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Labor and Delivery Ebola Readiness and Protocols

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HHC NEW YORK CITY HEALTH AND HOSPITALS CORPORATION Bellevue SOUTH MANHATTAN HEALTHCARE NETWORK

Funded by ASPR & CDC

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BACKGROUND

- Sparse data of patient outcomes
- Historical data is set in low a resource environment
- Little has been published on healthcare worker safety techniques in regard to labor and delivery
- No previous published protocols on pregnancy

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HISTORY

- Outbreaks with Pregnancy data collection
  - Yambuku, 1976
    - High Percentage of Infected, 46%
    - Related to Injection Contamination
    - Mortality Rate of Pregnant 89%
    - Overall Patient Mortality 88%
    - 19 abortions among 82 women
    - 11 neonates born, all died within 19 days

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HISTORY

- Kikwit, 1996
  - Of 105 identified patient, 15 were Pregnant
  - 14 die, Mortality Rate 95.5%
  - Overall Mortality Rate, 77%
  - 10 women ended with abortion
    - 3 had Curettage was performed
    - Gloves, mask, plastic apron

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HISTORY

- Kikwit, 1996
  - 1 woman survives
    - 32 yo, curettage for Incomplete Ab
  - 1 woman had stillbirth with a 32 wk Delivery
  - 4 were in 3rd Trimester, all died
  - 1 delivered a live term infant
    - Mother developed fever 4 days before
    - Neonate died 3 days later

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SYMPTOMS

- At Kikwit 100% of pregnant patients had:
  - Fever
  - Severe Genital Hemorrhage
  - Abdominal Pain
  - Diarrhea
  - Arthralgia
  - Hiccups
  - Dysphagia
  - Neuro Psych
- Other symptoms
  - Melina
  - Vomiting
  - Nausea
  - Hematuria

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CURRENT UPDATE

- Baggi et al
  - 2 pregnant patients from Guinea
  - Both recovered and were subsequently induced at seven months with fetal demise
  - Amniocentesis confirmed high concentration of Ebola Virus

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CURRENT UPDATE

- Asymptomatic Shedding
  - Pregnant patient may present differently
- Delivery after Infection
  - Pregnant Survivors
  - Pregnancy after resolved infection

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ASSESS YOUR RESOURCES

- Gather the team
  - Nursing
  - Doctors
  - Infection Control
  - Facilities

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PATH

- Where does a patient present
- Where will the go
- How will they get there

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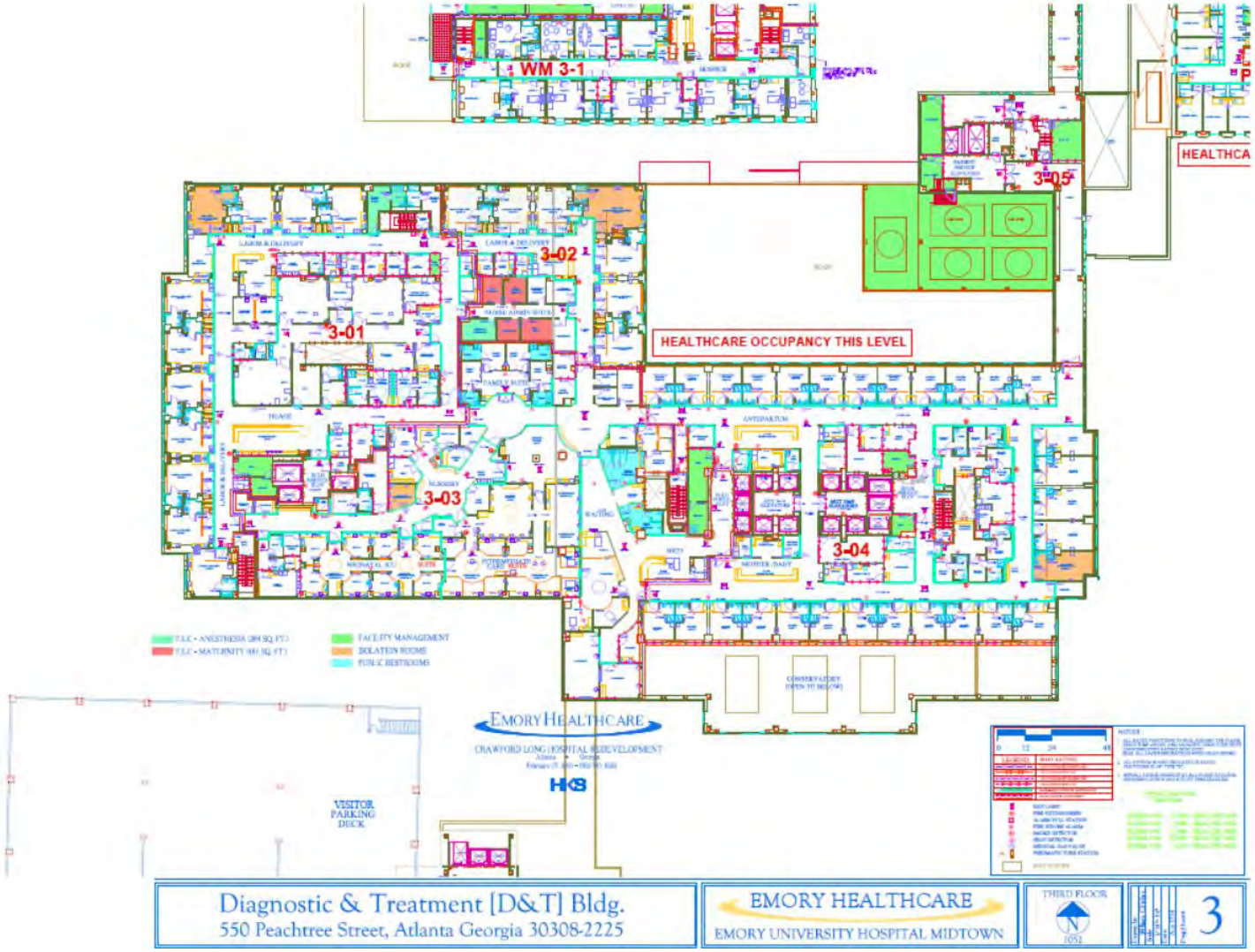
SCHEMATICS



