

Untangling the spaghetti: Improving retrieval time for CT supplies using 5S

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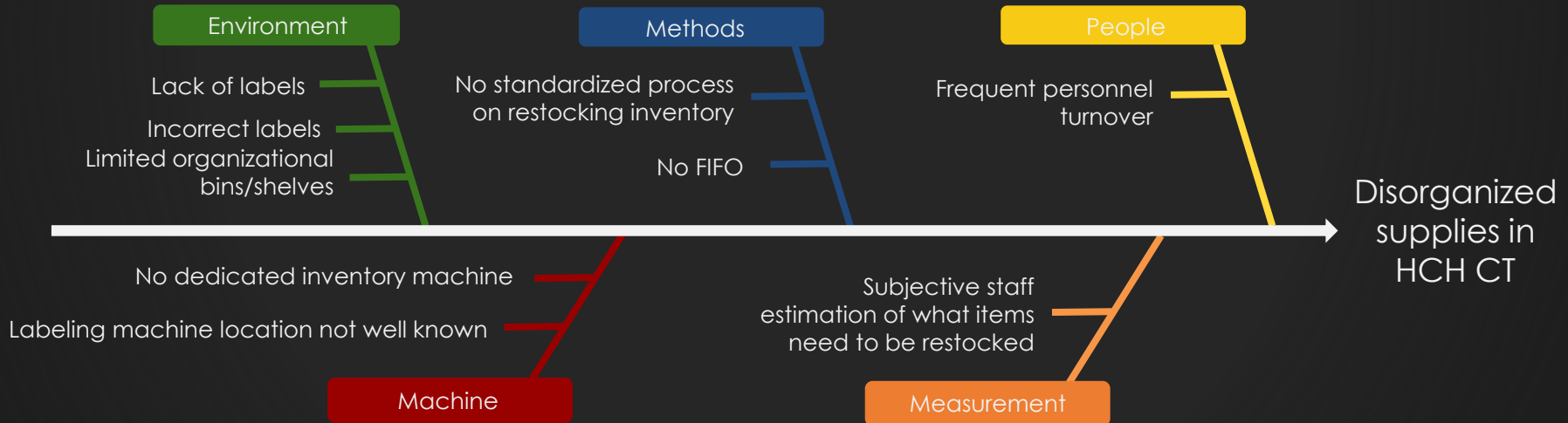
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PROBLEM STATEMENT

The Huntsman (HCH) CT supply room is a critical resource for patient imaging. However, the room is disorganized and the time spent searching for the appropriate equipment can potentially interfere with imaging workflow and CT guided procedures, which can contribute to patient safety risks and decrease efficiency.

CURRENT STATE INVESTIGATION








RISK ANALYSIS

- Increased patient time in HCH CT.
- Increased procedure time in HCH CT.
- Confusion and frustration from medical providers and staff during scanning and procedures.
- Patient and provider dissatisfaction.
- Misplaced or forgotten supplies expiring and becoming waste.

SMART GOAL

- To reduce time to find supplies by 25% by December 2021 in HCH CT.
- To increase the satisfaction of CT technicians and providers with organization of HCH CT storage by December 2021.

