Multidisciplinary Teams Care Approach: A Successful Collaboration Model for Comprehensive Joint Replacement Center

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- [Fawn] Today's course is Multidisciplinary Teams Care Approach: A Successful Collaboration Model for Comprehensive Joint Replacement Center. Our presenter today is Dr. Manisha Sheth. She currently teaches as an assistant professor at West Coast University in Los Angeles, California. Prior to teaching at West Coast University, she served as an adjunct faculty at Dominican College New York for two years. She has also worked as a clinical specialist and the lead OT for Comprehensive Joint Replacement Center at Norwalk Hospital in Connecticut for the past 16 years. She is NOMAS, which is neonatal oral motor assessment skill, licensed professional for the past 11 years. Her extensive 30 years experience of working with adult and older adult populations includes various practice settings such as acute care, acute rehab, skilled nursing facility, and home health. Welcome back, Dr. Sheth, we're so happy to have --

- [Manisha] Thank you very much, Fawn. Hi, everybody, it is good noon in California, and for some of you it will be good afternoon. Good afternoon, everybody, and thank you so much for attending my live webinar on Multidisciplinary Team Care Approach: A Successful Collaboration Model for Comprehensive Joint Replacement Center. So, today's learning outcome are: after this course, participants will be able to define what is a multidisciplinary model. You will be able to describe the value of multidisciplinary team model as it relates to Comprehensive Joint Replacement Surgery Center. And, finally, you shall be able to develop collaborative practice with other disciplines such as physical therapist, nursing, physician's assistants, across the continuum of care. Background. So, as for American Joint Replacement Registry, in 2012, total number of surgeries were 45,517 versus in 2016, it went up by 281,746. By 2030, the total hip replacement is projected to grow by 171 percent. That means they will be doing about 72,000 surgeries compared to the total knee replacement, which will grow up by 189 percent, and it'll grow to 635,000 surgeries per year. What does that tell you as a therapist or as a joint replacement individual who works in the joint replacement? Because there has been so many surgeries in, so let's talk about in 2014, more than 4,000 Medicare covered hip and knee replacements surgeries were performed, and

totalling up to seven billion hospitalization cost for Medicare and Medicaid. So as for center of Medicare and Medicaid of 2019 guideline, the comprehensive care joint replacement, CJR, model aims to support better and more efficient care for beneficiaries, and they're going most common in patient surgeries of hip and knee replacements. This model test bundle payment. What is bundle payment? That is Medicare and Medicaid will pay the hospital a certain pre-decided amount of dollars for the entire hospital stay pre-op to post-op recovery up to 12 months. There will be a certain amount given to the hospital, and it's up to the hospital how they utilize that amount of money. This bundle payment and quality management for an episode of care associated with hip and knee replacement to Anchorage hospitals, physicians, and post-acute care providers, to work together to improve the quality and coronation of care from initial hospitalization through recovery. So, it has become very essential for us as a healthcare providers to develop and implement a multidisciplinary team approach to enhance post-surgery outcomes while minimizing unnecessary expenditures.

So, one may ask, what is a comprehensive joint replacement surgery? In other words, it's also called a fast track joint replacement surgery. So, fast track joint replacement surgery incorporates several unique aspects compared to the conventional approach. It begins prior to surgery, with throughout information regarding the procedure, post-op pain medications and management and rehabilitation. The fast track methodology incorporates protocols such as: spinal anesthesia with nerve block, instead of general anesthesia. As a result when there is no general anesthesia, the post-anesthesia side effects such as nausea, vomiting, are eliminated, and respiratory complications can be minimized. And opioid sparing multi-module analgesic approach is used that avoids the effects of substances, particularly heavy sedation. Since patients are not very sleepy and groggy after surgery, early mobilization, mobilization on the same day after post-op, day zero, is possible because of less sedation. Early mobilization also leads to reduced risk of Deep Vein Thrombosis and Pulmonary

Embolism. More-ever, short length of stay is possible, which helps to prevent any hospital acquired infection. So, what is multidisciplinary team approach? Multidisciplinary team approach is when professionals from a range of disciplines work together to deliver comprehensive care that addresses as many of the patient's need as possible. As valued based care initiated continue to focus on hospital readmission rates and patient satisfaction, it has become essential for healthcare providers to develop and implement a multidisciplinary team approach to enhance outcome while minimizing the expenditures. What are the common goals of multidisciplinary team? Most importantly, to improve client function, or maintain maximum client independence, to enhance client's well being, to increase client satisfaction, and more so reduce use of hospital service, to reduce healthcare cost, and of course, to optimize work satisfaction for all the team members.

