# Development of a Neonatal Intensive Care Short Course for Singly Qualified Professional Nurses

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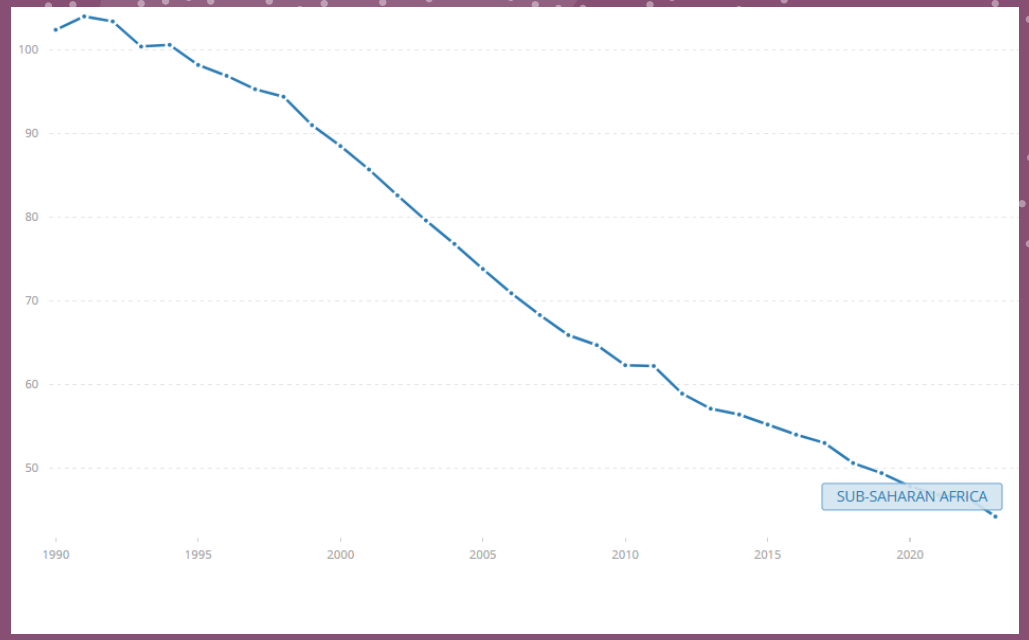
# Why?



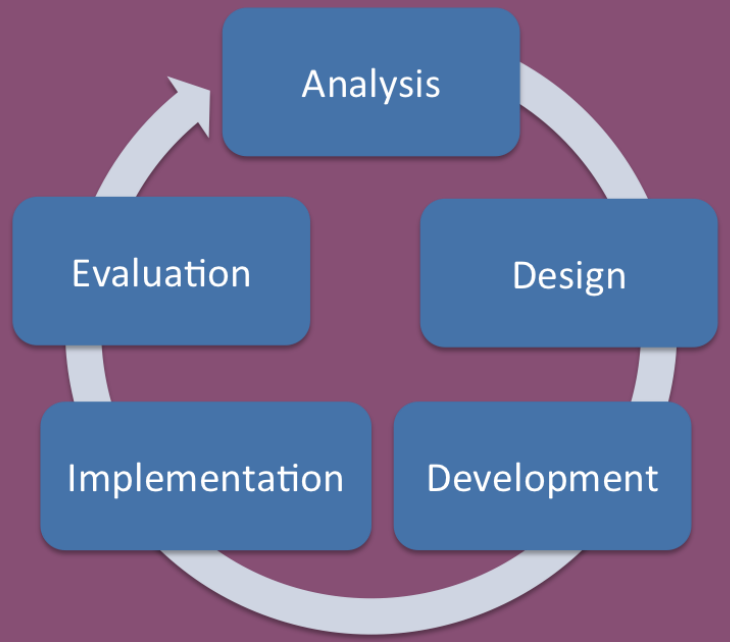

Despite global progress, Sub-Saharan Africa still bears the highest neonatal mortality rate at **32 deaths per 1,000 live births**, far above the SDG target of 12 per 1,000 by 2030. Contributing factors include low maternal education, home deliveries, short birth intervals, and critically a lack of quality neonatal intensive care, where fragile newborns often fail to receive the timely, skilled interventions they need to survive.(Tamir, 2024)

