prolonged jaundice proforma introduced in 2016 for assessment of patients with prolonged jaundice.
- To see whether relevant necessary tests are being done only or if additional unnecessary tests are also being the done
- To increase awareness among medical and nursing staff about escalation of potentially sick neonates presenting with jaundice

### Methodology

- Department Audit with Retrospective data collection.
- Data was obtained from health records retrospectively for last 6 months.
- Total number of patients in first cycle = 36
- Total number of patients in second cycle = 10
- Inclusion criteria = Term babies with jaundice > 14 days and preterm babies with jaundice >21 days.
- Out of the 36 patients, 5 were excluded because of inter current illnesses.



### Change Ideas

- Consultant to do teaching sessions regarding prolonged jaundice proforma
- Increase the availability of physical copies of proforma in SSPAU and Paediatric ward for easy access
- Nursing and admin staff to put a copy of proforma in patients's file at the time of booking the patient.
- Make sure all the components of the proforma are correctly filled.
- Dedicated jaundice clinic one day of the week to increase compliance and maintain uniformity

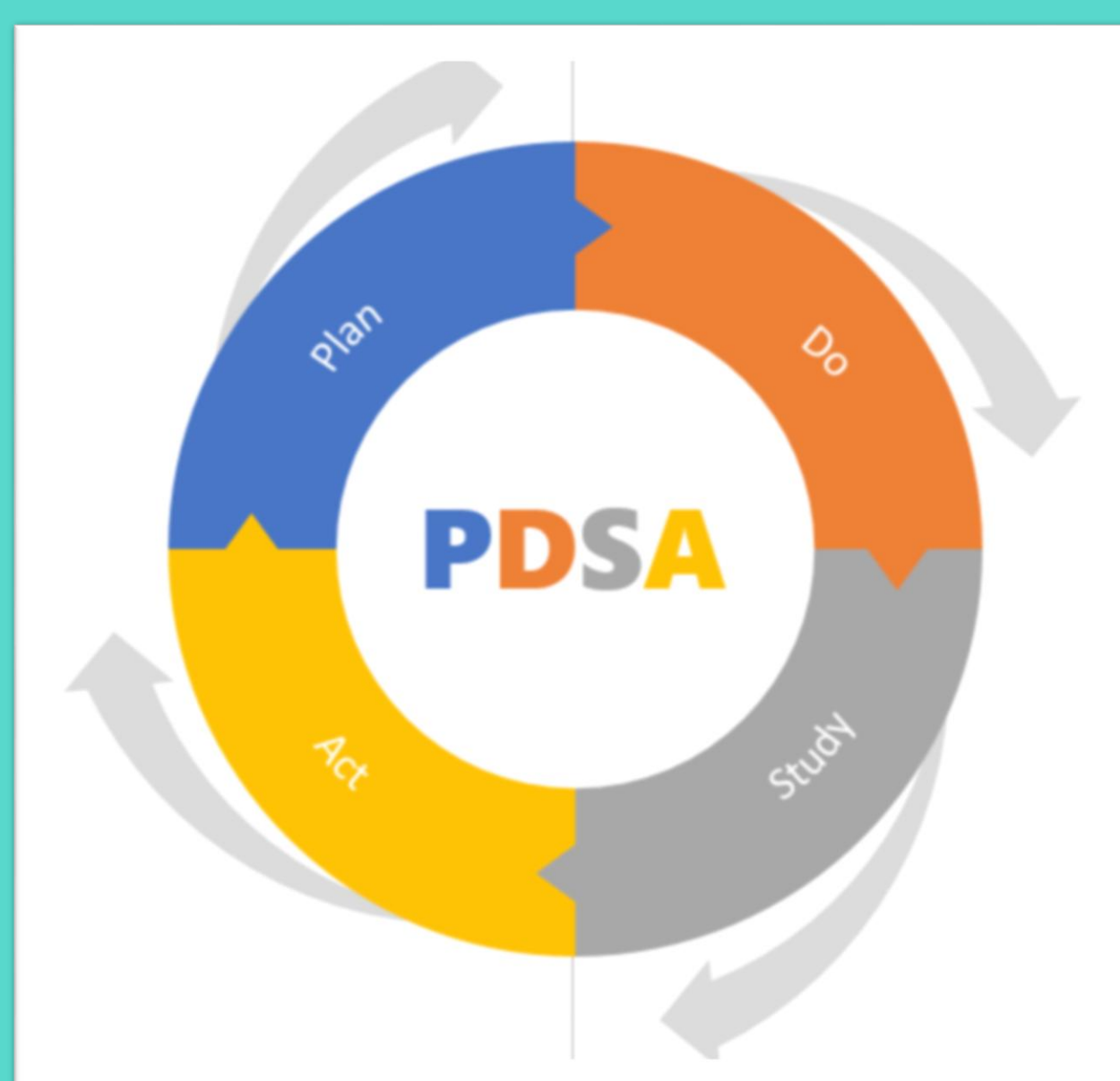
### PDSA Cycles

#### Plan

- Ensuring the use of the prolonged jaundice proforma
- Reduce irrelevant tests being done

#### Act

- Increase awareness about prolonged jaundice proforma
- Easy access to prolonged jaundice proforma
- To do relevant investigations only
- Review again