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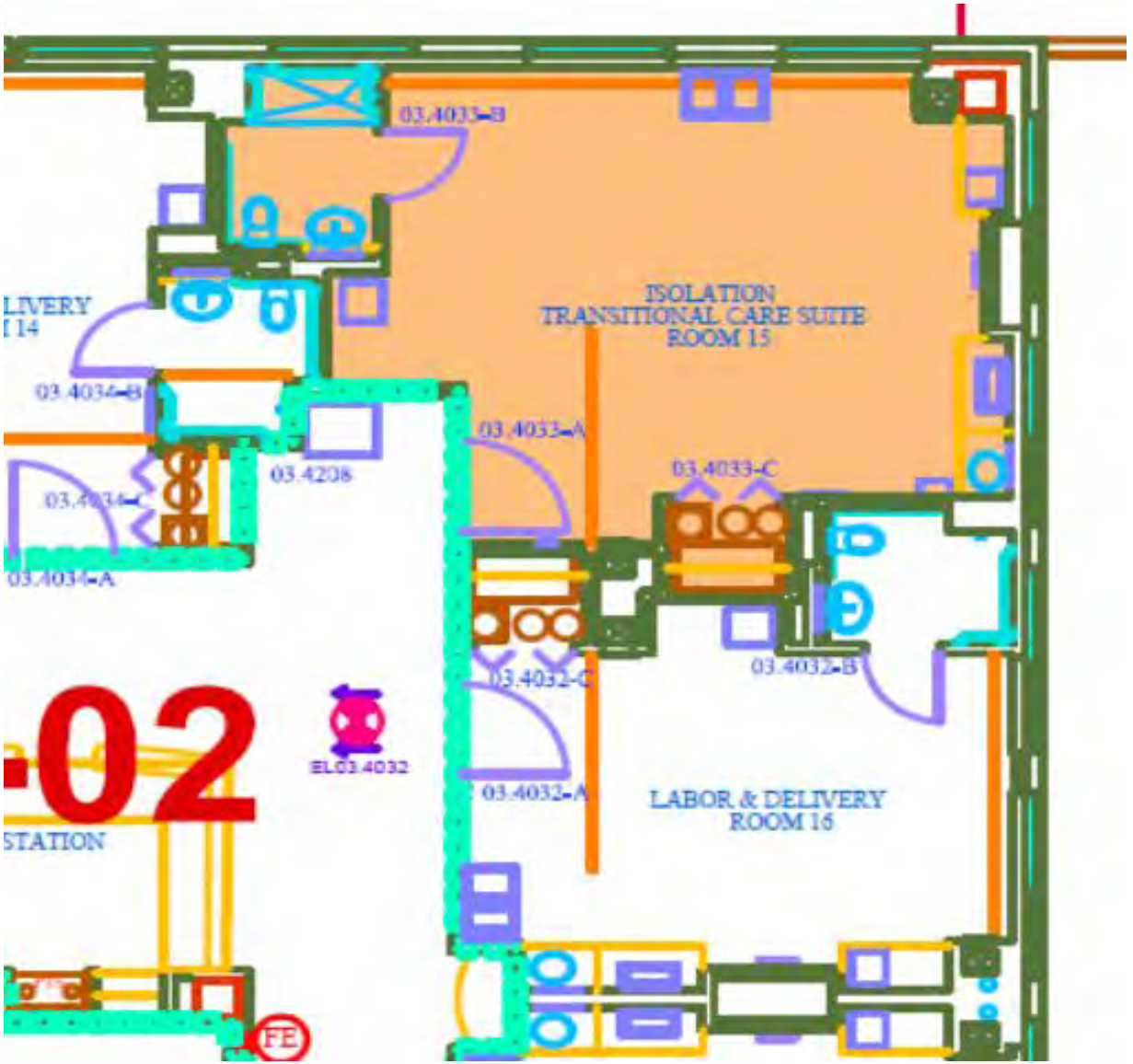
SCHEMATICS