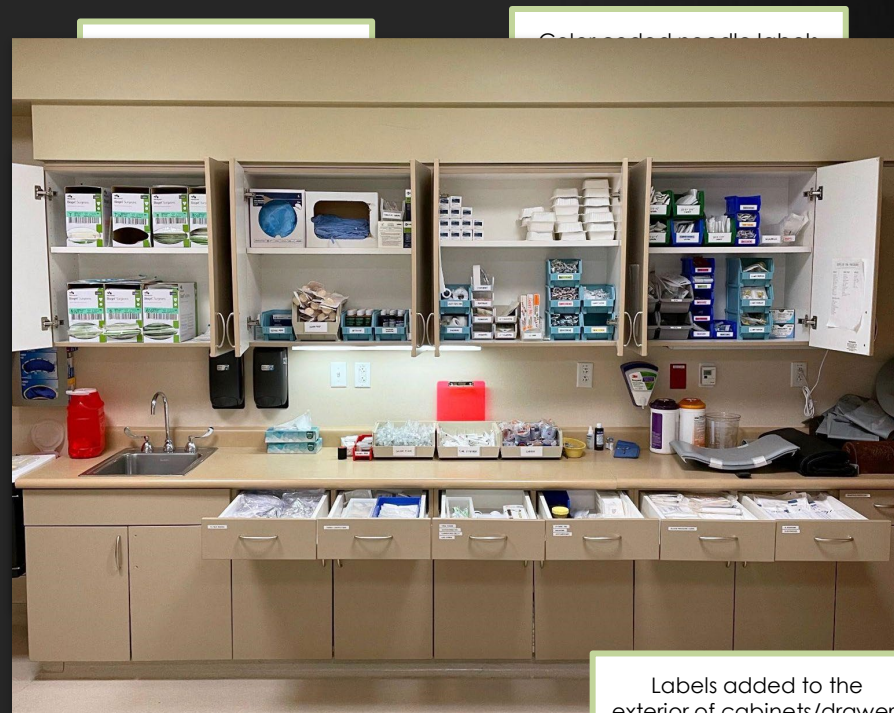
INTERVENTION: 5S METHODOLOGY

	SORT	Go through supplies and remove all expired and unused items.
	SET IN ORDER	Organize cabinets/drawers/shelves by type of supply and frequency of use. Add dedicated shelving and/or storage bins for certain items.
	SHINE	Tidy up the HCH CT storage closet, control room, and scanner room: throw away trash, wipe down surfaces, etc.
	STANDARDIZE	Label all cabinets/drawers so contents are known before opening them. Remove all items from unlabeled boxes so inventory is visible.
	SUSTAIN	Work together with CT managers to maintain this level of organization for HCH CT.

CT ROOM



PRE



Labels added to the exterior of cabinets/drawers

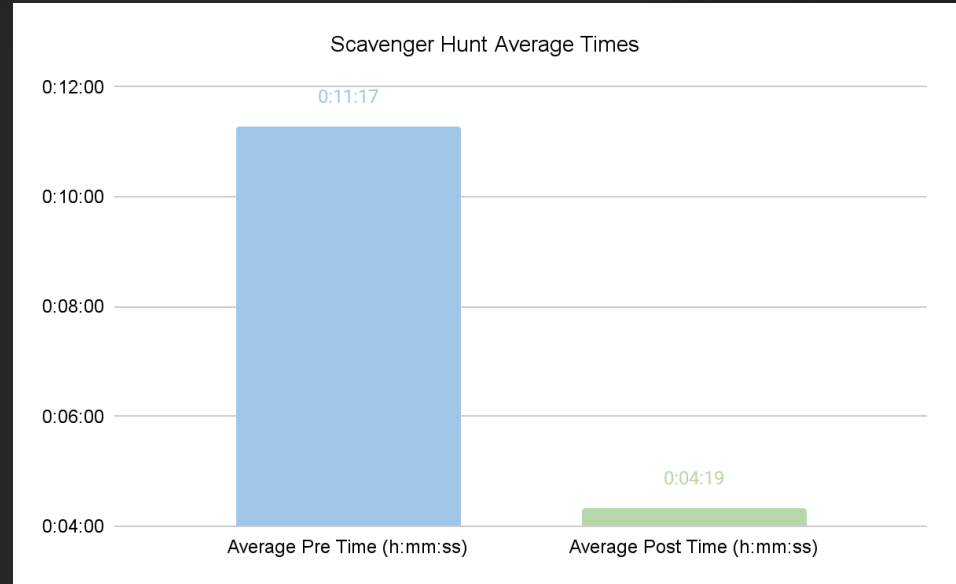
POST

SCAVENGER HUNT RESULTS

Prior to intervention, **seven participants** were asked to find ten frequently used items within the CT room and storage closet and timed during their search.

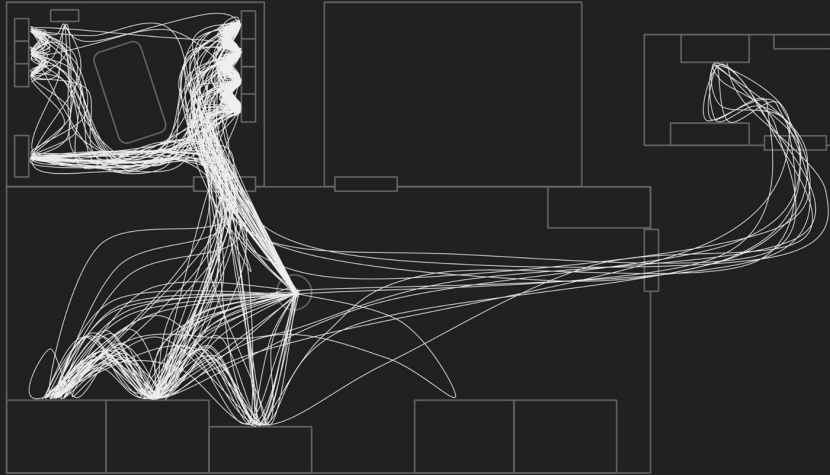
Seven new participants were asked to complete the same task post intervention. The scavenger hunt items are listed below:

- Sterile gloves
- Sterile 4x4 gauze
- 50ml syringe
- Sterile gown
- 18G needle
- Biopsy tray
- Christmas tree adapter
- Saline/H2O bottle
- Mask
- Three-way stopcock