# Why this specific program

- Undergraduate nursing training gaps (limited neonatal training)
- Impact of nursing education shift to higher education on specialties (limited access to speciality training)
- SANC does not recognise neonatal nursing as a stand alone speciality
- Continuing Professional Development (CPDs)
- Innovative strategies to bridge care gaps

# Methodology

- Mixed Methods, design varied according to phases
- Each phase took on a step of the ADDIE Model an instructional educational model for program development



# Phase 1: Analysis

**Mapping review (Qualitative):** 3 Journals 109 articles…emerging type of review method

**Formulation of competencies (Qualitative):**

Generic competency framework for advanced nurse practitioners

**Ranking Exercise (Quantitative):**

**Experts**

- neonatal Intensivist (n=1), nurse educators (n=2), neonatal nursing specialists (n=3), member of a Neonatal Nursing Association. (n=1), (N=7).

**Profile of participants and Survey (Quantitative)**

- Professional Nurses working in NICU's in 4 hospitals in Johannesburg (N=114)

# Phase 2: Design

- Focus Group Discussion/Individual Interviews, same experts used in phase 1

# Phase 3: Development

- Development of outline of course
- Verification using the Delphi method ( same experts in phases 1 and 2)

# Findings

Mapping review (109 articles)

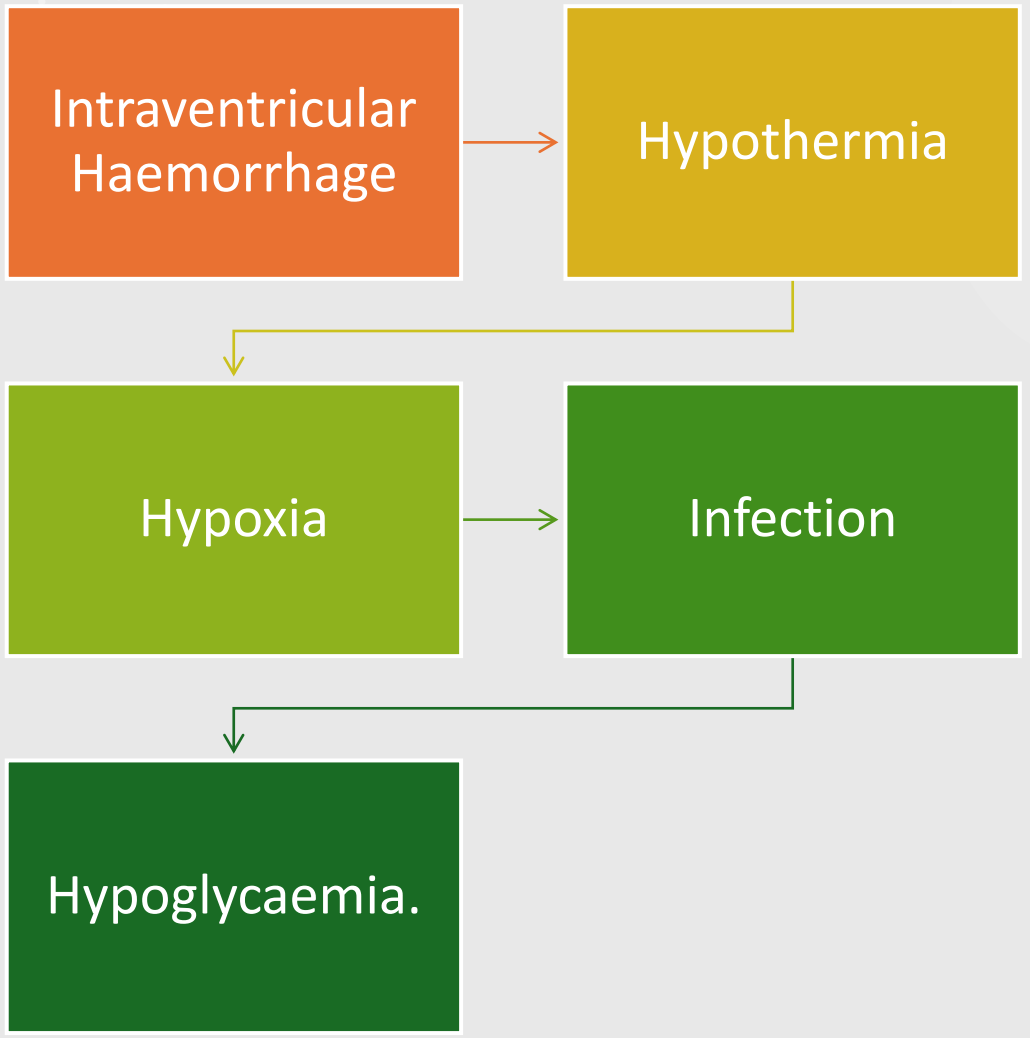
All developed competencies included in the program (Due to high % of highly ranked competencies by Professional Nurses)