So in order to do the multidisciplinary team approach, they develop a Clinical Care Pathway. What is a Clinical Care Pathway? Clinical Care Pathway identifies processes and steps that can impact care in four categories. One, most important, safety and reliability of the protocols. Two, effectiveness of the program. Three, efficacy of the program, and patient and family experience. So Clinical Care Pathway, CCP, is divided into four stages. Stage One, which is the pre-operative surgical day. Surgical visit that starts from the day the patient and surgeon decides that this individual needs a hip or a knee replacement, which would be about four to six weeks. Stage Two is pre-operative preparation and planning. Stage Three A, which is once the patient comes into the hospital to get on the day of surgery, which is the preparation stage, the operative stage, and the recovery stage, and PACU which would be about six hours. Three B is when the patient is in the hospital, from the recovery to the inpatient rehab unit or the inpatient joint replacement unit, and the time to discharge, which would be about three days. And last stage is post discharge stage, which is the rehab state follow up, which would last from the day of the discharge up to one year. Let's talk about each stage

and how multiple healthcare individuals that are involved, and what are their roles in this multidisciplinary team model.

Let's start with preoperative surgical stage, which would consist of orthopedic surgeon, the scheduler who decides and schedules the surgery, joint replacement care coordinator, and most important is the PPE class which is post patient, preoperative patient education program. Preoperative assessment and organ dysfunction optimization, that is the preoperative surgical visit, that's the goal. Preexisting conditions such as coronary artery disease, hypertension, chronic obstructive pulmonary disease, diabetes, and any other organ function as strong obstructive pulmonary diseases. This can determine factors what postop complications and duration of the hospital stay will be. It is crucial to meet with the patient several weeks before the scheduled surgery. It allows the preoperative team to optimize any organ dysfunctions, address the issues they may have for potential risk, and to optimize preoperative anemia. It also gives the opportunity to initiate alcohol and smoking cessation if needed.

The most important is the preoperative patient education. This programs are design to improve patients' compliance and outcomes through the education of proper self care, rehab, as well as setting the realistic expectation by a variety of healthcare specialists. Including, but not limited to, occupational therapy, physical therapy, nursing, physician's assistants, case manager, and social worker. Preoperative education benefits patient with depression, unrealistic expectations, and those with limited social support. Discomfort is expected in immediate post-op, therefore, it is important to manage possible unrealistic expectations that the patient may have during operative period regardless of any analgesics they use. Many orthopedic centers now provide a preoperative education class, where a multidisciplinary team including nurse, physical and occupational therapists, and care coordinator, explains the care pathways and

addresses patient's physical, social, psychological, psychosocial, economical, needs prior to patient's surgery.

So let's talk about who are the disciplines involved in preoperative education class. Most importantly it starts with joint replacement care coordinator, a nurse, occupational therapist, physical therapist, and a case manager. What is the role of joint replacement care coordinator? The care coordinator is like a link between the patient and the healthcare professionals. The care coordinator will be responsible for patient's care needs from the surgeon's office to the hospital, and once they go home, they will act as a advocate throughout the course of the treatment from surgery to discharge and after discharge we have. Care coordinator will review patient's need at home after surgery including if any support needed and any therapy, for example; home care, nursing, social worker, transportation, transportation to the doctor's office, is all arranged by a care coordinator. They assess and plan specific care needs and also answer the questions and coordinate the hospital stay during the joint replacement care team. When they come to the pre-op class, the joint replacement care coordinator educates. First, he or she would start reviewing the anatomy of the hip, knee, or shoulder. Indication and contraindication for surgery. Also, she may have a sample prosthetic device and different prosthetic device that a surgeon would use, a specific surgeon. And these days they have the 3D from the pre-MRI done few weeks ago, so it is so customized that they use the 3D prosthetic, which is exact replica from their x-ray.

