Control of Sickle cell & Thalassemia Disease in Odisha

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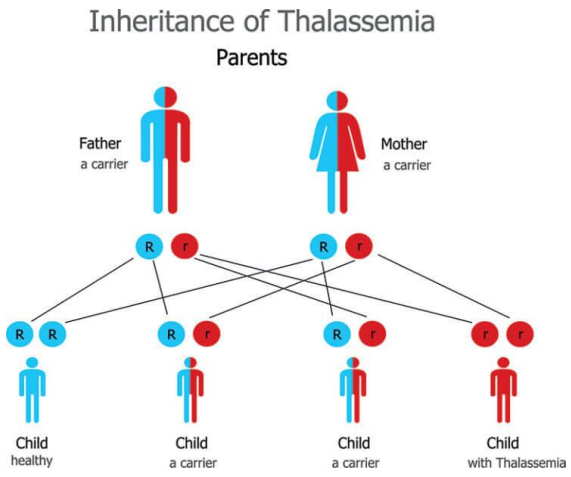
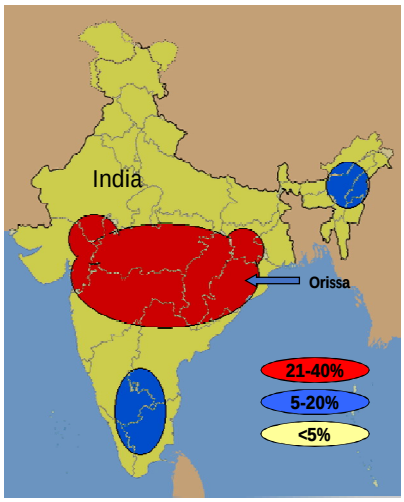
Definition of Sickle Cell Disease and Thalassemia

- Sickle Cell Disease is a genetic disorder in which red blood cells are converted to a sickle shape. The cells die early, leaving a shortage of healthy red blood cells and can block blood flow causing pain. It passes from parents to offspring.
- Thalassemia is an inherited blood disorder characterized by less oxygen carrying protein (Hemoglobin) and fewer red blood cells in the body than normal. It also passes from parents to offspring.

It is more prevalent because of endogamy and consanguineous marriage which is more happening in the tribal districts and western Odisha mostly seen in the Aghoria & Kulta families.

