Acute Care Back To The Basics: OT's Role In The Emergency Department

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- [Fawn] Today's course is Acute Care Back to the Basics: OT's Role in the Emergency Department. Our presenters today are Katherine Freeman and Lyndsay Laxton. Lyndsay is a senior occupational therapist currently in her seventh year at the University of Colorado Hospital. Her clinical experience at UCH spans multiple units, including neurosciences, medical ICU, and surgical trauma ICU. Her clinical and research interests include ICU, rehabilitation, delirium management, and utilization of the ICU diary. In November 2017, Lindsay presented implementation of the ICU diary intervention within the medical intensive care unit at the Fifth European Conference on Weaning and Rehabilitation in Critically Ill Patients in London, England. Katie Freeman is a senior occupational therapist currently in her tenth year of practice at the University of Colorado Hospital. Her clinical experience started with floating throughout all areas of the hospital before narrowing in on becoming a primary therapist on the neurosciences unit. Katie's professional interests also include clinical research, education, and also acting as the field work coordination for UH. Welcome to both of you, Katie, you can start us off.

- [Katie] Wonderful, thank you so much. Well, as we go through our presentation today, feel free to send any questions and we'll try to get through as many of 'em as we can. So today's lecture, we're really focusing in on OT's role in the emergency department. As we begin, of course, we've received a one-time honorarium for this presentation, and we have no other disclosures to endorse. Our real learning objectives today are to really give you guys some tools to help identify reasons OT practitioners are crucial interdisciplinary team member within the emergency department, hopefully give you some assessment tools for obtaining objective information during your OT evaluation sessions or treatment sessions, to advocate for OT's role, identify your patients with efficiency and effectiveness and best serve our patients' needs. Additionally, we'll hopefully leave you with some ideas about interventions that you can provide as an OT

practitioner within the emergency department. To this end, to meet these learning objectives, we've broken down this presentation into a general overview of the ED to really help those that may not have practiced in that area, as well as highlighting generally the unique value of OT as we're thinking about patients that our profession might be uniquely served to address in the emergency department. And as mentioned already, we'll go over some assessment tools, some interventions highlighted by some case studies, and then, of course, leave some time for questions and answers at the end.

In the US, the CDC has some great resources, most recently updated back in 2016, regarding the makeup not only of how common ED visits are in the US, such as at the last count, 145 million ED visits per year. And that's across rural and more urban populations, smaller hospitals as well as academic medicine hospitals. From these 145 million ED visits per year, approximately 12 million result in hospital admissions. So about 8% of folks that present at the ED will end up actually being admitted to the hospital. Now, the CDC looks at this across age ranges. On the graph, you can see in blue the ED visits broken down by age group as well as the hospital admissions. And one thing that really jumps out at me as I look at this is that our 65-and-over population really accounts for the bulk of hospital admissions resulting from ED presentation despite having some of the fewer ED visits, which gives rise to bulk of our presentation which addresses how we can uniquely serve the older adults that might present in the ED. In general within the ED, the most kinda commonly diagnosed issue based on ICD-10 criteria, is a result of injury, as we can imagine, being in the emergency department, approximately 42 million of these total 145 million presentations. So it's certainly an acute change in function for which OT may have some resources that could really help this large patient population out. Most of the folks presenting to the ED in general live at home as opposed to being, presenting from a nursing home or a facility of some sort or homeless. The majority of patients are also female, so females living at home alone. And when we look at insurance in the ED, which we'll touch upon

later in terms of discharge planning, discharge recommendations, and really having an understanding of what a patient has in terms of linkages to resources, the bulk of patients presenting to the ED usually have Medicaid or state-based provided insurance, about 55 million of these ED visits. The second biggest group is, in fact, private insurance. And then jumping down to Medicare, and then the fourth biggest group has no insurance or is listed typically as self pay. Certainly there's some workers' comp and other unusual insurance situations that also float in through the ED, so it's reaching out to your case manager, peers in the ED, to understand the kind of unique restrictions or benefits with each individual patient's insurance can help with discharge recommendations.