So they would use one of the prosthetic device and show them what the new prostetic device will look like, how to do the pre-op operation and preparation, talk about medications, side effects of medication, and what medications should be stopped at what time. The joint replacement care coordinator also will educate on the surgical procedure specifically for anterior and posterior approach and the precautions which you have to follow after surgery after that particular incision. Pain management,

potential complication, and how to prevent those complication, and at the end she may talk about discharge planning. I'm gonna spend little bit more time on what is our role as an occupational therapist in the pre-op class? All the occupational therapists start talking about what should be the exercises for strengthening. Mainly I want to talk about because their one leg, one limb, one lower limb has been compromised, they have to compensate with bilateral upper extremities if they are walking with a walker, if they're walking with a cane, sit to stand transfers, mostly they need all their upper body strength, so I will talk about upper body strength, maintaining range of motion of uppers and lower extremity, and most importantly endurance, because you and me both know that after surgery and after hospitalization, your endurance and activity tolerance is gonna be compromised. I talk about diet and nutrition. High fiber, high protein, and low carb diet will definitely help with their healing. Alcohol and smoking cessation. Post-surgery precautions, that means if they have an anterior approach, posterior approach, or knee replacement, or for shoulder replacement, I will talk about all the precautions that they have to undergo and with the precautions what adaptive devices they will use. And most importantly, every patient is so anxious and stressed for the surgery that, as an OT, mind and body relaxation technique comes in handy, and it has been very beneficial. Use of adaptive devices, hip kit, leg lifter, three in one commode, wheelchair if there need be, or adaptation in their kitchen. All that I will talk about in the pre-op class. IADL, that means I'm gonna talk about car transfer, meal preparation, laundry, housekeeping.

Next is intrinsic falls, intrinsic factors, and extrinsic factors which would be safety for the fall preventions. I talk about how there should not be any lose rugs or pets or small children. Discharge planning. Definitely when arranging a ride to go home. Once they're home, who's gonna take care of them, or if they don't have anybody, have to ask for support, social support, physical support, and depending on their level of support and their condition, what would be the different options for the next level of care? Physical therapists, nursing, and case managers. Physical therapists will talk

about education on walking with assistive devices, exercises to regain strength, range of motion, and independence after surgery. They will go over all the different adaptive devices and DME's that one would need. Nursing will educate and review patient's medical history, medication history, and instruct them about what to do before surgery. And finally, the case manager. The case manager is responsible for discharge planning, including ordering equipment or services as needed by an individual patient.

So, what are the different outcomes of preoperative class? Patient have a better understanding of surgery and outcome. They're definitely, because they're educated, they have reduced anxiety and stress. They have definitely have been more competent and compliant about the surgery and precautions, and they have increased knowledge about the surgery. Definitely because they were there and prepared for the surgery and what are the precautions after surgery, post-op complications, they're tremendously and significantly reduced. And also, because they were prepared, their post-op care and complications were reduced, cause a decrease in length of stay.

Let's talk about who are the team members once this individual is in the hospital. Surgeons. The goal in the intraoperative phase is to reduce physical stress of surgery. Stress free anesthesia and surgery to trauma induced physiological response, leads to reduction in morbidity and mortality. Reducing the physical stress of the surgery can be achieved, one, with minimally invasive surgical techniques. So a lot of surgeons use macro or robotic instruments to minimize the incision and local infiltration anesthesia, so no more general anesthesia, it's only spinal anesthesia with nerve block. There has been evidence suggesting that regional anesthesia confers a greater advantage for total joint arthoplasty from a physiological standpoint. It is sufficient for surgery, so the spinal and the nerve block provides sympathetic block, inhibits stress hormone release, and decreases insulin resistance. It also reduces length of stay. Epidural in major open surgeries have been shown to decrease respiratory complications and decrease bowel ileus as opposed to general anesthesia with concurrent opioid use.