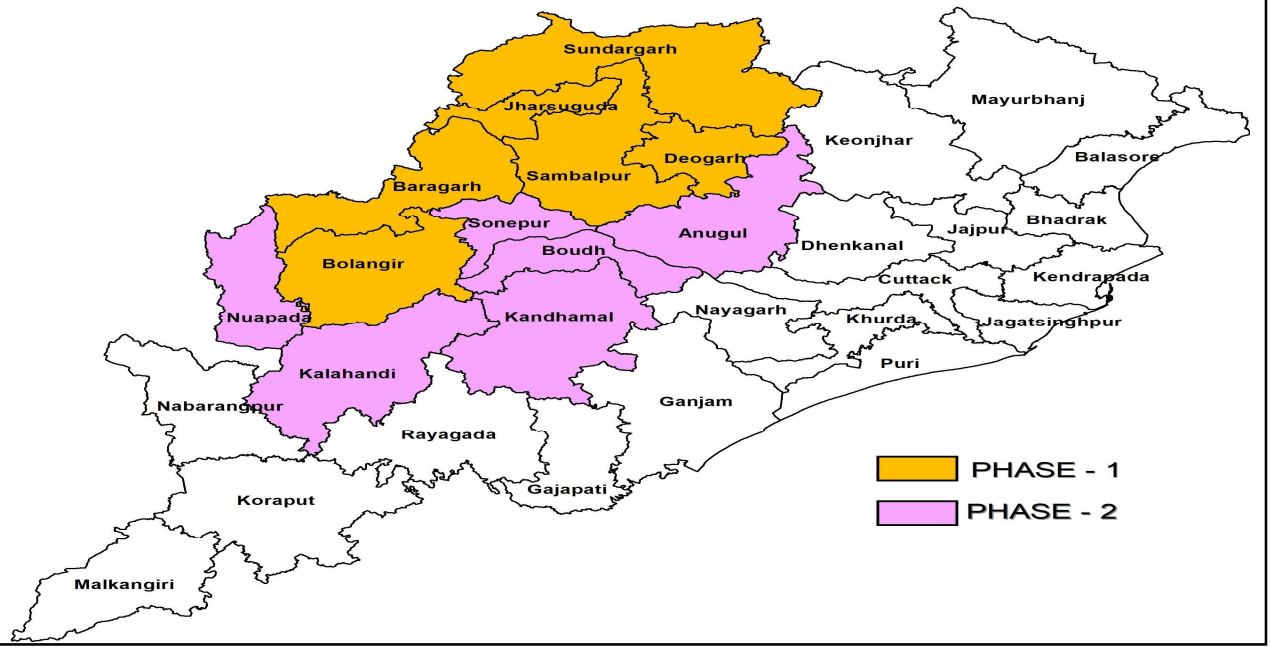


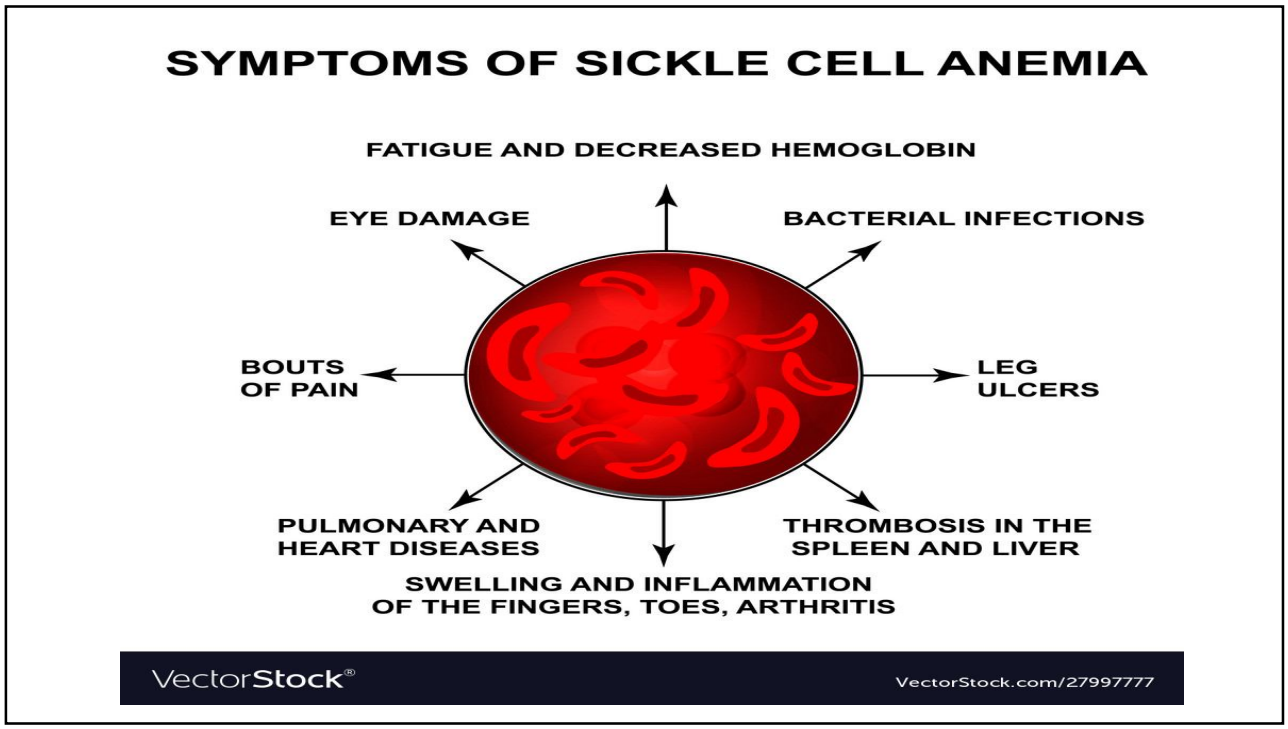
Prevalence of Sickle Cell gene in India



- States with high prevalence are Odisha, Jharkhand, Madhya Pradesh, Chhattisgarh, Maharashtra & Gujarat.
- The frequency varies between 5% to 40% in these high-risk states.
- The State of Orissa falls in the High prevalence zone (21-40%).
- Few caste groups in Odisha especially from western districts of the state have very high frequency of sickle cell disease due to preferential endogamy.