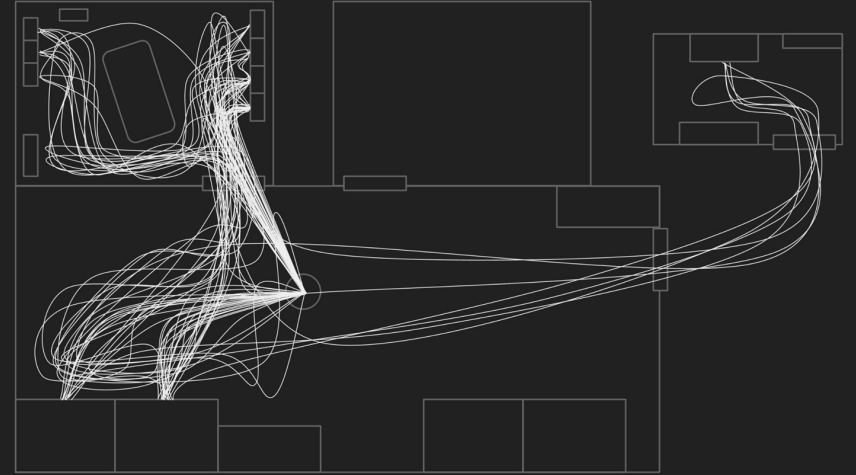


Average Pre Time (h:mm:ss)	Average Post Time (h:mm:ss)	% change	p-value
0:11:17	0:04:19	-61.68	0.0013

SPAGHETTI DIAGRAMS



PRE



POST

During the Scavenger Hunt, participants' movements were tracked and illustrated, pre and post intervention. Individual participants' diagrams were combined, demonstrating decreased movement post intervention.

SURVEY RESULTS

I am satisfied with how the supplies are currently organized.

Agree

Neutral

Disagree

How easy is it for you to find the supplies you need?

Very Difficult

Difficult

Neutral

Fairly Easily

Extremely Easily

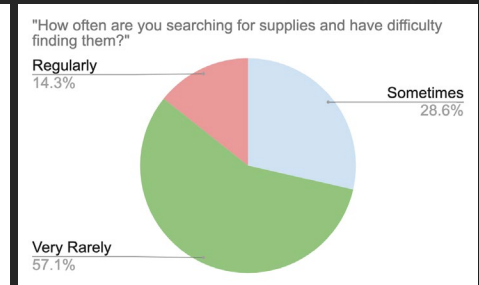
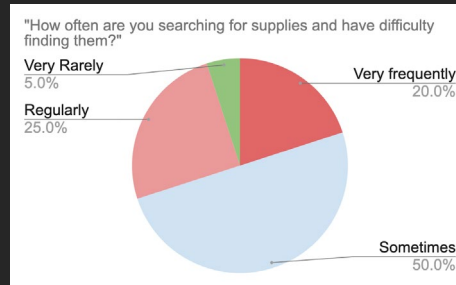
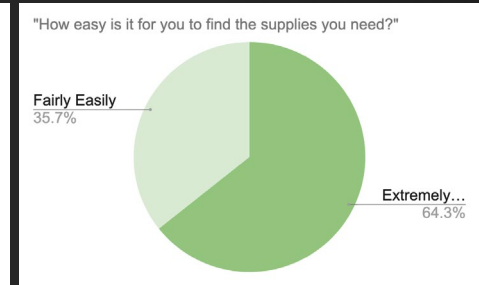
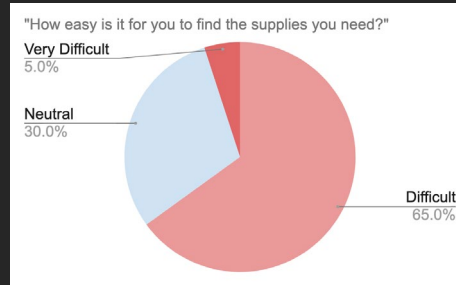
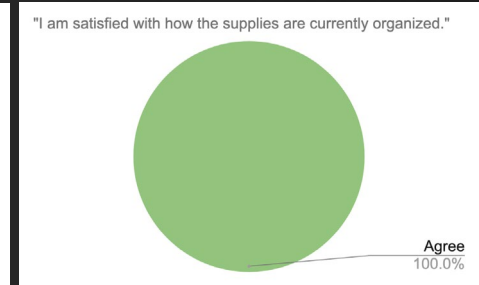
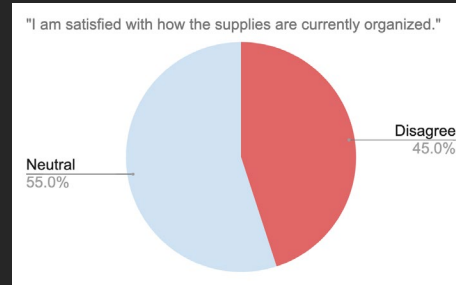
How often are you searching for supplies and have difficulty finding them?

Very Rarely

Sometimes

Regularly

Very frequently



PRE (N=20)

POST (N=16)

CT technicians and providers were asked to complete a survey pre and post intervention.

POST INTERVENTION SUMMARY

- Decreased time to acquire supplies by approximately 61% (original goal was 25%).
- Decreased foot traffic in the CT room and storage closet area.
- Increased satisfaction scores among CT technicians and providers.

FUTURE DIRECTIONS

- Work with CT technicians to maintain new organization system.
- Standardize process of accepting/unloading new supplies and organizing them within the new organization system.
- Create system to improve ease of taking inventory for ordering new supplies and discarding expired supplies.

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REFERENCES

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