

"THERE MUST BE A BETTER WAY...."

Eliminating the Patient Transfer: No Lift/No Transfer Solutions at Focus Hand and Arm Surgery Center

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From my earliest experiences as a nurse, I was familiar with one basic assumption: "Any surgical process requires multiple patient transfers." At Focus Hand and Arm Surgery Center, we challenged this assumption and proved it false. Originally, we transferred a patient three times for every surgical procedure performed. These transfers were not only inefficient, they also posed an injury risk to our nurses. We now have a facility with zero patient transfers. This is ultimately a safer work environment for our nurses, and offers the optimal patient experience by eliminating the risk of patient falls associated with the transfer process.

Focus Hand and Arm Surgery Center

Location:

Englewood, Colorado

Types of Procedures Performed:

Primarily Arm & Hand Surgeries

Total Surgeries/Yearly:

1600

Background

Focus Hand and Arm Surgery Center is part of a multi-location orthopedic surgery practice headquartered in Englewood, Colorado. The practice offers comprehensive services that include consultations, surgical interventions, aesthetics, and immediate and emergency care. At the time of the process evaluation discussed in this White Paper, the facility was using an inventory of the following patient handling equipment in its surgical process:

- 10 Stryker Transport Stretchers
- 2 Stryker Operating Tables
- 4 Recovery Recliners
- 2 Carter Hand Surgical Tables

In advance of opening its ambulatory surgery center, Focus Hand and Arm decided to conduct a comprehensive review of its patient handling procedures.

Challenges & Goals

The Focus surgeons were well aware of nurse demographics, patient demographics, and injury statistics:

- The average age of the nurse is now nearly 47 years old, while the average age of the peri-operative nurse is 52 years old.
- According to the Centers for Disease Control, the average weight for males and females has increased almost 20% over the previous fifty years. For men, 1960 the average man weighed 166 lbs. By 2012, that number had increased to 195 lbs.
- The American Nurses Association estimates that 52% of nurses suffer chronic back pain, and much of this is due to the manual patient handling so common within healthcare.
- As many as 12% of nurses leave the profession every year, citing back injury as a determining reason in leaving the workforce.

As an integral part of opening its new facility in April 2013, Focus wanted to ensure that it was doing everything possible to protect its nurses from injury. To lose even one experienced nurse to a patient handling injury was just not worth the risk. So staff safety became the most important of three far-reaching goals that we set out to achieve:

- Eliminate/mitigate the risk of nurse injuries during the patient handling process
- Streamline the patient handling process to reduce Operating Room turnover time to 7 minutes
- Improve the overall patient experience

A Task Force was assembled to examine these issues, document our existing processes, and make recommendations for improvements. At the time, we did not believe that a single solution could help us reach all three goals.

Initial Evaluation

The examination of our patient handling process uncovered multiple inefficiencies.

- Current process required the patient to be transferred three times

- Current process involved the use of three pieces of equipment during their surgical stay (Recliner, Transport Stretcher and Operating Room Table)
- Patient transfer was viewed as a 'High-Risk/Non-Value Add' activity, both for the patient and the nurse
- Three pieces of equipment had to be cleaned for every surgical procedure
- Three pieces of equipment needed to be maintained by the facility
- Multiple pieces of equipment resulted in excess linen costs
- Storage was needed for equipment that was not being used at all times

In addition, if we were to continue using our 'standard' existing process, additional equipment purchases would be required.