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DIFFERENCES

- Pain
- Dramatic Bleeding
- Secondary Patient

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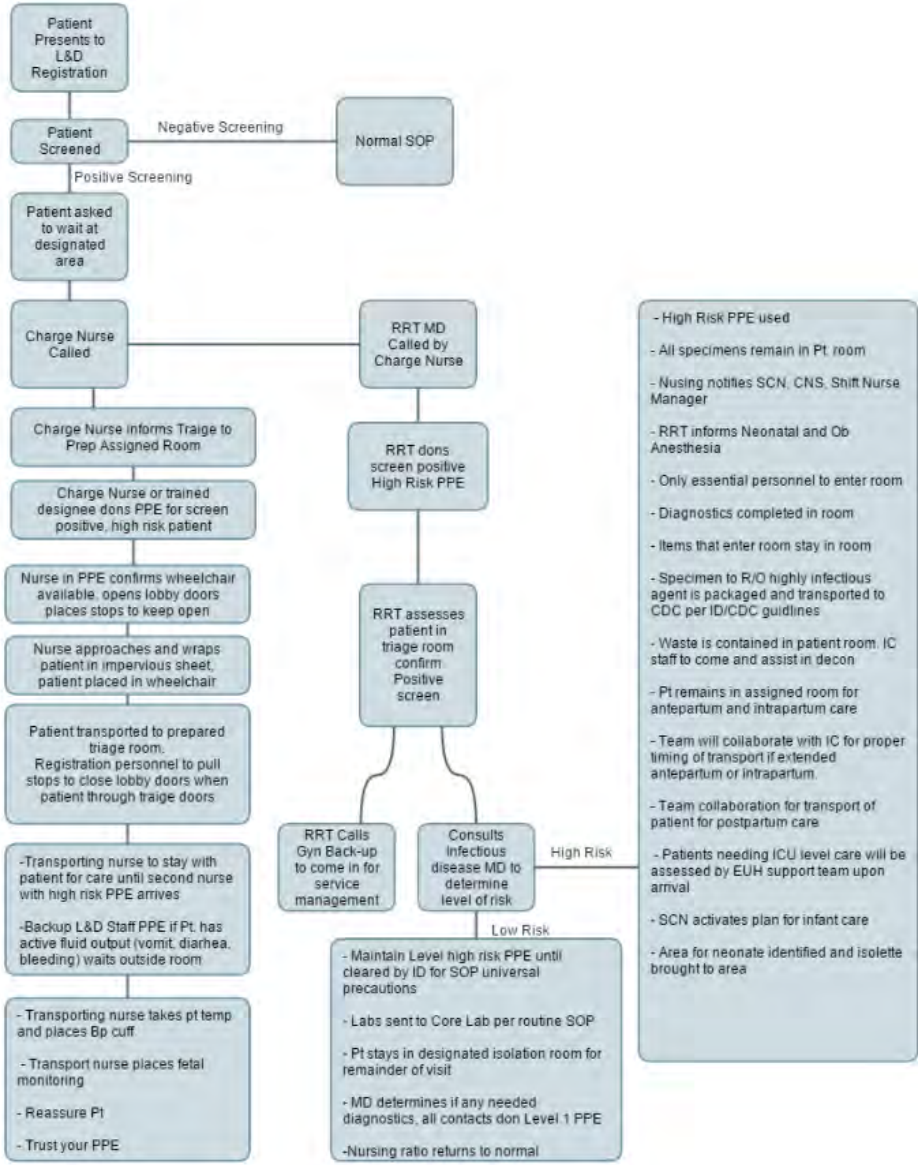
PRESENTATION PROTOCOL



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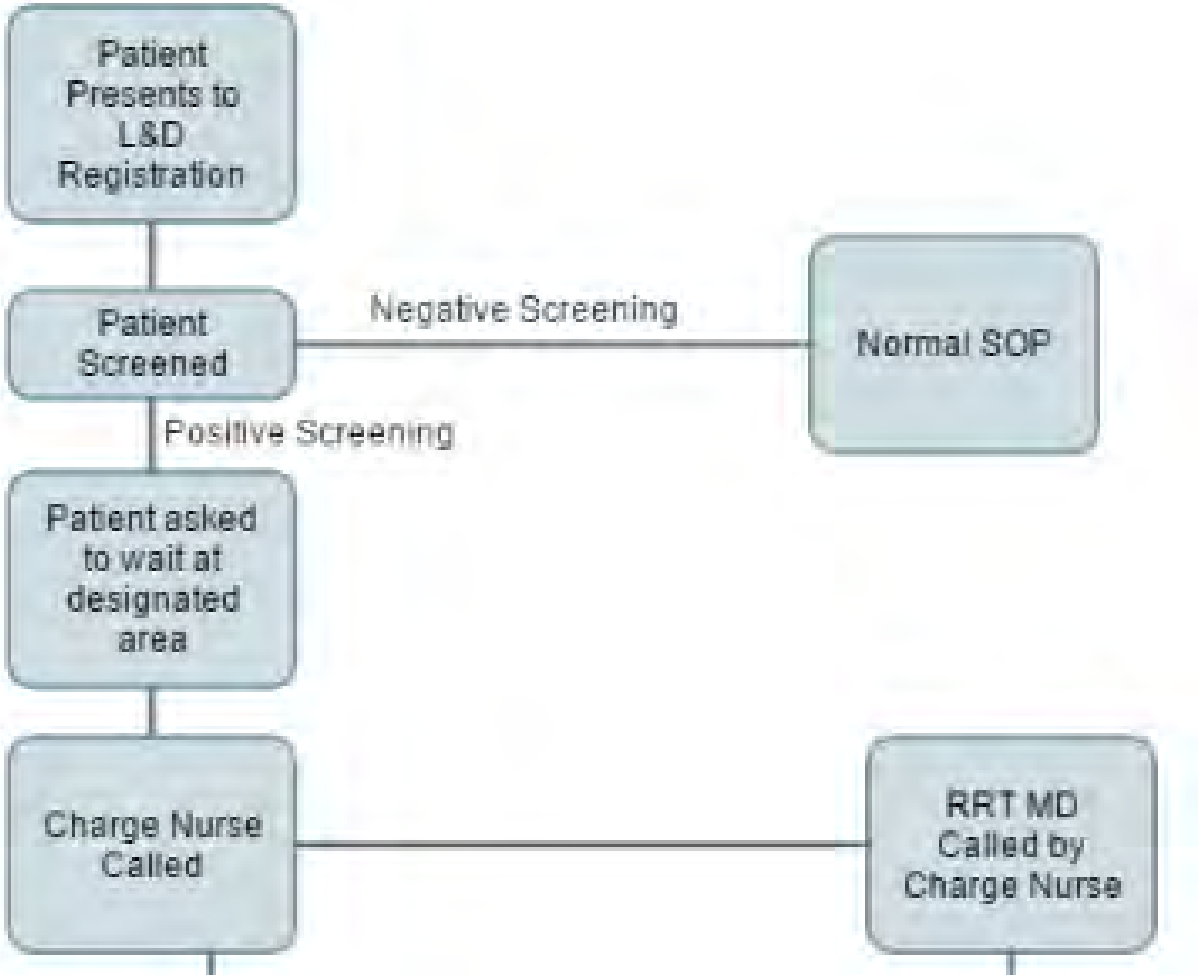