Nursing and PACU are responsible for patient's care during the first hour after surgical procedure. Coming out of anesthesia can take a long time, and some patients might experience breathing problems during process. PACU nurses monitors the patient's airways, breathing and vital signs, ABC's, and call for physicians if there's any complication arise.

Let's talk about team members in Three B stage. That means that individual is out of surgery, out of PACU and recovery, and is back in their room, so that is the post operative phase. Post operative phase can be divided into the two key elements, enhancing post operative comfort, and optimizing post operative care. Since multimodal opioid sparing analgesic technique, that means they get three IV Tylenol, instead of getting all the opioids, also the epidural analgesic continues a patient-controlled peripheral nerve blocks and single injection of Tylenol, have been very helpful and purposeful. The typical risk factors were post-operative nausea and vomiting, especially for female gender, non-smokers, which have needed attention. The best way to prevent nausea and vomiting, is to avoid using general anesthesia, and opioid all together. Early mobilization and rehabilitation phase is also prolonged bedrest, because of the sedation, can also be associated with increased risk of PE, DVT's, insulin resistance, and delayed wound healing. Hence, early mobilization and physical therapy and occupational therapy are key element in this phase. So during the course of the operation, the surgeon must make an important decision about patient's health, safety, and welfare.

Furthermore, the surgeon must work to ensure cooperation among the team members of the surgical team, which typical includes other surgeons, qualified person who acts as a surgeon's assistant, anesthesiologist, and operation nurse. Physician's assistant. Physician's assistants are highly skilled clinicians who have received didactic and clinical training to function in all areas of peri-operative environment, including pre-admission, testing, intra-op first assisting, PACU care, and then into the inpatient

room care. Team member nurse. What does nurse do in the room? Nurse continues to monitor patient after they have awakened from anesthesia. They evaluate the incision site to ensure that the sutures are holding and the wound is healing. They also identify possible infection or administer antibiotic if complications arise. PECU's patients are more vulnerable to illness after surgical procedures. Nurse must watch for the signs of pneumonia, or any easily transmitted disease such as STREP. They also regularly assess patient's vital sign, including heart rate, pulse, blood pressure, respiration, and temperature.

Generally, patient do feel cold after surgery, so it is the nursing and nursing assistant's duty to make sure that the patients are warm. They monitor patients' IV line and urinary catheter. Nurses watch for the signs and symptoms of any pain and nausea and give medication to control them. Most importantly, when the patients are going home, one of the important part of post-op care is getting patient ready to go home. Nurses play a large role teaching both inpatient and the patient's caregiver on what to do and what not to do. This often includes practical tips on bathing, dressing, wound care, exercises, also on pain medications, and signs and symptoms of infection, or any wound infection. Lastly, nursing and the nursing aid will teach the patient how to dawn the knee high stockings to prevent Deep Vein Thrombosis. Assisting the nurse as the nursing aid. Those certified nursing aids help nursing and taking vital meals, setting up for the meals, making beds, keeping the room clean. Also setting up the equipment such as oxygen or ice machine for the patient, and also assistance on medical procedure. They answer the call to help and observe any changes they may notice in patient's condition or behavior. Joint replacement coordinator is, it's like her or his 24/7 duty to take care of the joint replacement's patient. The care coordinator visits patient, post-operatively to make necessary arrangement for discharge planning. A small transition from hospital to either an extended care facility or to home is made so that the patient can benefit. Care coordinator must possess good assessment, coordination, and communication and problem solving skills to provide the patient with

a plan of coordinating services across the continuum of care. Patient rounds are conducted on all the patient with the surgeon and the entire multidisciplinary team to look and discuss the progress of the patient and the next level of care.

What does a PT do in the inpatient? PT, as they have already discussed in the pre-op class, they may start working with the patient post-op day zero. They will start first day, or start day zero, in the room, starting with education about the precautions and out of bed to chair mobility. They always have the oxygen, pulse ox, and blood pressure monitor because this is right after the surgery on post-op day zero, and may have a short ambulation in the room on the post-op day zero. Post-op day one, in the morning, they would have an individual session, which they will not only ambulate the patient in the hallway, long walks, take care of their ascending and descending steps, and in the afternoon they would have a group session which they would talk about home exercise program, family and caregiver training. OT's, what do we do in the Joint Replacement Center? People call me in-and-out therapist, because I'm teaching them getting in and out of their clothing, in and out of the bathroom, in and out of the car.