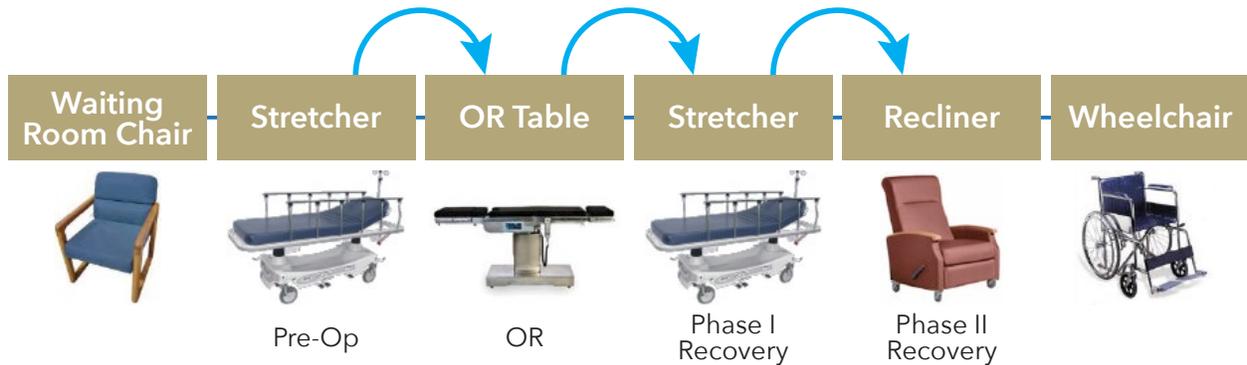
Standard Transfer Process

Prior to opening our new facility in April of 2013, Focus utilized the 'standard' patient handling process, which required three patient transfers:

1. Patient arrived to the facility and checked in.
2. Patient was taken to a pre-op bay, where they would change and then lie down on a Stryker Transport Stretcher. The Stretcher would be in the flat position, with the back slightly elevated in a Fowler position.
3. When called for surgery, the patient was transported on the Stretcher to the Operating Room (OR).
4. **Transfer #1:** Upon arrival in the OR, the patient was transferred onto the OR Table.
5. The patient was positioned for surgery.
6. **Transfer #2:** Post-surgery, patient was transferred back to the Transport Stretcher.
7. The Patient was then transported to Recovery.
8. **Transfer #3:** At some point in Recovery, the patient was transferred to a recliner to continue the recovery process.
9. Upon discharge, patient would either walk or be taken in a wheelchair to their vehicle.

3 TRANSFERS

Traditional patient handling model



Since Focus performs approximately 1600 surgeries per year, the implications were significant:

$$1600 \text{ Surgeries} \times 3 \text{ Transfers/Surgery} = \\ 4800 \text{ Patient Transfers/Year}$$

Although Focus had not had a staff member suffer an injury during patient transfer, we knew that "there must be a better way", because it was only a matter of time.

Sanitation Implications

Using three pieces of equipment for each surgery also made sanitation an issue. We estimated that effectively cleaning each piece of equipment required approximately 4 minutes of staff time, as well as another 5+ minutes for the device to have the cleaning solution remain wet to effectively kill all bacteria. Here again the implications were significant:

$$1600 \text{ Surgeries} \times 3 \text{ Pieces of Equipment} = \\ 4800 \text{ Pieces of Equipment to Clean/Year} \\ 4800 \text{ Pieces to Clean/Year} \times 4 \text{ Minutes of Staff Time} = \\ 19,200 \text{ Minutes/Year}$$

Time/Motion Implications

In 2005 researcher Ann Hendrich conducted a Time/Motion study that estimated time and cost associated with patient transfers. At that time, the transfer cost was estimated to be as high as \$36 per transfer, as well as consuming 2-4 staff members for approximately 3 minutes.

The charts below formed the basis of the time/motion analysis at Focus:

Staff Member	Transfer #1	Transfer #2	Transfer #3
Nurse	3 minutes	3 minutes	3 minutes
Nurse	3 minutes	3 minutes	3 minutes
Nurse	N/A	3 minutes	N/A
Anesthesia	N/A	3 minutes	N/A

	Cost Per Transfer	# of Procedures	Transfers/ Procedure	Total Cost/Year
Current Process	\$36	1600	3	\$57,600
New Process	\$36	1600	0	0

We were spending about 24 minutes of staff member time facilitating patient transfers. This included the physical act of moving the patient, rearranging furniture within the room, securing a particular stretcher or recliner, and cleaning a needed piece of equipment for the patient. These factors negatively contributed to our ability to quickly and easily turnover an Operating Room and had a significant associated cost. Staff time needed to be re-directed to effective patient care, not high-risk activities that pose a risk to patient and staff.

Evaluating "A Better Way"

TransMotion Medical's sales representatives Karla Krajci and Skip Karch introduced us to their Universal Care Platform™ (UCP), the TMM4 Stretcher Chair. The Universal Care Platform™ is configured to act as a Recliner, Transport Stretcher and Operating Table. By combining all of these into one device, the UCP would allow us to eliminate patient transfers and realize multiple benefits.