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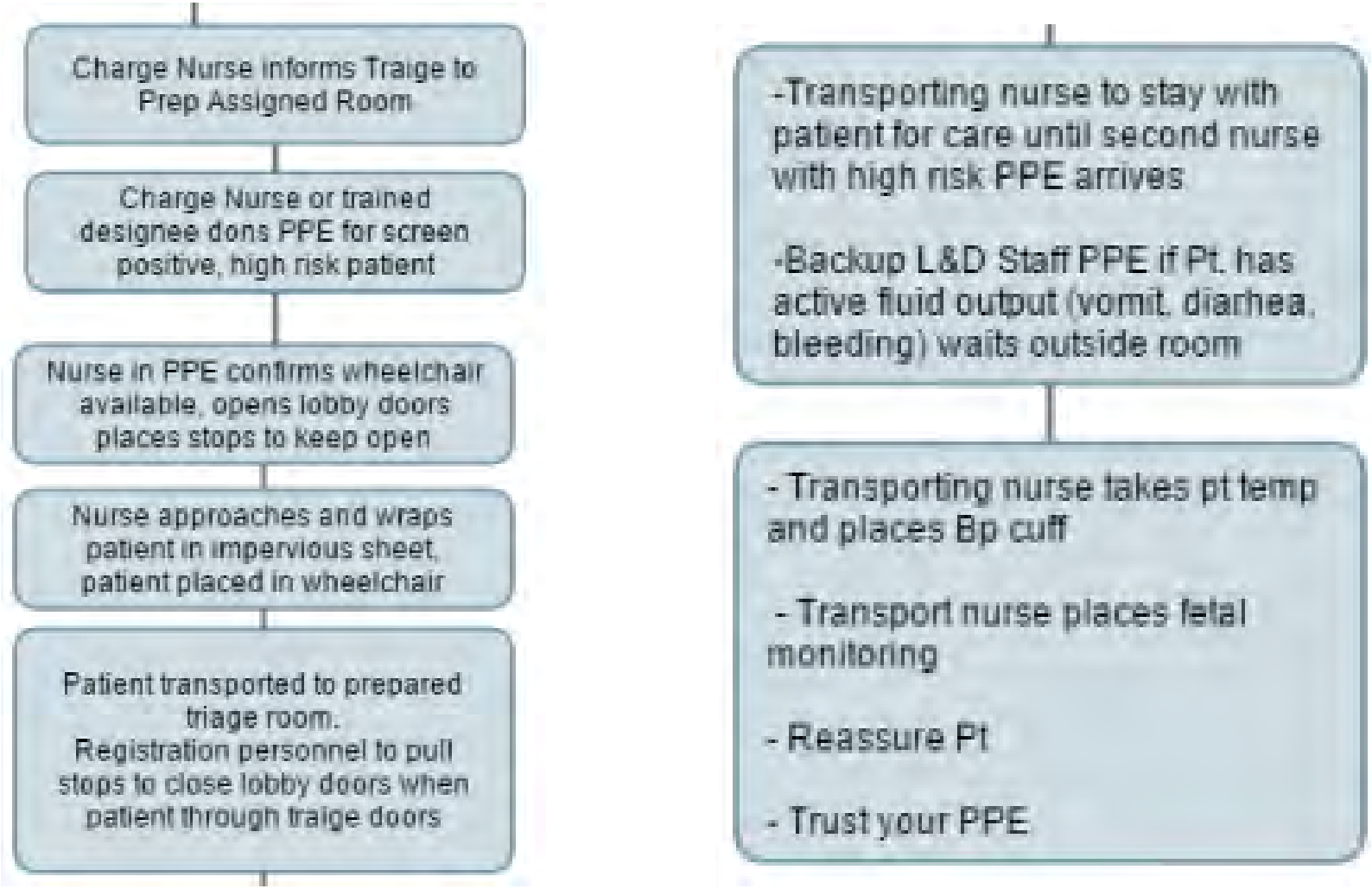
PRESENTATION PROTOCOL