Delphi 2 rounds with a 100% consensus

The nurse should demonstrate competency in the ability to implement a range of advanced procedures, treatments, and interventions in accordance with the development care plan for the management for the following neonatal conditions:

- Neonatal Abstinence Syndrome
- Hyperbilirubinemia
- Respiratory Distress Syndrome
- Persistent Pulmonary Hypertension
- Necrotising Enterocolitis
- Gastroschisis
- Omphalocele
- Congenital Heart Defects
- Intraventricular Haemorrhage
- Hypothermia
- Hypoxia
- Infection
- Hypoglycaemia.

Implements a range of advanced procedures, treatments, and interventions in accordance with the developed care plan for the prevention of the following conditions:



# Nurse uses appropriate assessment to identify actual and potential risks to safety and security, takes appropriate action to ensure the following:

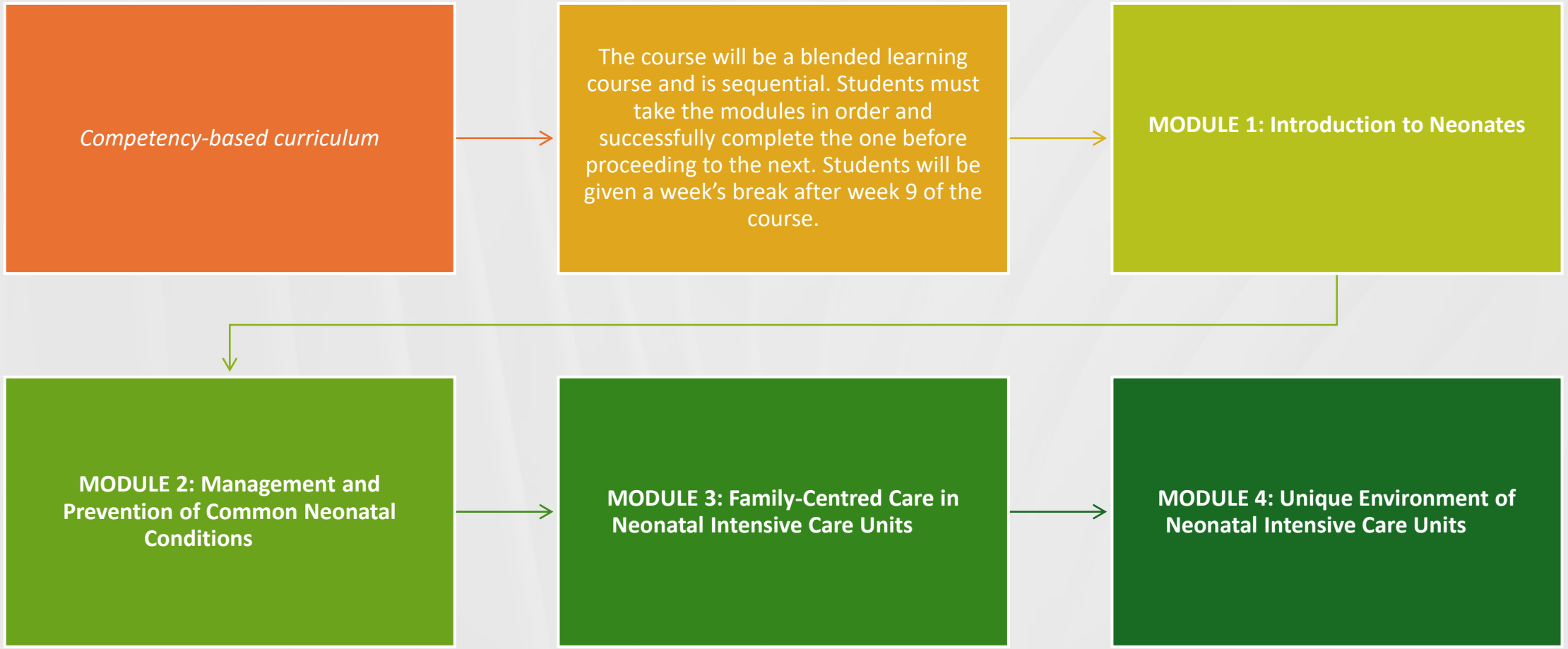
- Maintenance of skin integrity
- Early initiation of breastmilk
- Safe and correct administration of medication
- Promotion of a neuroprotective environment by the implementation of quiet time
- Effective initiation of neonatal resuscitation
- Execution of safe administration of a blood transfusion
- Correct management of a neonate on phototherapy
- Promotion of skin-to-skin contact with primary caregiver
- Correct management of neonate- on supplemental oxygen
- Effective non-pharmacological pain management.