District coverage under COE, VIMSAR, Burla




SYMPTOMS OF SICKLE CELL ANEMIA
FATIGUE AND DECREASED HEMOGLOBIN
EYE DAMAGE
BACTERIAL INFECTIONS
BOUTS OF PAIN
LEG ULCERS
PULMONARY AND HEART DISEASES
THROMBOSIS IN THE SPLEEN AND LIVER
SWELLING AND INFLAMMATION OF THE FINGERS, TOES, ARTHRITIS
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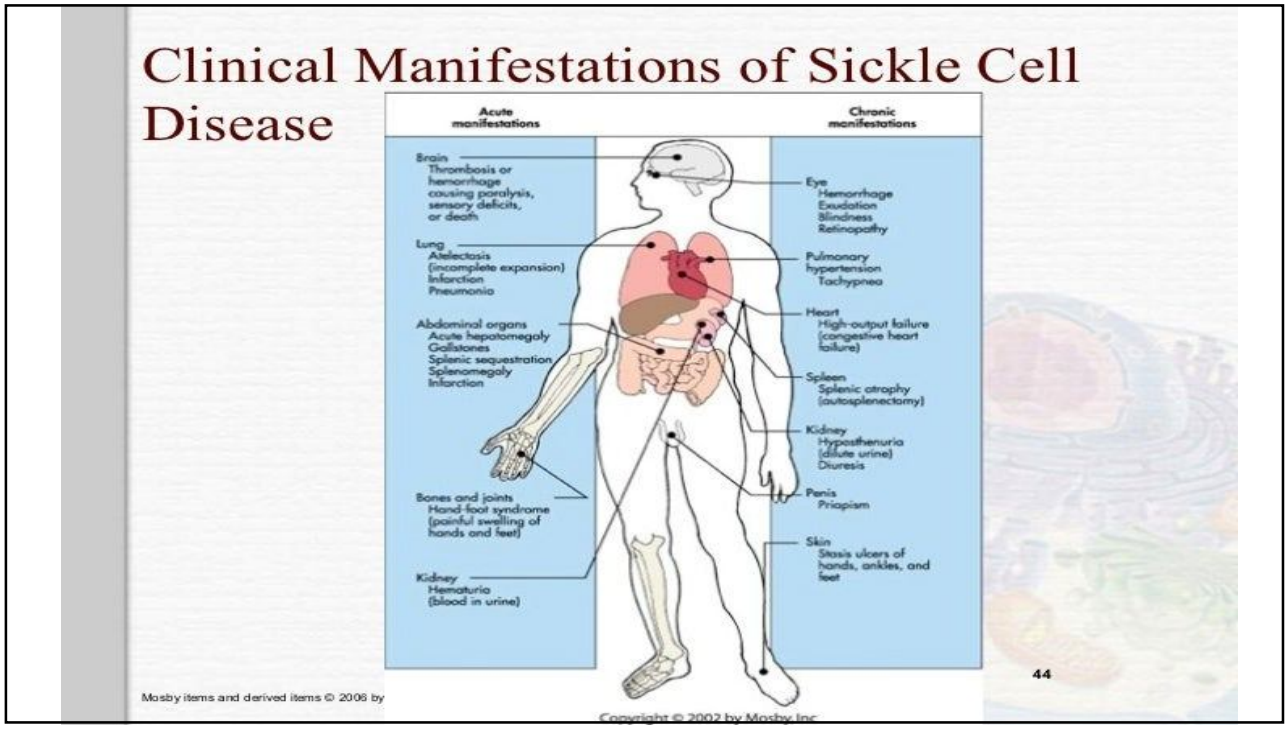
Clinical Manifestations of Sickle Cell Disease
Acute manifestations
Chronic manifestations
Brain
Thrombosis or hemorrhage causing paralysis, sensory deficits, or death
Lung
Atelectasis (incomplete expansion)
Infarction
Pneumonia
Abdominal organs
Acute hepatomegaly
Gallstones
Splenic sequestration
Splenomegaly
Infarction
Bones and joints
Hand-foot syndrome (painful swelling of hands and feet)
Kidney
Hematuria (blood in urine)
Eye
Hemorrhage
Exudation
Blindness
Retinopathy
Pulmonary hypertension
Tachypnea
Heart
High-output failure (congestive heart failure)
Spleen
Splenic atrophy (autosplenectomy)
Kidney
Hyposthenuria (dilute urine)
Diuresis
Penis
Priapism
Skin
Stasis ulcers of hands, ankles, and feet
44
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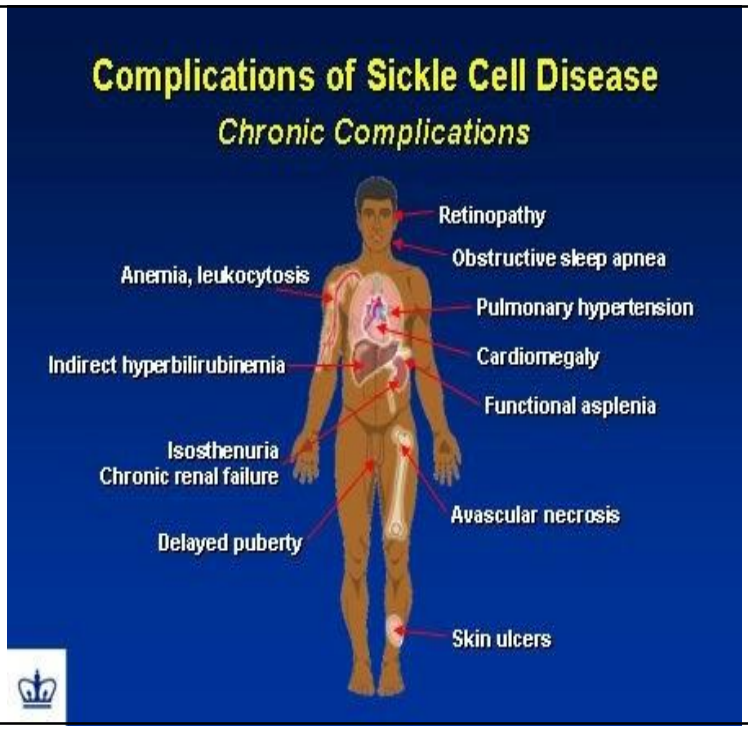