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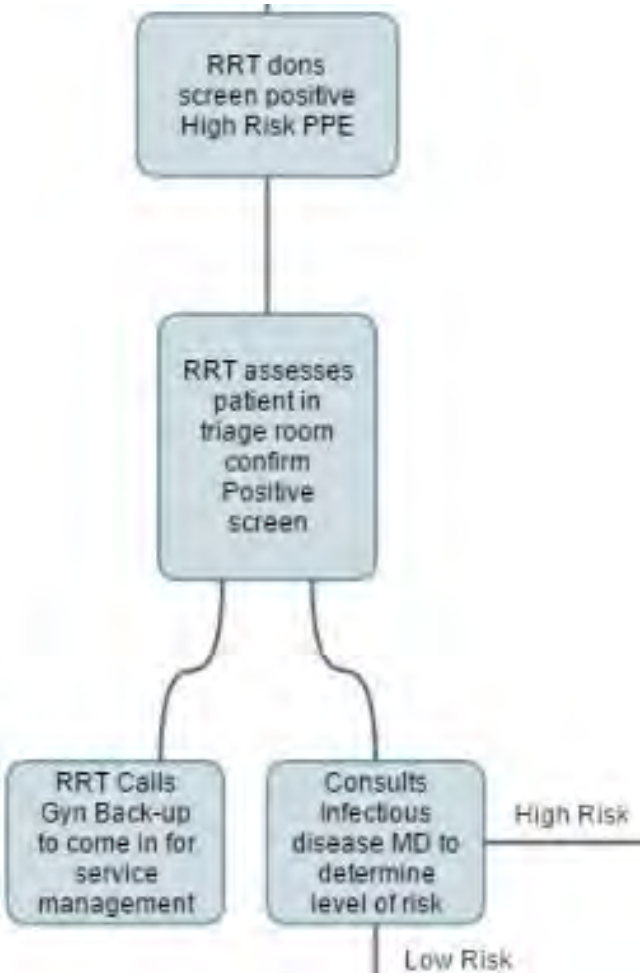

Low Risk

- Maintain Level high risk PPE until cleared by ID for SOP universal precautions

- Labs sent to Core Lab per routine SOP

- Pt stays in designated isolation room for remainder of visit

- MD determines if any needed diagnostics, all contacts don Level 1 PPE

-Nursing ratio returns to normal

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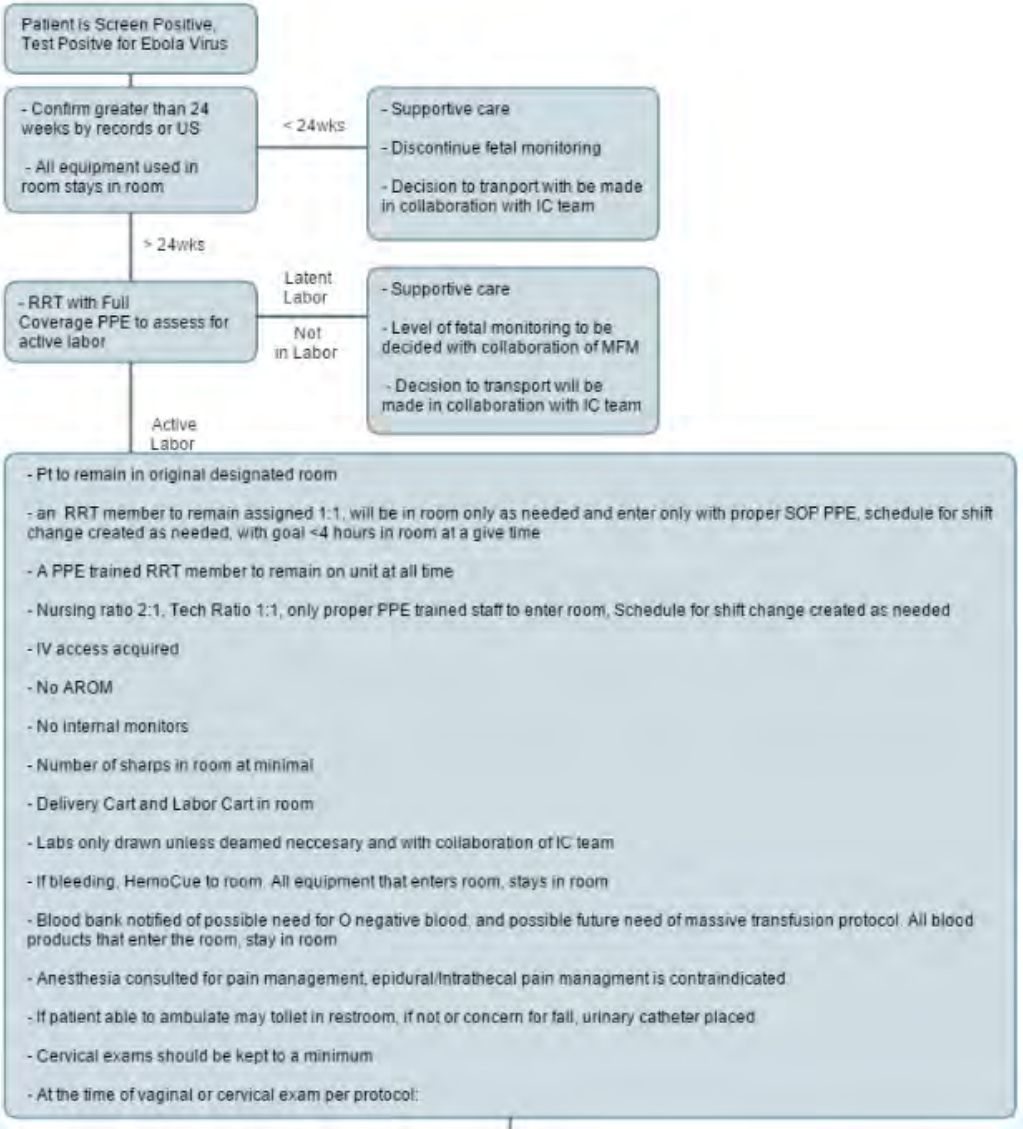
LABORING PROTOCOL