So post-op day zero, my session starts with educating. It's all about education, education, and education. Education first, starting with what other precautions, whether if they are an anterior approach, then what are the precautions with the anterior incision? What are the posterior lateral precautions? And what are the activities that they should do, and what they should not do, and in order to be independent, what other equipments and what other techniques they will be using. So that's my first education. I'm gonna instruct them about the weight bearing status. Most of the time, about 90 percent of the hips and knees have weight bearing at tolerated. Depending on the surgeon and the surgery, they may have partial weight bearing and or toe touch weight bearing. Anyways, I'm gonna talk about instructions, education, and give them the handout on what they can do, and what they should not do. Next comes dressing, toileting, bathing, showers, and getting in and out of the

shower, getting in and out of the toilet. I've already educated them on getting either a raised toilet or getting three in one commode, which would help them to not only in the toilet, but also in the shower or in the bathtub that they can use. Other goal is light meal preparation, or laundry, or getting in and out of the car. That's the first thing they will do as soon as the discharge from home. So that's my goal as an occupational therapist, to teach them all the techniques for them to become independent in their activities of leaving. I'm also gonna talk about how to get dressed, while maintaining surgical precaution. This is often done with the use of adaptive devices so that the patient can independently complete their lower body dressing.

Another goal of occupational therapists is patient functions independently and safely, in their home and their community. Particularly during car and bathroom transfers. For car transfers this is done by reviewing proper body mechanics when getting in and out of the vehicle, and explaining how to maintain their precautions with different types of car. Especially if it's a very high car, or very low car, then you have to make recommendations and adaptations to get in the car. Generally for getting in and out of bed, I recommend having a plastic sheet or having a silk bed sheet so that, cotton to cotton doesn't slide that well, so I recommend having a garbage bag or a plastic bag so that the transfer is easy if they have a high bed. Plastic bags to reduce friction when sliding across the seat, and use of a step stool if they have a very high car, like a truck, or a high bed, helps tremendously. Patients are given information to prepare for their discharge, to go home, and make arrangement for transportation, if they anticipate a difficult transfer in and out of their own vehicle. Bathroom transfers are particularly important, as patient needs to demonstrate safe independent transfer on and off the toilet, in and out of walk-in shower, or step into the tub. I provide them instruction how to get in and out of the tub, if they are not able to step in and out, I talk about grab bars, non-skid mats, also shower stool, shower chair, or tub bench if need be. Especially have recommended tub bench for individuals who had bilateral knee replacement, or a knee replacement which they had no range of motion in their

operated knee and they were just not able to bend that. I have recommended tub benches, but most of the time, tub seat, elevated toilet seat, and bed-side commode would function.

On entering the therapy program after surgery, patient are able to practice with equipments with the help of occupational therapy, and into the kitchen, into the bathroom, of the hospital. This is an unusual discipline that plays a very important role, a key role in the Joint Replacement Program, is the pharmacist. The pharmacist goes over patient's recovery, including making sure that the medications they have received are accurate, right dosage, and also what is the education about the dose, frequency and route, as well as what are the different drug reactions and drug interactions with one another. They go over the whole medication regimen, they also go over the new prescribed medication and how to to take it and when to take it, and most importantly, educate the patient about effects and side effects of the medications.