Complications of Sickle Cell Disease
Chronic Complications
Retinopathy
Obstructive sleep apnea
Anemia, leukocytosis
Pulmonary hypertension
Indirect hyperbilirubinemia
Cardiomegaly
Functional asplenia
Isosthenuria
Chronic renal failure
Avascular necrosis
Delayed puberty
Skin ulcers

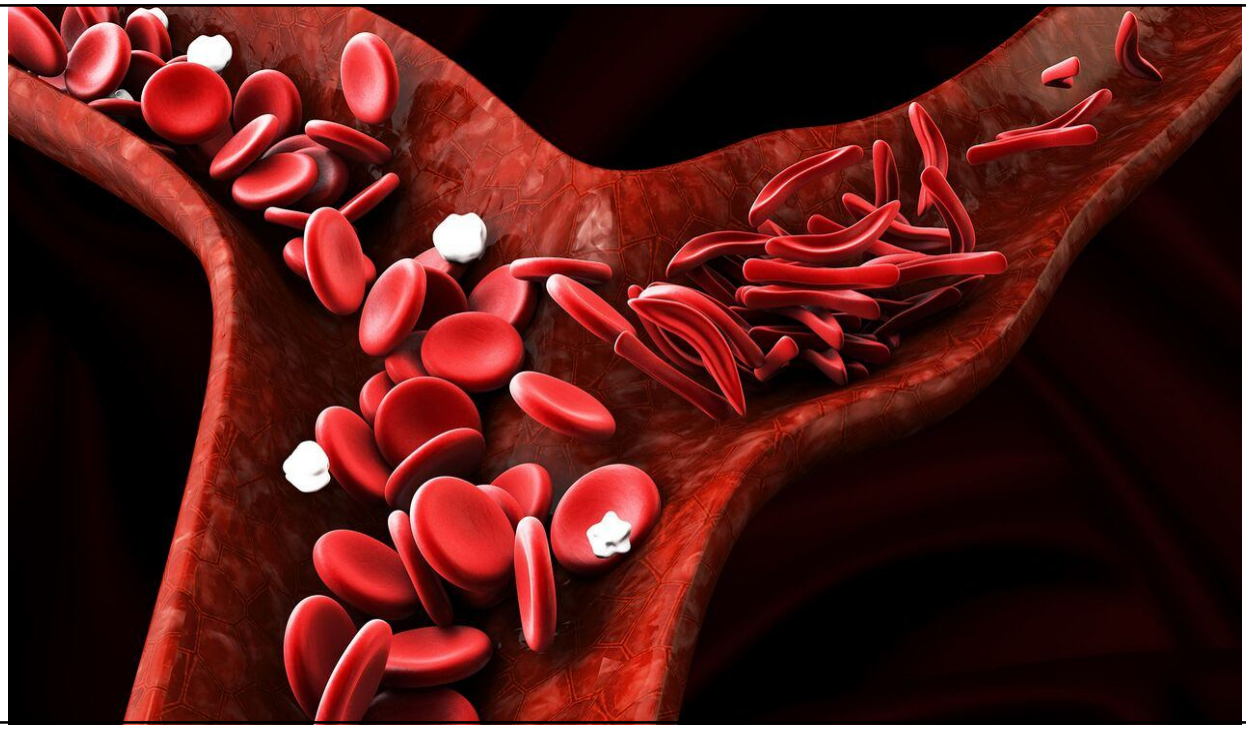
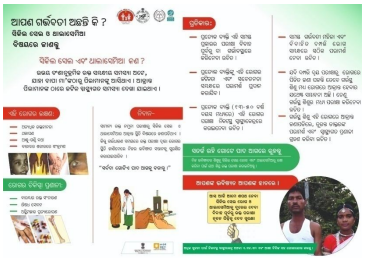
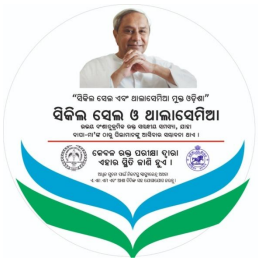
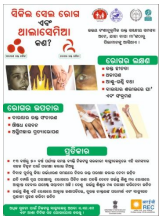


