

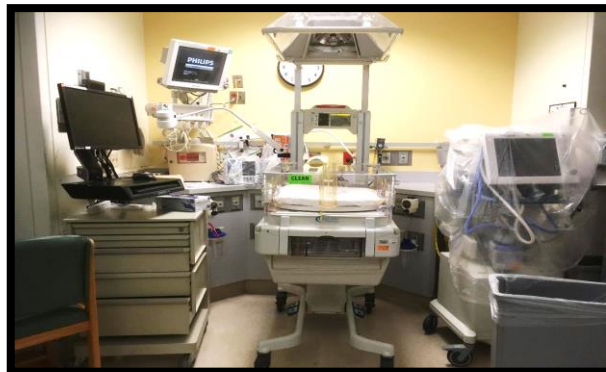
## PROBLEM

Outdated and large portable Ultrasound equipment often leads to repeat imaging and poor ergonomic conditions which has a negative impact on patient satisfaction and has directly result in increased use of FMLA and Workers Compensation by Ultrasound Techs.

## SCOPE IN/OUT

**IN** Memorial Campus / Ultrasound Exams / Portable Ultrasound Only / Monday - Friday  
**OUT** All other campus / All other modality / Saturday, Sunday, Holiday

## BACKGROUND / CURRENT CONDITIONS



- More than 1,300 portable Ultrasounds in FY18
- Portable equipment is 16 years old
- Portable equipment weighs 34% more than latest models available
- No ergonomic training / evaluation regarding portable Ultrasound

## Negative Financial Impact Directly Linked to Portable Ergonomics

<b>WORKERS COMPENSATION COST</b>	<b>\$39,000</b>
<b>COST OF ULTRASOUND TEMP</b>	<b>\$43,716</b>
<b>REVENUE LOST – PORTABLE EXAM LENGTH (33 min LONGER)</b>	<b>\$38,024</b>

**\$ 120,740  
Negative Financial  
Impact**

## ROOT CAUSES

- |   |  |  |
|---|--|--|
| <b>MAN</b>  | <b>METHOD</b>  | <b>MACHINE</b>   |
| <ul style="list-style-type: none"> <li>• Staff not provided any training in ergonomics</li> </ul> | <ul style="list-style-type: none"> <li>• Positioning for exam</li> <li>• Repetitive use, chronic reaching</li> </ul> | <ul style="list-style-type: none"> <li>• Machine is cumbersome</li> <li>• Confined space (NICU)</li> </ul> |

## SMART Goal



Evaluate the impact of replacing the current Ultrasound Unit with a new compact design intended for portable use.



## PLAN - Countermeasure

- Ultrasound technologists at Memorial campus will track exam length during portable exams.
- Comparisons will be done demonstrating the differences in Exam length in ICU/NICU compared with other inpatient units.
- Research latest Ultrasound portable equipment and ergonomic education

## DO - Implementation

Task	Responsible	Due Date
Track time spent during portables	Ultrasound techs	12/15/18
Calculate Data	Christina Gray	12/31/18
Research Equipment / Ergonomics	Christina Gray	12/31/18

## STUDY - Conclusion

- Portable exams completed in ICU / NICU rooms take 10% longer than in other rooms
- Based on exam room size – and the necessary support equipment – Sonographers are frequently reaching, stretching in awkward positions.
- This additional 33 minutes per portable equates to approximately 388 fewer exams that can be performed annually – causing decreased access.

## ACT – Follow Up / Actions

- Ergonomic evaluation will be performed by Environmental Health & Safety – Summer 2019
  - Include equipment evaluation
  - Sonographer (individual) evaluation
- Training staff on how to complete portable exams in ICU / NICU

## LESSONS LEARNED

- ❖ Capital requests and evaluation of equipment is time consuming. This process is not simple and straightforward.
- ❖ Issues that are Sonographer (individual) dependent are often difficult to quantify