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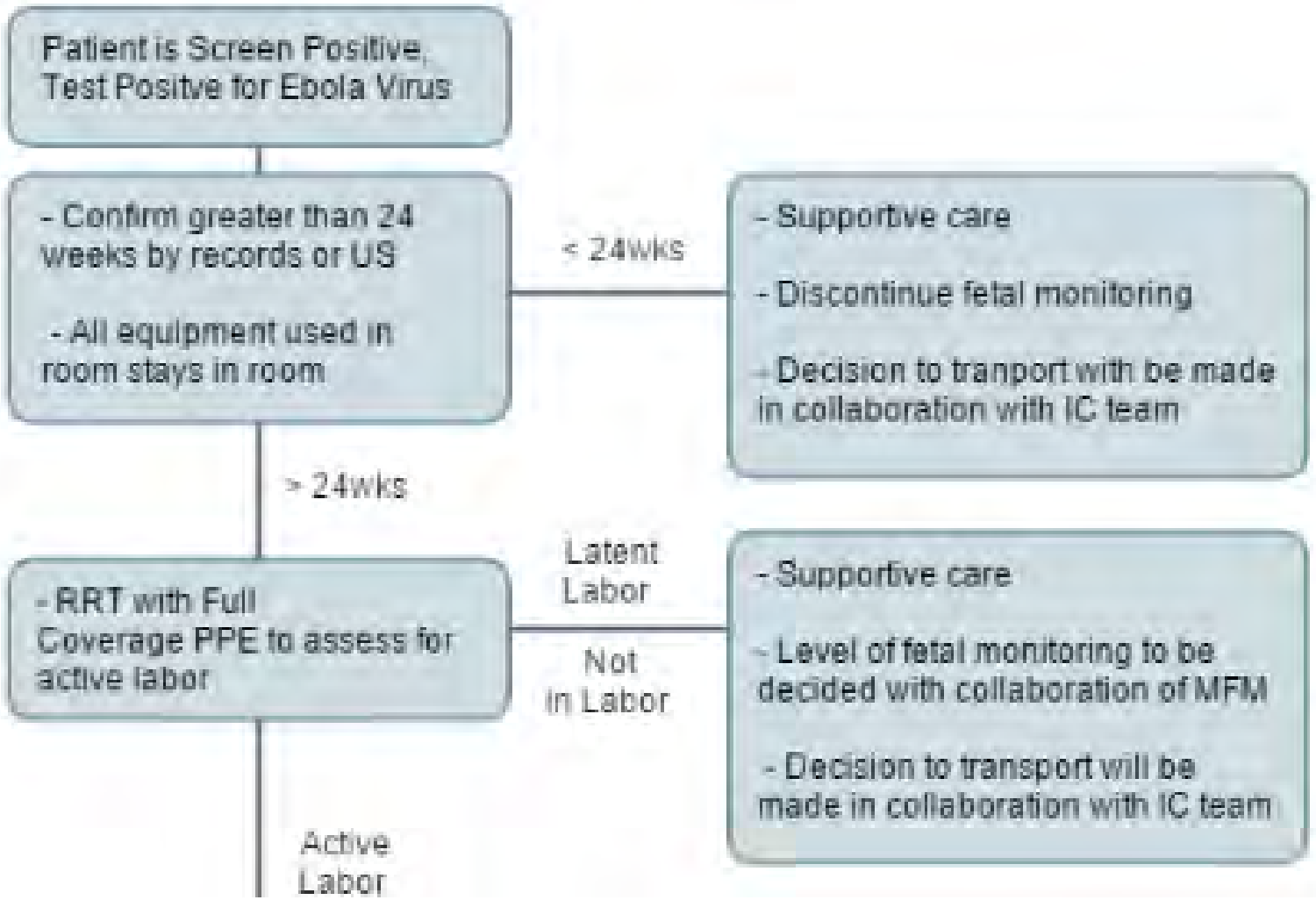

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LABORING PROTOCOL

- Pt to remain in original designated room

- an RRT member to remain assigned 1:1, will be in room only as needed and enter only with proper SOP PPE, schedule for shift change created as needed, with goal <4 hours in room at a give time

- A PPE trained RRT member to remain on unit at all time

- Nursing ratio 2:1, Tech Ratio 1:1, only proper PPE trained staff to enter room, Schedule for shift change created as needed

- IV access acquired

- No AROM

- No internal monitors

- Number of sharps in room at minimal

- Delivery Cart and Labor Cart in room

- Labs only drawn unless deamed neccesary and with collaboration of IC team

- If bleeding, HemoCue to room. All equipment that enters room, stays in room

- Blood bank notified of possible need for O negative blood, and possible future need of massive transfusion protocol. All blood products that enter the room, stay in room

- Anesthesia consulted for pain management, epidural/intrathecal pain managment is contraindicated

- If patient able to ambulate may toilet in restroom, if not or concern for fall, urinary catheter placed

- Cervical exams should be kept to a minimum

- At the time of vaginal or cervical exam per protocol:

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VAGINAL EXAM DONNING

- Over Full coverage PPE
  - 1. Remove outer glove
  - 2. Sanitize
  - 3. Place surgical sleeve over protective outerwear sleeve
  - 4. Sanitize
  - 5. Replace outer glove insuring glove over the sleeve cuff

- At all times one should have clear visualization of the outer glove cuff edge, and a buddy system used to monitor.