#### Do

- Retrospective data collection

#### Study

- Proforma followed → 23%
- Unnecessary investigations done → 81%

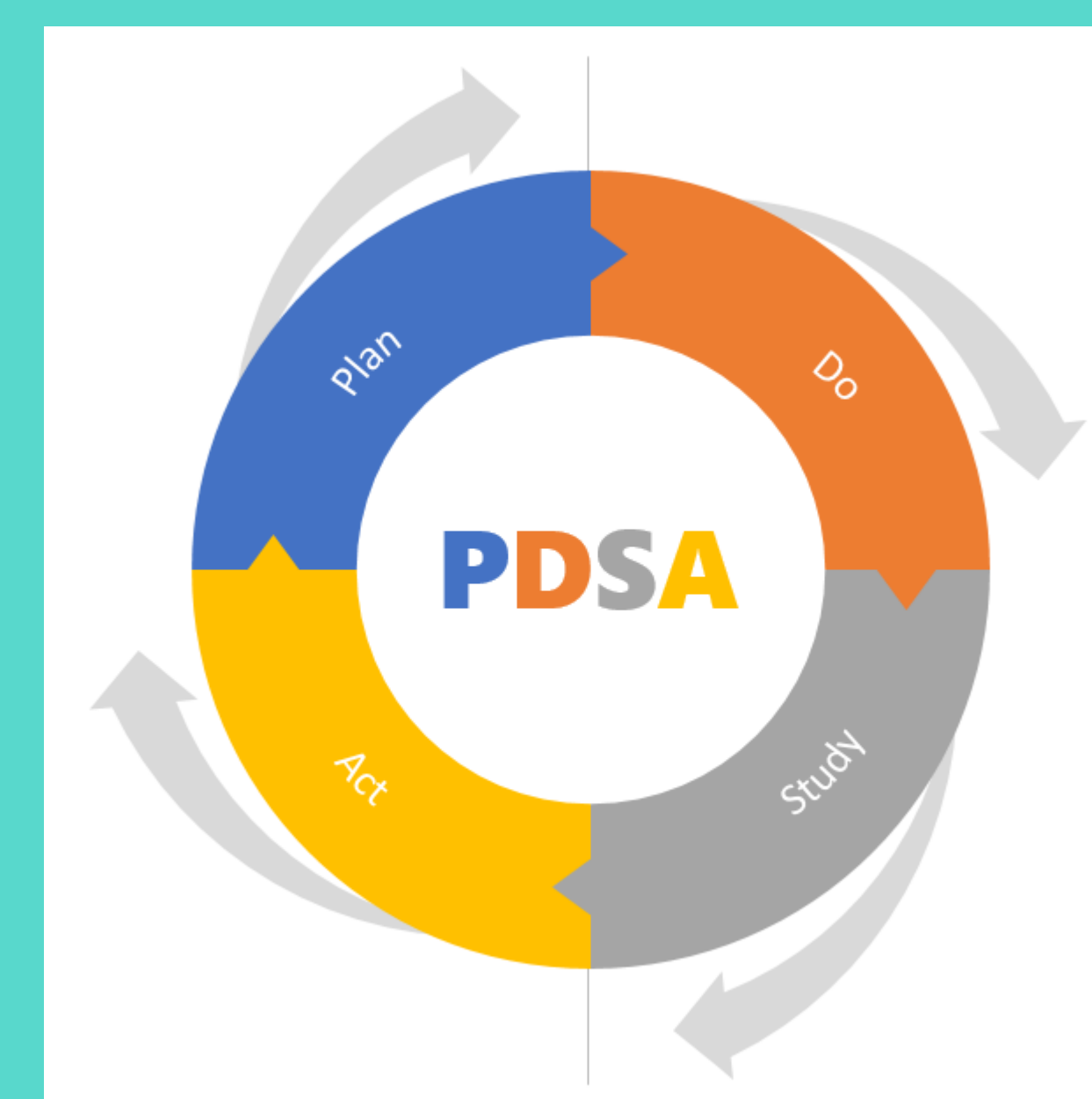
#### Cycle 2

#### Plan

- Achieve 100% compliance on following prolonged jaundice proforma.
- Reduce irrelevant tests being done

#### Act

- Ensure continued usage of prolonged jaundice proforma
- Easy access to prolonged jaundice proforma
- To do relevant investigations