Now, jumping back to think about our older adults, the ones that although not the highest population in terms of ED visits but the highest population of hospital admissions resulting in the ED, one thing to consider is that older adults that present in the ED typically also have longer lengths of stays in the ED, either tracked in hours or days if it's needed. They're more likely to be admitted, as we see. They're also more likely to have repeat ED visits compared to the other age group populations. They also have a higher rate of adverse outcomes after ED, or discharge from the ED, such as mortality, hospital admission, return ED visits, which is a challenge not only because of their status as a geriatric population or older adult status, but as the CDC has tracked ED visits over the years, they have also kinda tracked the improving or increasing use of ED as frontline unplanned healthcare visits for Americans, particularly overcrowding. Which is a challenge, 'cause a lot of the evidence out there shows that when overcrowding in the ED is happening, this leads to an increase in 30-day adverse outcomes. Again, increased mortality, return ED visits either for the same complaint or a different complaint, as well as hospital admission at a return ED visit. So thinking about our patients we might see as OT practitioners in ED, our vulnerable populations such as our older adults can become even more vulnerable in periods of overcrowding or popular use of the ED services.

So certainly other evidence has gone as far to look at patients that are actually admitted to the hospital during periods of ED crowding also have increased hospital inpatient length of stays, higher inpatient mortality, and that ED patients discharged home during crowding have increased rates of short-term mortality in return to the ED visits requiring hospitalization. So certainly the pressure to discharge patients during periods of crowding may lead to discharge of more vulnerable patients that would otherwise be admitted. And that certainly leads to a huge need to have good discharge practices during these periods of crowding in the ED to ensure to save transitions to the community whether for older adults or even our younger populations. So certainly thinking about the big picture of lots of business in the ED, how do we best serve patients as we're moving through?

In terms of the common diagnoses that you'll see as OT practitioners, oftentimes the referrals or consults come on our musculoskeletal populations thinking that the largest group or population diagnosis that we see is due to injury. So our fractures, dislocations, sprains, falls certainly is one of the most common diagnoses where OTs are consulted. Altered mental status, general failure to thrive at home, and mild traumatic brain injury sometimes termed concussion or sometimes undiagnosed as well. So these are the populations or diagnoses that we'll commonly see in the ED. And some things to consider is with this altered mental status category, failure to thrive category, really thinking about not only our geriatric population or older adult population but also some of our individuals that might be living with chronic diseases and trying to manage those at home and presenting to the ED with challenges managing whether medications related to their chronic illness, their ADL performance at home, IADL performance at home, and leading to a need to really screen our patients for not only cognitive challenges, functional challenges but performance challenges at home. There is evidence out there that the ED physicians report older adults in particular in regards to cognitive impairments is often seen as the greatest

barrier to providing the best emergency care. So, again, as OTs, kinda thinking about our unique value that we can provide in the ED and our understanding of occupational performance, human performance from a physical perspective, cognitive perspective, societal role perspective, how can we uniquely provide services in the ED to address these common diagnoses that are coming through the door? As we've kind of touched upon, thinking about OT practitioners and our background really as being clinical experts in functional assessment and intervention for patients coming in through the ED.

So looking not only at the person, their physical, psychosocial, cognitive status, but what is their environment, whether it's at home, homelessness or other pre-admission home setting. And then the occupations or activity level of participation that they are trying to achieve outside of the ED that has been disrupted by some sort of health event bringing them through the ED. So when you think about these patients, wanting as OTS to really help the physicians and physician assistants, the ED MDs, recognize post-discharge needs and informing discharge decisions. Thinking about, are there pieces of DME that can help this individual after a fall, car crash, injury, be able to return safely home? Is there any patient education that is needed to help them address not only their precautions that might be new related to their health injury or education of a loved one that's taking their individual that might have some cognitive impairments home to better succeed at home? And thinking about referral to community or support services, whether home health services, outpatient-based services, community-based services, day programs that can help individuals really cope with life at home and succeed in that home environment. So thinking about that totality of post-discharge needs and also thinking about, what is the safest discharge decision? Is it discharging a patient home with support? Is it advocating for admission to the hospital? So what are the options available to this patient through their unique insurance, social, financial situation, their occupational needs, their environmental needs, their person-related needs? And what is the best discharge setting to help avoid future presentation to the