Lastly but not least, is the case manager. Case manager are registered nurses or licensed social work, work closely with the interdisciplinary team, or the multidisciplinary team, surgeons, and coordinate safe discharge. They decide from pre-admission to post-discharge. The goal of the case manager department is to ensure highest quality patient service through individualizing the planning and collaborating with other team members. Liaison nurse. Liaison nurse is, she is the nurse from either the home care agency or from out-patient, or from the skill nursing facility, who will individually and personally go to each patients room, and she is like a link between the hospital and the community. She or he will make ensure that people leaving the hospital continues to receive the right care after discharge. They will also follow up with the OT, PT, and RN services to the next level of care. And there are times that I have spoken not only to the liaison nurse, but also to the occupational therapist, physical therapist from the home care agency or skill nursing to make sure that they continue to follow and there is a continuity of care. Post discharge, rehab and

follow up care. That means there's a continuum of care to the next level of care, to the appropriate home care, or acute rehab, or skill nursing, or outpatient. They follow up generally within 15 days to back to the surgeons office where the staples are removed and follow up surveys done and X-rays are done. And all the patients are followed back by the care coordinator after they're discharged from the hospital to ensure that they are following the protocols.

So let's talk about case study. This is one of my patient who was, Mr. Smith is a 76 year old retired fireman who has been diagnosed with osteoarthritis in his left hip since one year. His pain was managed initially by medication for few months, however now has been complaining of excruciating pain for last past month. The surgeon and the family decided that he should get a total hip replacement. His living situation, he lives with his wife in a single level ranch home, has three steps to enter. He has walk-in shower in the bathroom. His prior level of function, he was independent with ADLs and IADLs, although of lately his pain was coming and hindering his independence, and he started taking longer to finish or complete his daily routine. He enjoys his leisure time, enjoys swimming and playing golf. So let's talk about Stage 1, who were the multidisciplinary team members? He registered with the pre-op class. The scheduler decided on which day that he will have surgery. In Stage 2, he came to the pre-op class. He met with the occupational therapist, physical therapist, joint replacement care coordinator, and had prepared himself on what would be his expectations and what would be the whole procedure of surgery, pre, during, and post surgery. So I had recommended getting the hip kit, and an elevated toilet seat or three-in-one combo, which he did, and he also got the full front view walker. He made modifications in his home, for example he removed all the loose rugs which he had in the living room and his bedroom, made sure that he had arranged for meal preparation. His wife was gonna take him home. He also followed the diet and nutrition, as well as started working on his upper body strength and lower body strength with exercises that we had recommended, and worked on his alcohol consumption and smoking.

The day arrived, he came to the entrance of the hospital, a volunteer met him at the hospital front gate, took him to the registration, and to the OR, to the prep room. Nursing, anesthetist, surgeons, prepared him for surgery, and he had a very successful posterior lateral approach total hip replacement, and his recovery in PACU was uneventful. He came up to the floor on his room, nursing and CNAs took care of him, vitals, his bed, his pain medication, ice is very important, and everything was put in place. Since he was the first surgery in the morning at 7:30, he was ready for lunch and he was ready to work with physical therapy . He started working at 2 PM with physical therapist. He got out of bed, he used the bathroom, the bedside commode, and he walked a little, about 10 to 15 feet in his room.

Next morning PT came back, and OT, I worked with him. PT had his morning session and individual session and in the afternoon he had the group session with physical therapist and other patients on the floor. Occupational therapist, I worked with his ADL's, IADL's, hip precautions, care giver education, recommendations, and other team members, pharmacist, nursing, case manager, liaison nurse, everybody visited him on his day one of surgery. His bedside commode and rolling walker was delivered in his room and at 4 o'clock next day afternoon, he was ready to go home. His pain was under control, his mobility, he had already walked 500 feet, he had worked with PT on his steps, and he felt he had worked with me on getting in and out of the shower, getting in and out of the toilet, getting dressed with the hip kit, and we, as a team, communicated in the rounds and we felt comfortable that he is ready to go home. At 4 PM, everything was put in place and I took him downstairs. His wife had pulled in the car already, so my and a volunteer performed car transfer and he went home. Day one of after surgery. The liaison nurse had already met him when he was in the hospital for home care. He received home care PT for two weeks, he had a follow up with surgeon, his staples were removed, and he was ready to start outpatient therapy at the end of two weeks. He had an excellent recovery. The X-ray looked great, and followed by the

home care services, he was working with outpatient physical therapy for four weeks. At the end of two weeks, the surgeon had already told him that he can start driving, and he can start doing light office work. He started working, he started driving, and by the end of four weeks, at the end of his outpatient, he was ready to be discharged from therapy. Hence, we have a fit for life program, which is just maintaining the functions they have, so he continued to go to fit for life program, and continue all the exercises the PT's and the OT's had shown and had followed up.