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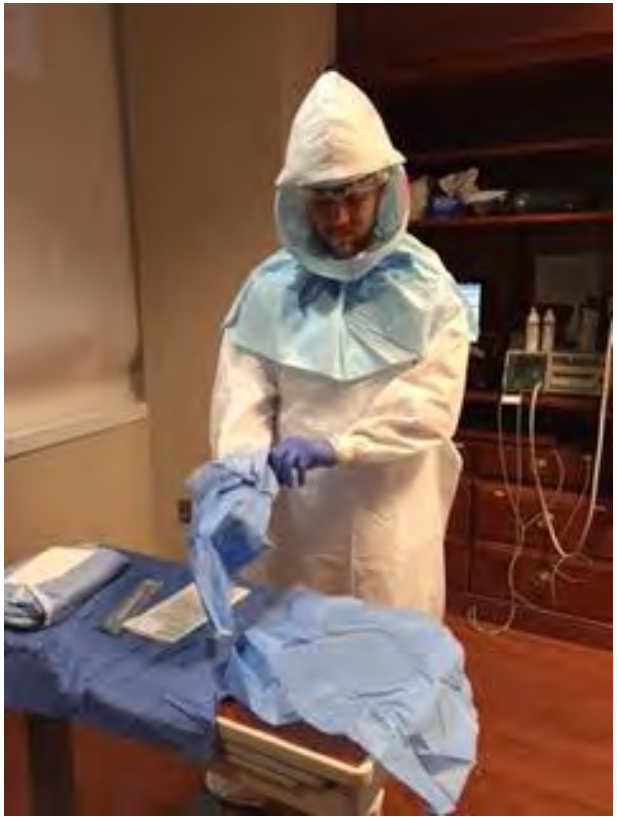
PRACTICE



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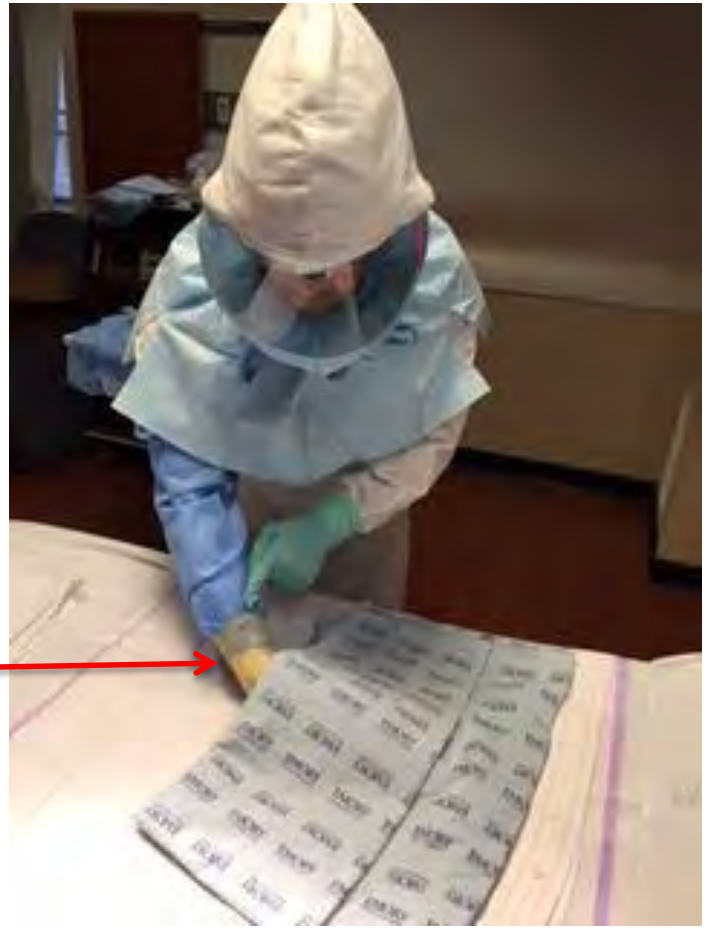

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VAGINAL EXAM DOFFING

- Over Full coverage PPE
  - 1. Wipe off heavy soil
  - 2. Remove Sleeve From Shoulder pulling downward
  - 3. Sanitize
  - 4. Remove Outer Glove
  - 5. Sanitize
  - 6. Replace outer glove

- At all times one should have clear visualization of the outer glove cuff edge, and a buddy system used to monitor.