ED, avoid admission to hospital, if appropriate, of course, and really help them thrive at home? Certainly reducing the probability of future adverse health outcomes is a huge area for OT, whether looking at medication administration and chronic disease management or just general health literacy for an individual that maybe might be noted to have repeat presentations to the ED or have markers that show that they're successfully managing a chronic health condition at home. Say they come in with a concern for errors in management of their diabetes, and thinking about, okay, is it access to services, is it understanding of their chronic disease management? Is it the visual ability to manage their insulin, if they're insulin dependent, to maintain accurate management of their chronic disease?

And then certainly as we've touched upon, avoidance of hospital admission if at all possible. Knowing that those that are admitted to the hospital. One, it's a strain on resources, but it also can be a sentinel event for an individual if they're presenting to the ED and then admitted to the hospital for addressing their injury, illness, or disease. And thinking about why this is an important functional level in the evidence has been identified as a predictor of adverse events, including future ED re-presentation in the adverse post-discharge events. So certainly after the focus in the ED, being from the provider, the physician, provider standpoint of the acute medical issue, assessment of function, that needs to be really efficient and effective and related to post-discharge needs to quickly create a safe discharge plan for the individual. And this really aligns with the ICF our International Classification of Functioning, Disability, and Health where they're really looking at functional status as the result of a dynamic interaction between not only the health condition but contextual factors. Which, as OTs, we understand to be, can be related to the person, to the activity they're trying to perform and any limitations on those activities. So thinking about it from that kind of individual person level view. As well as participation restrictions.

So thinking about it in terms of my environmental factors, barriers, or facilitators to an individual's functioning in the societal roles that they're trying to fulfill when they're outside the walls of the ED. So when we look at where, based on our background as OTs we're uniquely suited to address this need to assess function in the ED to help our patients have the best outcomes. A lot of times providers will say, okay, to what point is that helpful? How is this going to help not only the patient, most importantly, but also the hospital itself or the emergency department? And there's evidence out there, a lot coming out of the UK and Australia and Canada, some starting to come out of the US, but looking at pilot programs such as the one addressed in this article looking at preventing unnecessary hospital admissions and OT and social work service in an accident and emergency department. Where a hospital in the UK looked at a six-month period looking at OT referrals.

So they staffed one full-time OT and a part-time social worker and tracked data over a six-month period where they ended up getting about 209 OT referrals. What would happen when they got a referral is an OT would come in, perform an initial evaluation, including interview, assessment of dressing, mobility, transfers, and any other person-related factors, whether vision, cognition, so on and so forth, that were needed, and determined whether or not the patient had needs for OT services. Additionally, the OT would evaluate whether the patient could benefit from a social work consult for assessment of further social and care needs, particularly based in the community. So of these 209 referrals, approximately 2/3 of them saw OT only. About a third of 'em saw both OT and social work. On average, they were about 78 years old. Again, majority female, 152, 57 males. The main reasons for referral from providers such as MDs or physician assistants were concerns about mobility, assessment of ADLs, and concerns for the ability for the patient to cope or thrive at home. Of these patients that were referred to this pilot program, 81% of the patients were actually able to return home, resulting in less than 19 needing to be admitted to the hospital either for further therapy needs, further discharge planning, further medical workup. So quite a few of

these patients were able to return either to their own home or to a home of a loved one. As a result, approximately 500 bed days were saved in the hospital, which is quite a big deal. So these are patients that maybe prior to this pilot program would have been admitted to the hospital, instead were able to return to home, freeing up space in the hospital for more critically ill patients or patients that needed more acute medical management. And at the end of this pilot study, the medical providers in the ED say they felt better able to make decisions based on functional info received from the OT, so leading to better outcomes for the patients as well.

