



# SAMRAKSHAN

An IRIA & ICRI Initiative to address perinatal mortality in India

This Action plan lists out the broad goals and aims of SAMRAKSHAN, an initiative developed and launched by IRIA & ICRI to address perinatal mortality in India

**ABSTRACT**  
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## Rationale

Fetal Radiologists are uniquely equipped to identify maternal and fetal conditions that may contribute to feto-maternal morbidity and mortality. Fetal Radiologists perform imaging studies using different modalities like Ultrasound, Doppler studies, CT and MRI, Echocardiographic studies, Neurosonograms, and Genetic sonograms, amongst others that help for early identification of maternal and fetal morbidity or abnormalities. Multi-modality imaging studies offer the potential for a systematic sequential assessment that minimizes risk of missed or misplaced findings and interpretations.

India has a high perinatal rate and is a major contributor to the maternal mortality, neonatal and infant mortality and stillborn rates worldwide. Despite significant and substantial progress in health care in India, pregnancy induced hypertension, fetal growth and prematurity remain significant factors that drive feto-maternal morbidity and mortality in India. These major factors can be identified early through a systematic imaging study approach and can help with initiation of early therapeutic strategies and consequently lead to a significant reduction in feto-maternal morbidity and mortality.

### Relevant Statistics that support the initiation of SAMRAKSHAN

- Estimated 27 million live births in India in 2017
- Estimated 75,658 live births in India in 2018
- 78.9% Institutional Deliveries in India
- Hypertensive disorders of pregnancy major cause of maternal mortality
- 10.08% incidence of Pregnancy Induced Hypertension; Preeclampsia 8-10%, Eclampsia 1-5%
- Estimated 3.5 million premature births in India in 2017
- Congenital Malformations prevalence 1.9% to 2.72%
- Estimated 621,000 babies born annually in India with congenital anomalies
- Congenital anomaly prenatal diagnosis was 10.98 per 10,000 births
- Prevalence of SGA 36.5%
- Prevalence of IUGR reported at 54%
- Prevalence of low birth weight babies 26%
- Attributable neonatal deaths (1000s) was 202.3 for all SGA

## Goals

- To enhance and promote the role of Radiologists in India in the National Mission to reduce perinatal mortality incorporating experience and expertise with imaging studies and multimodality approaches in perinatal care
- To develop a technical package that includes methods to assess and score at risk pregnancies and fetuses for preeclampsia, prematurity, preterm, placental abnormalities, fetal growth and fetal abnormalities
- To develop a training, documentation and reporting package that can be used as a Continuous Learning Improvement Program (CLIP) to continuously train radiologists in India on modalities in Fetal Radiology
- To develop Information, Education and Communication (IEC) packages that can be used to increase awareness on the strengths and potential for fetal radiology in the early identification of feto-maternal morbidity focused on all stakeholders, including but not limited to, the community, other health care service providers involved in feto-maternal health, other community based groups and organizations involved directly or indirectly with feto-maternal wellbeing, and social and political and business communities.

## Phase I

**Focuses on setting a strong foundation in place for enhanced quality of institutional based care.**

### Training

- Training Personnel
  - Focused on currently practising Radiologists
  - PG Residents in Radiology
  - Training of Trainers
  - Developing State and Regional Pools of Trainer of Trainers
- Training Centers/Institutes
  - Centers that can become state wide and regional training centers
    - Focus on
      - Government Medical Colleges
      - Private and Non-Government Sector Teaching Hospitals
      - Large Diagnostic Centers in Private Sector
    - Pre-requisites
    - Outcomes
    - Assessments, Audit and Evaluation
  - Scale Training Centers into Centers of Excellence in Fetal Radiology
- Training Package
  - Content of Training
    - Modules
    - Duration
    - Outcomes
      - Outcome Indicators Focused on Early Identification of
        - Pre-Eclampsia

- Prematurity
- Preterm
- Placental Abnormality
- Fetal Growth
- Congenital Abnormalities
- Intrauterine Fetal Death
- Documentation
  - Enrolment Forms
    - Trainees
    - Trainers
    - Training Centers
  - Individual Case Documentation Forms- FAS FIRADS FORM
  - Monthly Reporting Forms
  - Annual Performance Form
- Reporting
- Audit and Evaluation
  - Random Audit of Personnel
  - Random Audit of Participating Centers