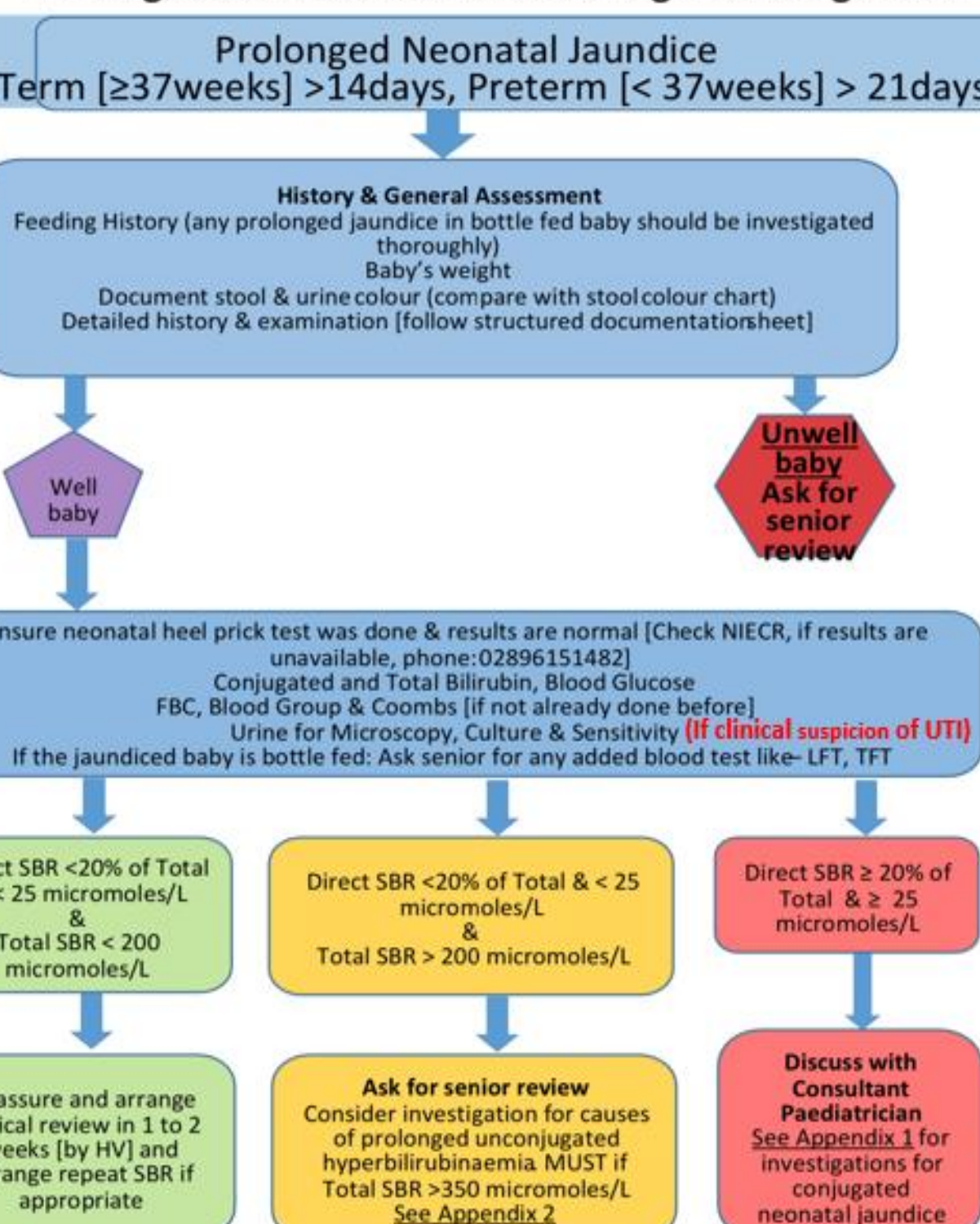
#### Do

- Retrospective data collection
- Comparison with previous cycle

#### Study

- Proforma followed → 100%
- Unnecessary investigations done → 0%

### Prolonged Neonatal Jaundice Management Algorithm



- Evidence Base & Sources of information
- NICE Guideline for neonatal jaundice 1.7
  - Yellow Alert Campaign - <http://www.yellowalert.org/ForProfessionals>
  - Children's Liver Disease Foundation - <http://www.childliverdisease.org/>
  - Prolonged Neonatal Jaundice Guideline: Nottingham Children's Hospital

### Prolonged Neonatal Jaundice Screen Proforma

Addressograph: \_\_\_\_\_ Time: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Days, Gestation: \_\_\_\_\_ weeks

DOB: \_\_\_\_\_ Corrected Gestational Age: \_\_\_\_\_ weeks

H & C No: \_\_\_\_\_ Mode of delivery: \_\_\_\_\_ Postnatal history: \_\_\_\_\_

Phototherapy or any other treatment so far: \_\_\_\_\_

Any history of jaundice in other siblings: \_\_\_\_\_

Any family history of genetic / familial conditions: \_\_\_\_\_

Feeding: Breast  Formula  Type: \_\_\_\_\_ Frequency: \_\_\_\_\_ Amount: \_\_\_\_\_

Mother's Blood Group: \_\_\_\_\_ Baby's Blood Group: \_\_\_\_\_ Direct Coomb's: \_\_\_\_\_

Guthrie test result: Normal  Abnormal  Check NIECR, if unavailable, phone: 028 9063 4096

Progress of jaundice: \_\_\_\_\_

EXAMINATION

Birth Weight: \_\_\_\_\_ Weight today: \_\_\_\_\_ Thriving? Yes No OFC: \_\_\_\_\_

Well  Unwell  Satisfactory colour of stool? Yes No Witnessed by examiner?

Document if parents confirmed stool colour against chart:

Satisfactory colour of urine? Yes  No  Witnessed by examiner?