0 TRANSFERS

Utilizing the Universal Care Platform™ (UCP)

– TransMotion Medical TMM4 Stretcher Chair



TransMotion Medical offered us the opportunity to trial the UCP in our clinical environment. This evaluation allowed us to preview the benefits that our facility could realize by switching from the traditional patient handling model (which is wrought with risk and inefficiencies, for both patient and care-giver), to TransMotion Medical's UCP solution.

During the trial process, our surgeons requested additional length on the back section of the surgical bars that were on the UCP. We conferred with TransMotion Medical's engineers, and they quickly devised a modification that satisfied our team. Since TransMotion Medical is a U.S./Ohio manufacturer, the company responsively made some simple customizations of the product to optimize the surgical functioning at Focus. No other supplier was able to listen to our needs, and then address them along the way.

At the conclusion of the trial we decided to purchase the TransMotion Medical Universal Care Platform™, because it helped us reach all three of our Task Force goals.

Achievement #1: Eliminated/Mitigated Nurse Injuries

The UCP with Power Patient Positioning allowed us to eliminate three patient transfers and become a “No Lift/No Transfer” facility. In addition to ensuring our nurses’ safety, this has the potential to impact our bottom line significantly. The research shows that in healthcare, the average back injury costs \$25,000, while more serious cases that require surgery can cost up to \$85,000. For a facility like Focus, keeping patient transfers as part of the process was not an option. The cost of one back injury could potentially equal the entire investment of capital equipment required to eliminate transfers, and all the workplace hazards associated with transfers.

Achievement #2: Streamlined Patient Handling Process to Reduce Turnover Time

Turnover time is a key factor for any facility. Focus put a premium on maximizing the ability to turnover rooms between procedures. There are two ways this can be accomplished. The first is to push your staff as hard as possible to turnover a room. The second way, which we selected, was to eliminate as many wasteful actions from the process as possible. The UCP allowed us to eliminate patient transfers, a key factor in reducing turnover time. In addition, the TransMotion Medical Universal Care Platform™ requires Focus employees to clean just one piece of equipment per surgery, versus three pieces of equipment under the old process. Reducing cleaning time by two-thirds represents a savings of 12,800 minutes of time, or 213.3 hours per year that was reclaimed by streamlining the process. Additionally, the new process requires only one-third as much cleaning solution.

By eliminating patient transfers and reducing overall cleaning time, Focus comfortably reached its goal to reduce turnover time to 7 minutes. That was an impressive feat for a surgical center of this type.



Cleaning time

The Old Process - cleaning time for three pieces of equipment

TMM Universal Care Platform™ - reduced cleaning time by two-thirds saving 12,800 minutes (213.3 hours) per year.

Turnover Time
between
procedures was
reduced to 7
minutes with the
TMM Universal Care Platform™



Achievement #3: Improved the Overall Patient Experience

At Focus Arm and Hand Surgery we want to provide an outstanding patient experience. Keeping the turnover time low has allowed our facility to improve the patient experience significantly:

- We get our patients in on time. No one likes coming to a facility and having to wait.
- We get our patients discharged and home on time.

Patients appreciate the fact that we know their time is important. In addition, the UCP offers outstanding patient comfort. Both of these combine to create a positive patient experience.

Summary

The Focus Task Force began its investigation by challenging the assumption that any surgery required multiple patient transfers. That led us to the discovery of the TransMotion Medical Universal Care Platform™.

The decision to purchase the TMM4 allowed us to achieve not just one but all three of our key goals:

- The Universal Care Platform™ eliminates patient transfers, protecting our key nursing staff. To risk even one back injury was not worth it from the perspective of Focus senior management. In previous years we were fortunate to not have any nurses suffer a back injury during dangerous patient transfers. By selecting the UCP we successfully eliminated this possibility in the future.
- The UCP also aided in reducing our OR turnover time from 10 minutes to only 7 minutes. This not only increases our throughput potential, it also reduces the likelihood of staff overtime.
- Patients are provided with a better experience thanks to reduced transfers and the outstanding comfort of the UCP.

Focus Arm and Hand Surgery strives to be a model for nurse safety and patient care. We want to continuously lead the way to “a better way,” and the Universal Care Platform™ from TransMotion Medical is helping us achieve that ongoing goal.