So that was my multidisciplinary team approach for comprehensive joint replacement center with the care pathway that we have developed, and which has been recommended by the Center for Medical Services. So, multidisciplinary collaboration at the Comprehensive Joint Replacement Center is relative in a creation of clinical and patient pathways that are reflected of actual care and processes. A user-friendly patient education book, and a multidisciplinary patient education class. Claims stated by multidisciplinary team reported improvement in outcome measures, very high satisfaction with their care, owning to the organization, ease of communication, and availability of healthcare professional as needed. The implementation of multidisciplinary approach to patient care can therefore provide significant fiscal and clinical benefits.

I hope this presentation has benefited you or the practitioner by providing a description of an essential role we as OT's can play in multidisciplinary team care approach to enhance occupational performance of clients undergoing joint replacement surgery. It's all about three C's guys. Collaboration, communication, and cohesiveness. Three C's make it a success, so teamwork makes a dream work. Here are all my references that I have included, and I have used in my presentation. I thank you so much for attending my webinar, and I am open, and this is my email address if you have and question or concern, please free to email me, msheth32@gmail.com, and I am open for questions.

Okay, so my first question is, "What do you do with clients that do not fit into this profile?" So, in that case, so you mean when they cannot come as a fast track joint replacement surgery? Or if, so that will be pre-decided already, so there's are big screening form they fill in, and if they do not qualify then they will not be a part of Joint Replacement Center surgery, all because they have different issues. I hope I answered your question.

My second question is, "Have you seen increased outcome with this program at the facilities where you have worked?" Absolutely, so where I worked for eight years as a lead joint replacement therapist, the outcome is 99 percent of the patients, satisfaction rate was very high, and they recommended that they would recommend this program to their family and friends. Our length of stay is, of last month, is 1.2 days. Most of my patient went home, following this protocol, the next day. We do have same day surgery, and you guys that's the future. Lot of institutes have already started joint replacement surgery as an outpatient procedure. An outpatient procedure, the role of OT becomes so significant and so important when you are working with a client for a few hours. So must of my education and my treatment is accomplished in the pre-op class, because during the post-op, they have very little time, and then it is taken over by home care therapist. So that is the future, same day surgery. So the answer to the question is yes, absolutely, the outcomes are significantly high. One, post-op complications and especially the hospital acquired infection is reduced, the length of stay is reduced, so they go back to their environment, and they are so much better in their own environment.

Okay my question number three. "Do you find that communication is so much better with this model?" Absolutely, communication is the key anyways, communication and education is so important, but since the patients have met each and every team member pre-op, nursing, PA's, OT's, PT's, nursing staff, they also come and visit the floor, so they exactly know how the floor set up is where the OT room is, where the PT

room is, where is the kitchen. They find it very comfortable once they come after the surgery, and because they kind of know us already, they have met us already, they have communicated their concerns already, so it is so much easier for patient to communicate, to talk, and I give my information, and everybody of us, from the team members, give our information to the patient beforehand. So I've had patients emailing me then, "hey my guy, my handy guy is coming in tomorrow to install grab bars, can you help me?" And I have done FaceTime with them. Talk about technology, so that's how we communicated. One of my shoulder replacement patient needed to know where should be her closet, or where should be her meal preparation, where should be her utensils and all the items that she needs should be kept, so she FaceTimed me being in the kitchen. So communication is very important and patients feel comfortable to communicate because they already know that we are here for them, and to have a patient's success, communication becomes a key. So yes, absolutely.