Figure 2 : Pictures showing symptoms of patients with **Beta-Thalassemia.**

Sample collection during RI Session







TVC_Odiya

TVC_Odiya_Outdoor

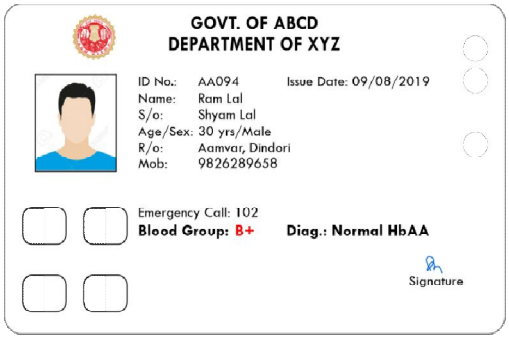
TVC_Sambalpuri

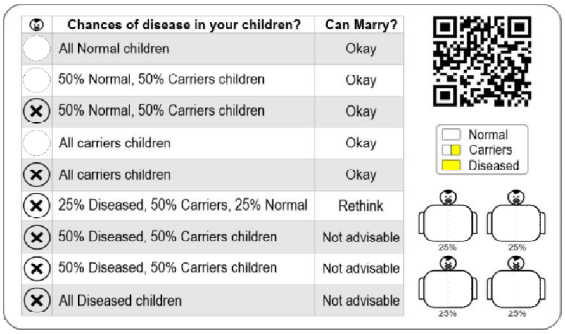
TVC_Sambalpuri_Outdoor

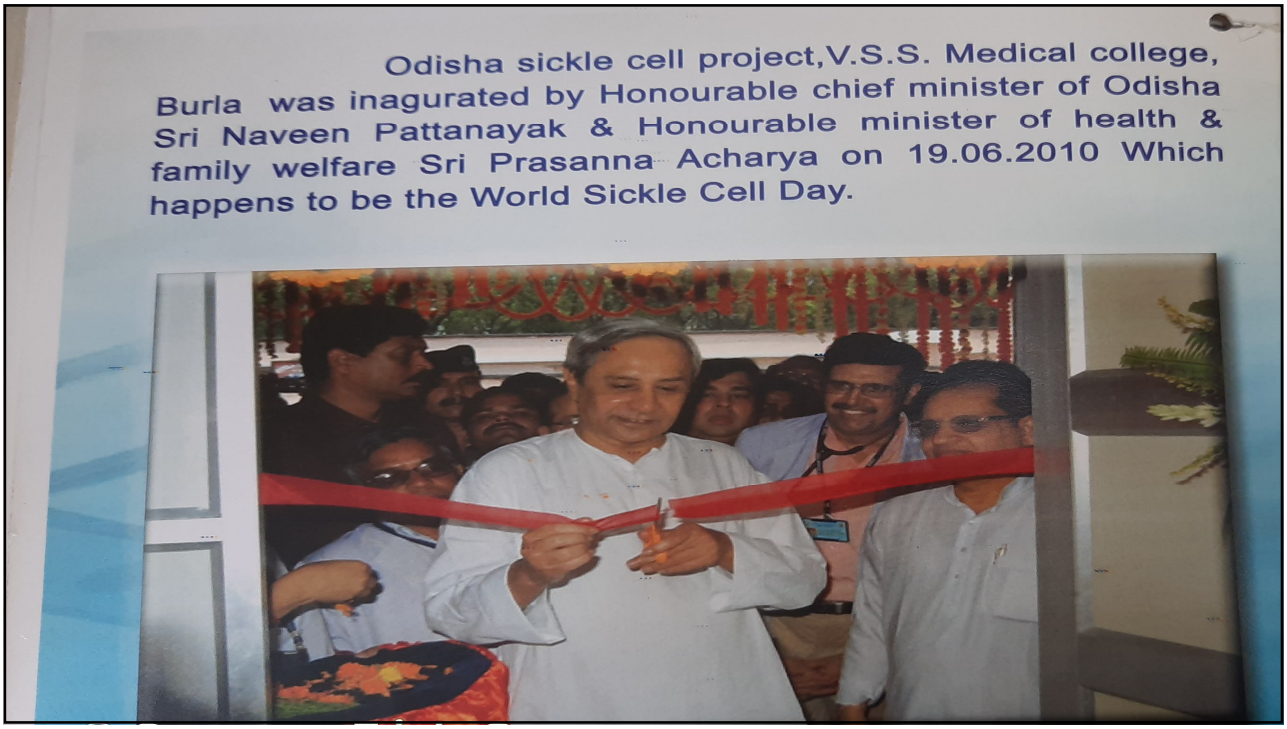
VID-20200912-WA0001

BCC Creatives

Sickle Cell ID Card







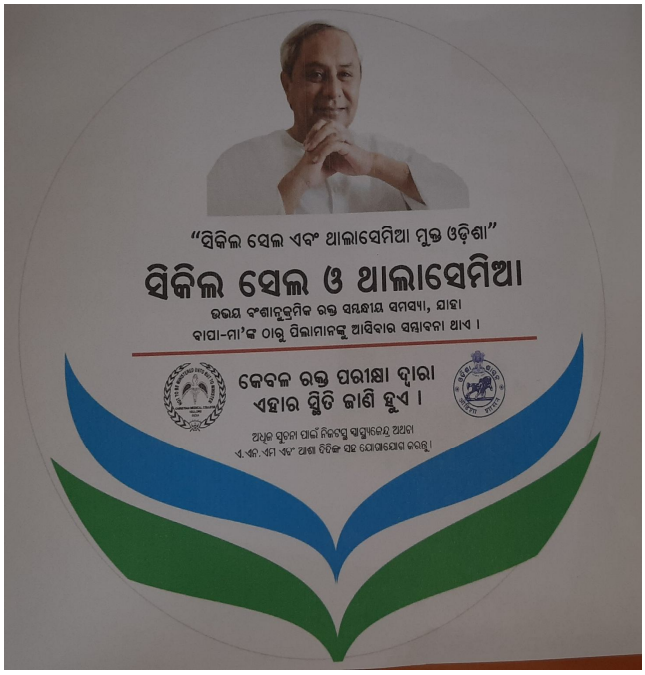
Signing of MoU

- MoU has been signed between the Govt. Of Odisha and CMC Vellore on 5.12.2017.

Newer Approach : a programme beyond screening

Complete life cycle approach for prevention

1- ANC
2- Spouse of HPLC +ve ANC
3- CVS for foetus in utero of couple both found HPLC +ve
4- School students std 8th and above screening



Appeal by Honourable CM, Odisha for awareness generation

Thank You