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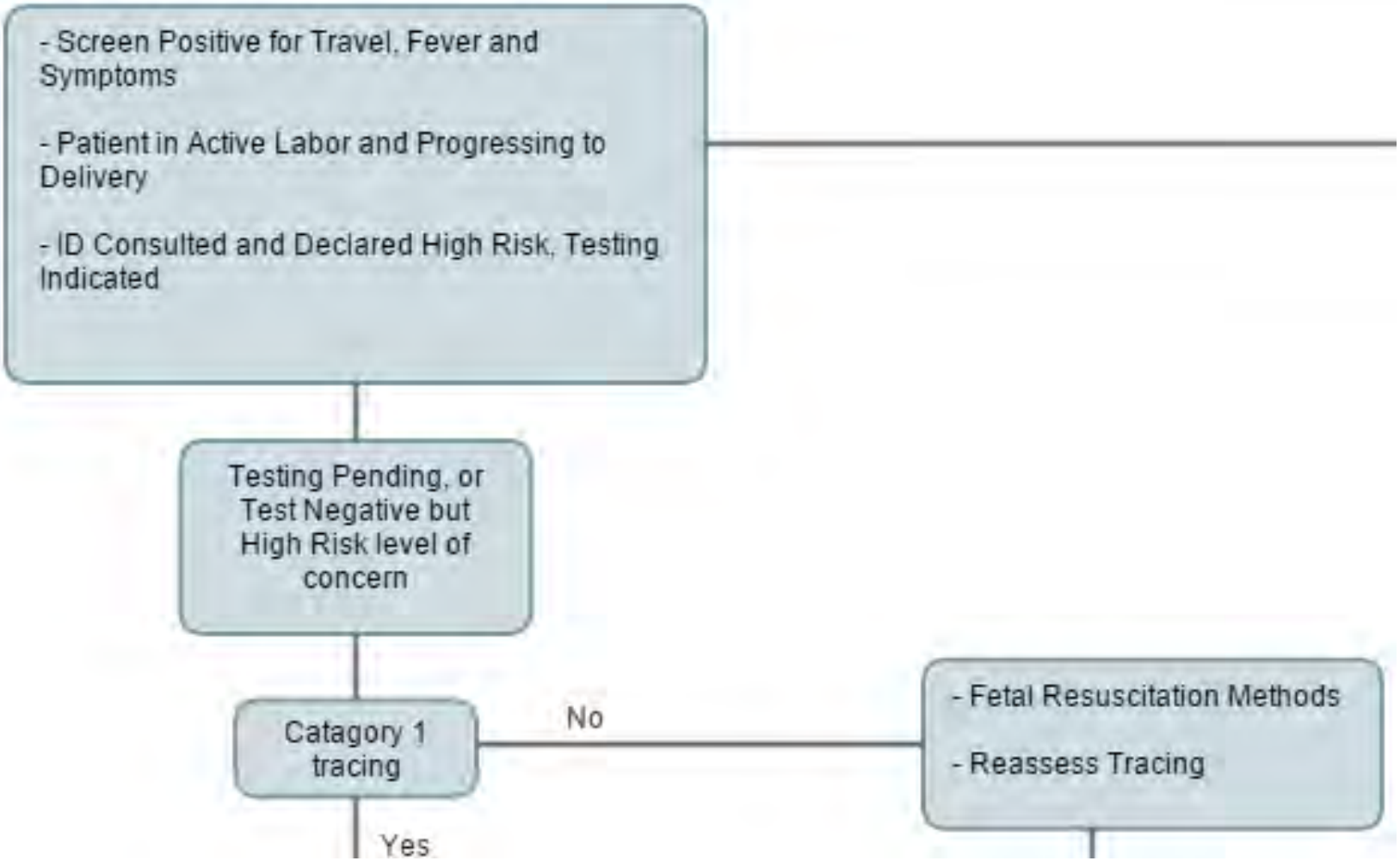
DELIVERY PROTOCOL



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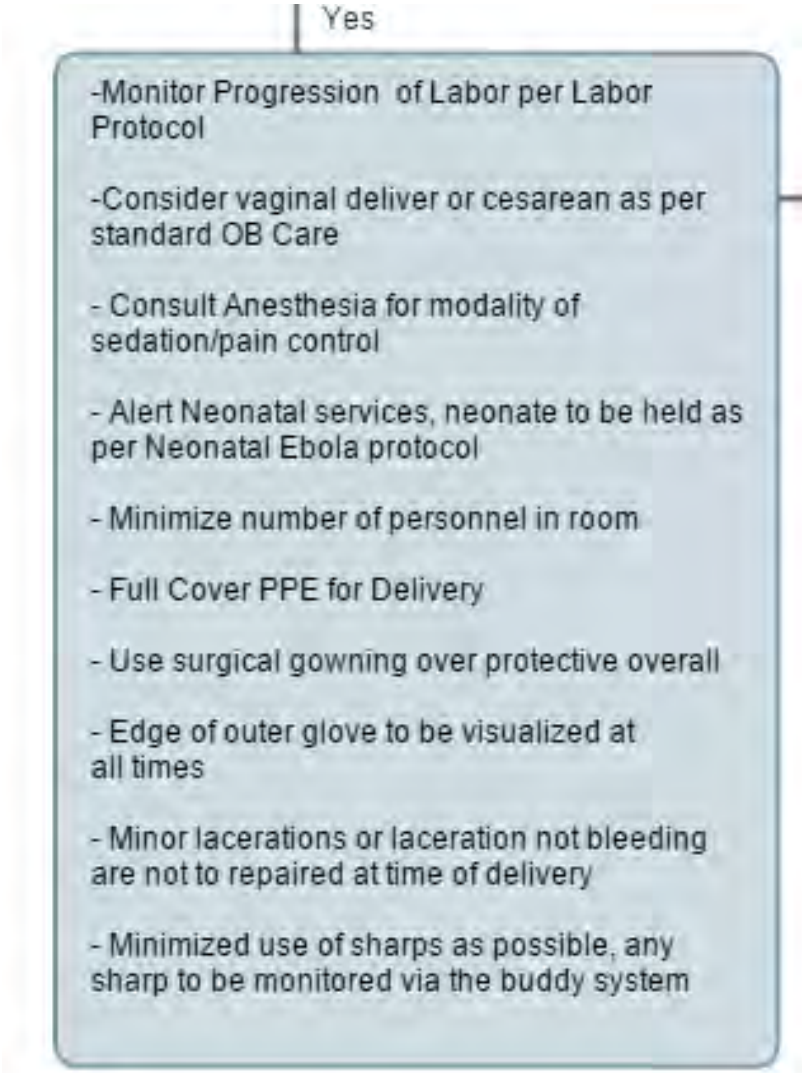

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FULL GEAR

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DELIVERY PROTOCOL

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GREAT QUESTIONS

- No protocol can cover all situations
  - Does Delivery Improves
    - Preeclampsia (Assuming you can Dx)
    - Simply to improve outcome
      - Lassa

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START YOUR PLAN

- Collaborate Collaborate Collaborate
- Nursing – Beverly Green
- Ethics
- Admin
- CDC
- Data is hopefully coming from the amazing health workers in Africa

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