# Nurse Initiates, develops, and continues therapeutic relationships using a range of advanced communication and interpersonal skills with families of neonates:

## Effective communication with families of neonates

- Involvement of families in care of the neonate G3: Support of families of the neonate
- Creation of a therapeutic environment for the family of the dying neonate
- Effective management of challenges or barriers to Family-Centred Care due to COVID-19. *this changed in the program for relevance*

# Program


*Competency-based curriculum*
The course will be a blended learning course and is sequential. Students must take the modules in order and successfully complete the one before proceeding to the next. Students will be given a week's break after week 9 of the course.
**MODULE 1: Introduction to Neonates**
**MODULE 2: Management and Prevention of Common Neonatal Conditions**
**MODULE 3: Family-Centred Care in Neonatal Intensive Care Units**
**MODULE 4: Unique Environment of Neonatal Intensive Care Units**

| Credit Summary | Module 1 | Module 2 | Module 3 | Module 4 | Skills Demonstration | Portfolio of Evidence | Total |
|---|---|---|---|---|---|---|---|
| Credits | 4 | 4 | 3 | 3 | 2 | 2 | 18 credits |
| Notional Hours | 40 | 40 | 30 | 30 | 20 | 20 | 180 notional hours |

FULLY ONLINE

3 FACE TO FACE SKILLS DAYS

PORTFOLIO OF EVIDENCE

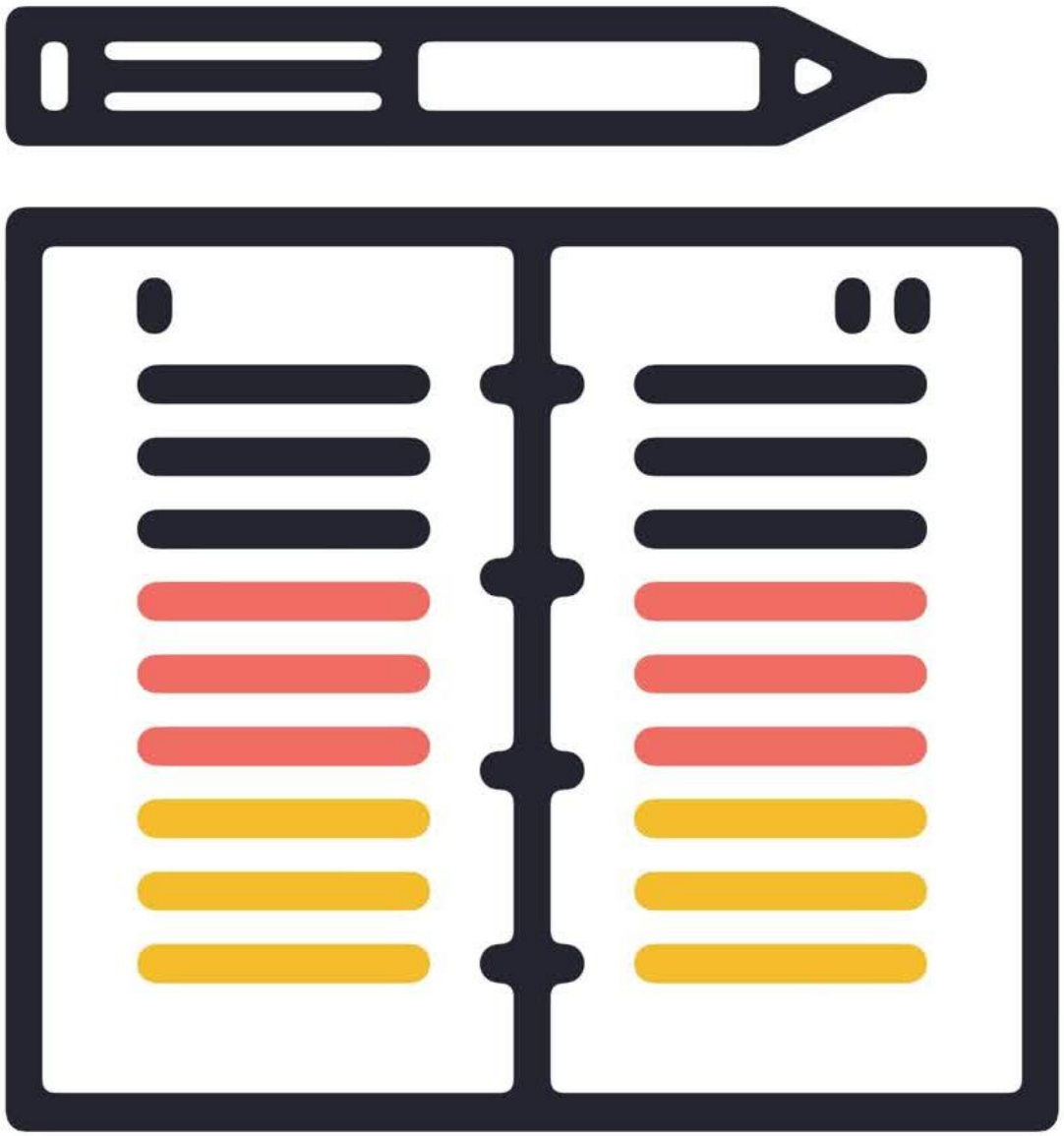
# Limitations

- Use of non-standardised ADDIE model → researcher's interpretation may differ from other studies.