### Selecting Locations

- States that are included in first or pilot phase of project
- Districts within states that are covered in pilot phase of project
- Plan for Scale up at State and National Level
- Coordinate with State IRIA

### Information, Education and Communication Strategies

- Locally Relevant but Nationally Linked Information, Education and Communication Strategies

## SAMRAKSHAN

- Central and State Pool of Materials in local language and English
- Electronic, Digital and Paper Content
- Audiovisual Content
  - Paper and Electronic Posters
  - Audio
  - Video
  - Podcasts
  - Link to Community Radio as applicable
- State and National Brand Ambassadors

## Goals First Year

- Inauguration and Launch of Samrakshan at SonoSummit, Chennai 2019
- Creation of National Steering Committee
- Creation of State Steering Committees
- Publicity of the Program
  - Dedicated Website
  - Publicity Material
  - Dedicated App
- Launch of State Programs in coordination with State Associations
  - Enrol and Initiate Training Programs
- Develop Consolidated Technical Training package
- Explore possibility of Government Grants for Government Medical Colleges
- Radiologists and IRIA at State and National Level to leverage political, social and business will to support the program

## Outcomes from First Year

- Develop a consolidated technical package for the implementation of the program
  - Training Modules
  - IEC material
  - Dedicated Website
- Two Training of Trainer Programs
- Participants completing Trainer of Trainer Programs initiate one training program each
- Trainers, Experts, Faculty Pool Developed
- Data collection through reports collected
- Audit and Evaluation of training and participating centers to fine tune processes
- Publicity and Awareness generation on perinatal mortality and the important role of radiologists to address perinatal mortality in each district focused on dissemination to all stakeholders

## Integration with Academics

1. Case Discussion Forums through Dedicated Website, WhatsApp or Telegram (or similar approach) Group
2. Mentoring to publish case reports, case series and articles
3. Online Journal Club disseminating innovative and updated approaches in Fetal Radiology
4. Dedicated online interaction rooms to conduct regular academic case discussions at regular intervals
5. Case discussion panels involving experts from neurology, neonatology, Genetics, Cardiology, Pediatric Surgeons and other relevant specialties



## Enrolment Form for Trainees

### Samrakshan Training Program Enrolment Form

1. Name
2. Age
3. Gender
4. Radiology Qualification
5. Years of Experience
6. Name of Institute/Center Currently working at
7. Number of Radiology personnel (with degree/diploma) in department/unit
8. Number of Radiology PGs in department/Unit
9. Contact Details
  1. Phone
  2. WhatsApp
  3. Email

Normal

Abnormal

9. Number of Fetal Ultrasound studies last year
10. Number of Fetal CT last year
11. Number of Fetal MRI last year
12. Number of Doppler Studies Last year
13. Number of Fetal Echo last year

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14. Number of Placental Studies Last year
15. Total number of clients seen for fetal radiology last year
16. Number of Cases Identified in last year
- Congenital Abnormality
  - Fetal Growth Abnormality
  - Intrauterine death
  - Pregnancy induced hypertension
  - Preterm or prematurity
17. Are you interested in IRIA and ICRI training programs                      Yes/No

(As part of project Samrakshan)

- FAS FIRADS training for risk assessment scoring
  - Doppler study training programs
  - Fetal CT training
  - Fetal MRI training
  - Fetal echo training
10. Are you interested to become part of IRIA & ICRI trainer of trainers pool?
11. Are you attending the SonoSummit at Chennai, June 2019?

## Samrakshan Monthly Reporting Form

### Samrakshan Program Monthly Reporting Form

Name of Doctor

Name of Institute

Institute Village/Town/City

District

State

Reporting Month and Year

Test	Number First Trimester	Number Second Trimester	Number Third Trimester	Total
USG studies				
Doppler Studies				
Fetal CT				
Fetal MRI				
Fetal Echo				

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FAS FIRADS GRADE	NUMBER	NUMBER REFERRED
0		
1		
2		
3		
4		
5		

TEST	NUMBER DONE	NUMBER ABNORMAL	NUMBER REFERRED
Doppler study			
Fetal CT			
Fetal ECHO			
Fetal MRI			
Placental Study			

Conditions of Interest	Numbers
Early Pre eclampsia	
Late Pre eclampsia	

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Early FGR	
Late FGR	
IUFD	
Isolated Congenital Anomaly	
Multiple Congenital Anomaly	

Remarks or Comments (Can use this section to list out congenital anomalies identified)