My next question. "Do you have frequent team meetings to discuss planning?" Yes, we do. Not only after the surgery, the whole team meets at 12 o'clock, so 12 to 12:30 is our "hello time" we call it, our team time that surgeon, PA's, nursing, nursing assistant, OT, PT, and case manager, it's a team of eight people who has been working that day, and who has seen all the patient. We get together and talk about each and every patient. So meeting and then on occasions, the PA will text me and ask me that "what do you think? Do you think that this patient can go today, or do you think this patient needs to stay overnight?" So the communication happens, meeting and collaboration happens, I would say every two hours, or at least morning before we go into the patient's room, the nursing will notify us about, what are the pain medication regimes, or which patients are still nauseous, or which patient's blood pressure's very low, so which patient we should see first, which patient we should not see first. So that kind of like, informal meeting happens before, during, and after. Yes, and we discuss the planning accordingly.

My next question. "Are there ever problems with separation of roles, or is this set up with this model?" Okay, that's a very good question. So, you guys, it is multidisciplinary approach, but it is also interdisciplinary approach. So there is so much overlapping of the roles. So lets give you an example, of a patient, where this individual is a knee replacement who PT sees it first, and this individual is not gonna stay after 12 o'clock, because due to they don't have a ride, or whatever might be the reason, then occupational therapist and physical therapist communicate with each other and then they say, "okay, I will take care of the bed mobility, you take care of the car mobility". I will get in and out so there is a little overlap, but for the most part, we have a distinct role. "Do you find a patient who have anterior approach recover quickest?" Okay, that was a very good question again. There has been a study done that whether you do an anterior approach or posterior approach, the recovery has not been a significant different. It is absolutely a surgeon's preference. And also there are some protocols that a surgeon follows whether if they are a right candidate for an anterior and posterior approach. Have been said that, anterior approach, because they have less restrictions, have definitely recovered quickly than the posterior approach, yes.

My next question is, "How many joint replacement on average is each surgeon completing on a daily basis?" So where I work in Norwalk Hospital, a single surgeon, so there could be two surgeons working on the same day, so one surgeon could have done four to five, depending on hip and knee because hip takes longer than a knee replacement, and also their recovery time in the OR is different, but on an average four to five could be on a daily basis. And then again, depending on the surgeon, so we have had days when we had eight joint replacement admission on that day.

My next question is, "It's such a quick turnaround, is there any anxiety from the patient or family?" Absolutely. It's two different group of patient right? There are patient and patient family, more than patient sometimes it's the patient's family, or it's the patient's husband or wife, or a daughter or a son who is not ready to take their moms and dads

so quickly from surgery to home. So absolutely, so as a role, as a health care provider and as a team, pre-op, during the surgery, and post-op, our role also becomes not only be a therapist for the patient, but patient's caregiver, and manage their anxiety and their stresses. So we try to manage and handle and address their anxiety as well as their stresses, and try to make the transition easier. And also, if that's the case and we feel that this individual would benefit from home care occupational therapy as well, then we will recommend that for the ease of the patient and patient's caregiver and the transition to be smooth. Just for one follow up, OT, volunteer, or two follow, it all depends on the healthcare individual or the home care person, but absolutely, to make them less anxious and less stressful for the transition, being going home the next day, it has worked that we recommend home care to follow up.

My next question is, "What can be done for muscle pain while sleeping, two to three weeks post-op, anterior procedure, other than ice." Funny that you ask me that question, because I am sleep expert as well, and I have addressed sleep deprivation after surgery in my doctoral project. So the question is, "What can be done for muscle pain while sleeping, two to three weeks post-op." So most importantly, hopefully the pain medication that they are taking, should take care of the interior pain, which is the joint pain plus the muscle pain, but ice is the main, ice I would say is the best alternative. Also you can always have the topical cream, pending surgeons approval. If they want to, if you can use any topical analgesic pain to take care of the muscle pain.

Any other question? Okay, I guess there is no more questions, so I thank you all to attend my webinar and spend Thursday afternoon with me, and I wish you all a very good weekend.

- [Fawn] Thank you Dr. Sheth for a great presentation, we have some people typing in thank you and thank you for an informative course. So I appreciate all your questions

coming in, and thank you again for a great presentation, lots of great things to digest and take back to the clinics.

- [Manisha] I hope for sure.

- [Fawn] I hope everyone has, yes for sure, thank you so much, I hope everyone has a great rest of the day. You joined us again Continued and occupationaltherapy.com. Thanks everyone!