

# Less Handling Less Danger

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## Background



Figure 1

Placenta, a vascular tissue which nourishes the unborn baby is the end product after each delivery. Cleaning of this autoclavable stainless steel triangular dish (Fig 1) with heavily blood stains is tedious and it poses potential risks to healthcare worker in their handling of this soiled instrument as shown (Fig 2). To facilitate easy removal of blood stains due to coagulation of blood, preenzymatic spray is introduced to keep this blood stained dish moist before sending the triangular dish to CSSD for re-autoclaving. However, this work process is time consuming with potential risks of blood and body fluid exposure. Hence, there is a need to improve this work process for staff working in labour and delivery suite to reduce the risks of exposure.

#### Figure 2: Previous Workflow



Triangular dish with placenta, blood and amniotic fluids

Aim



Transfer the placenta into plastic bag, more transfer more risks of exposure to blood and body fluids

disposal of placenta upon delivery.

Methodology

Problem analysis

Problem occurs :

For Disposal

Transfer to double plastic bag

Tie the bag / weigh

Discard to Biohazard waste



To ensure zero risk of healthcare-associated infection in the process of handling and

At the delivery of Placenta

Placenta is placed in the reusable triangular dish (Figure 1)

For Cleaning

Tie the plastic bag and take weigh before discarding into biohazard bag, or double bag for patients who are claiming. More handling more risks of exposure to blood and body fluids



For Claiming

Transfer to double plastic

Seal the bag / weigh

Give to the patient

Use enzymatic spray to clean the triangular dish before sending to CSSD for reautoclaving. Time consuming as blood coagulated, risks of exposure to blood and body

### Interventions

Team Members brainstormed on solutions to eliminate the high risk of blood body fluids exposure to the health care team with the following solution:

indias exposure to the health care team with the following solution.				
Testing of Solution	Problems encounter	Accept idea?		
Testing of Solution 1: Using Green towel Using sterile green towel to lay the triangular tray to receive placenta so that the dish will have less blood body fluids stains	Obstetricians and midwifes feedback regarding solution 1 that it was clumsy and dirty. During clearing, green towel soaked and stained with heavily blood, amniotic fluids and placenta made the clearing of placenta and cleaning more difficult. It increases the risks of blood and body fluids exposure to the health care staff.	No		
Test of Solution 2 : Using Wrapping paper  Autoclaved sterile reusable triangular dish came with 2 layer of wrapping papers. Using without removing the inner wrapping paper to receive placenta (Usual practice remove the 2 layer of wrapping papers), so that the dish would have less blood and body fluids stains	Obstetrician and midwifes commented that the solution 2 inner white paper takes out space and insufficient to receive the placenta. White wrapping paper projected the blood stained more obvious and look dangerous.  Opening out the wrapping paper in the triangular dish that contained placenta, blood and amniotic fluid was tedious and time consuming. It also predisposed blood and body fluids exposure risks to health care staff.	No		
Testing of solution 3 : Disposable dish With the help of the Material Management Department, a sterile disposable single use kidney dish was sourced and tested as a receptacle for placentas.	Refer Figure 3  Obstetrician and midwifes are pleased with the solution 3 as the benefits of using disposable sterile 1 liter kidney dish are:  - Disposable single use no contamination  - Neat and look good  - Light weight	Yes  Refer to Figure 3  Evaluation Chart for adopting solution 3 as the best option to handle placenta upon maternal		

### Figure 3

## Evaluation on disposable kidney dish by Labour ward

	Doctor	Nurse
Space enough to contain the placenta?	Yes	Yes
Easy to use to receive placenta?	Yes	Yes
Able to examine placenta effectively?	Yes, acceptable	Yes
Less discomfort to mothers?	Patient verbalised no discomfort)	Patient verbalised no discomfort)
Good gripping	Yes	Yes
Dimension is acceptable	Yes	Yes
Other comments:	-Price? - For assisted delivery*? enough space? - To evalute further?	- Price?

\*For assisted delivery- Need to 'break the bed', patient's pelvic is at the edge of the bed, staff need to manually hold the kidney dish to receive the placenta

With the revised workflow using disposable kidney dish for handling the placenta after maternal delivery

as depicted in Figure 4, we have experienced great impact of this improved work process as follows:

present during

patient's

Presentable

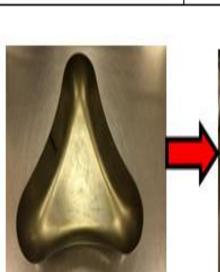
spouse

delivery)

delivery.

#### Figure 4 Current Placenta collection using Proposed Placenta collection using sterile metal triangular tray sterile disposable kidney dish Weight of kidney dish Placenta collected using before collection = 80 angular tray after deliver Placenta bagged into plastic bag weighing. Exact weight is obtained after substraction Veigh the bag of placenta and proceed for disposal of 80 grams (weight of into biohazard bag/ empty kidney dish) claiming procedure Tray of placenta bagged into plastic bag and riangular tray rinsed with proceed for disposal in water and sprayed with biohazard bag/ claiming enzymatic spray and bagged in plastic bag before sending to CSSD









Autoclave re-cycle triangular tray

Single use sterile disposable 1 Liter tray

### Results

1. Achieved International Safety Goal number 5 'Reduce risk of healthcare associated infection'. 2. Cost Saving

Cost saving of the Pre-enzymatic spray and autoclaving of triangular dish:

Therefore a total of 450 minutes - 7.5 hrs saved / month.

Cost saving items  Autoclaving of triangular dish is \$11each, disposable single use I litre kidney	Total Save
dish cost \$3.80 (with GST) cost saving of \$7.20 per delivery, multiply by 150 cases per month	\$1,080.00
Enzymatic spray per bottle - \$48.50 (946mls/bottle) Average amount of enzymatic used per case is about 20 ml Therefore a total of 2 bottles is needed per month	\$ 97.00
Grand Total save per month	\$1,177.00

3. Time Saving Time saved - each cleaning takes 3 minutes The total number of delivery is 150 cases per month, multiply by 3 minutes per case

Wear glove and goggles Spray enzymatic spray all over the tray Put into CSSD tote box CSSD technician collect the trays the following day for decontamination increase risks of blood and body fluids exposure due to: Transferring of heavily blood and body fluids placenta to plastic bag, more handling more risks involved. Use of enzymatic spray to the heavily blood and body fluids stained triangular dish, splashing risks.