Jaundice: Pallor: \_\_\_\_\_ Hepatosplenomegaly: \_\_\_\_\_

CVS: CNS: \_\_\_\_\_ Dismorphism: \_\_\_\_\_

Any other relevant information: \_\_\_\_\_

Guthrie result: Normal/Abnormal - please circle

If result is still unknown, Phone RBHSC Screening lab - 02896151482 (if no result or borderline then recheck TFTs): \_\_\_\_\_

(If Afro Caribbean / Asian / Mediterranean origin, then also requires blood film and G6PD)

Signature: \_\_\_\_\_

PRINT Name: \_\_\_\_\_

GMC NO: \_\_\_\_\_

### Conclusion

This QI project demonstrated that adherence to the prolonged jaundice proforma published in 2016 led to a more streamlined and evidence-based approach to the investigation of prolonged neonatal jaundice. Implementation of the proforma resulted in a reduction in unnecessary investigations, without compromising patient safety or clinical outcomes, and ensured appropriate identification of infants requiring further assessment.

### Reflections and Key Learnings

- Prior to implementation, investigations were often requested out of caution rather than clinical necessity, contributing to increased workload for healthcare staff and avoidable stress for parents.
- Feedback from parents indicated that fewer blood tests and clearer explanations improved their overall experience.
- From a personal perspective, this project enhanced my understanding of how small, targeted changes can have a meaningful impact on patient experience and system efficiency.
- With the implementation on EPIC system all over the trust, there has been an online template proforma made similar to the original one, and is being in use currently in the paediatrics department.