- Literature selection limited to peer-reviewed, high-impact journals → may exclude evidence from middle- and low-income countries.
- Small survey sample size (Phase 1.3.1) → generalisability limited unless extended to other healthcare establishments.
- Fewer experts participated than anticipated → limited broader expert insights on neonatal ICU competencies.
- Researcher-generated survey tool → Cronbach alpha confirmed internal consistency.
- Response bias risk → many participants gave similar justifications ("positive impact on neonatal ICU care").
- Discrepancy in response rates per item → partial responses included (on statistician's advice), may introduce bias.

# Recommendations

Recommendations & Future Research

- Recognise neonatal short course as part of CPD.
- Develop policy to embed neonatal nursing into mainstream postgraduate programmes.
- Advocate for formal recognition of neonatal nursing by stakeholders.
- Finalise micro curriculum and programme materials.
- Use alternative delivery methods, such as microlearning – short, focused learning modules that can be accessed flexibly.
- Enable credit transfer to Child Nursing Science, Midwifery, or Critical Care.
- Orientate supervising nurses for buy-in and support.
- Conduct longitudinal studies on course impact (mortality & outcomes).
- Evaluate knowledge retention and practical application post-course.
- Test transferability to other institutions and healthcare facilities.
- Investigate expert observations on poor care to validate findings.



- Implementation & Evaluation post-doc

# References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# Thank you