Another study that looked at why does having OT in the ED matter, what kind of results can we talk about that are more objective in regards to outcomes for the patient as well as outcomes for the hospital? Was a three-year study, also in the UK, looking at over a thousand OT referrals that they got during this time period. This study also had one full-time OT working eight hours a day, five days a week. Referrals were triggered for this program when a patient was identified or screened to have a functional deficit, social or environment concern from an ED provider such as a physician, or confusion. Then the OT would perform an assessment and establish client-centered plan of care or discharge recs based on their assessment. Over this time period, they found of these over a thousand referrals, about 92% were over the age of 65. Median's around 80, so, again thinking about a lot of the patients that OT sees in the ED end up being in that older adult population, again, majority were found to be female and living alone.

The most common referral kinda fits with the US-based ED information in terms of the common referral was status post a fall or injury, half of which had resulted in some sort of fracture, either upper or lower extremity fracture or otherwise. Again, about 80% of these patients were able to be discharged directly home from the emergency room or to a relative's home, thereby avoiding admission to the hospital. They were able to track that about 306 inappropriate hospital admissions were prevented, which based on average length of stay for orthopedic and trauma populations and medicine

populations was estimated to save over 2,224 bed days in just this three-year period. So quite a bit of bed space opened up within the hospital. Now, freeing up space in the hospital not only to avoid inappropriate admissions but also to be able to serve patients that truly need acute care or critical care level health care is important, but more important we always want to think about our patients. And so they looked at, okay, of these patients that aren't admitted to the hospital, are they becoming readmitted later on? Do they come back? And they found less than 1% readmission rate within one month of ED discharge. So not only were these patients able to avoid admission to the hospital, they were able to be discharged home and stay at home as well. So this article concluded that historically patients presenting to the ED with functional decline or inability to cope or thrive at home were often admitted to the hospital before this pilot program due to a lack of ED resources to assist them with their deficits, AKA having an OT present in the emergency room. So they concluded that providing OT in the ED improved their patient care by avoiding inappropriate admissions, establishing a patient's needs within their home environment, and also offering a link to community services or follow-up services to best meet that patient's functional needs and allow them to have the best outcomes as an individual.

So when we think about providing OT in the ED, a lot of times we start at, okay, what does the OT process look like in the ED? And similar to the role of ED and acute care where we really want to think about how can we use our skills as expert observers of performers, experts at activity analysis, experts of looking at what an individual's trying to achieve or engage in in their daily activities, and what are either barriers to that performance or what are things that are facilitating their performance as well? So in the ED, some common assessments fall into both the non-standardized and the standardized category. So thinking about your initial interview as an OT, similar to an acute care where, may inquire about their home setup, resources available not only from social support standpoint but DME standpoint or existing home health services. Thinking about occupational profile and wanting to demonstrate the unique value of OT

and ability to meet that patient's occupational profile. Certainly observation of performance of ADLs is instrumental in the ED environment, similar to in acute care in general. The challenges with the ED environment, of course, surround the artificial nature of a busy, noisy, loud environment with a hospital bed or gurney in the room and perhaps one bathroom down the hall. So being able to observe performance or simulate performance of ADLs in an artificial environment is a certainly a key resource or key need as a OT practitioner. And then thinking about the patient's home or environment assessment through interview and being able to address needs as well. Now, similar to assessments that fall into the non-standardized category, certainly there are standardized categories out there that exist. A lot of these that are listed on this slide, Identification of Seniors at Risk, Triage Risk Stratification Tool, Older Adults Resources and Services, and then the FAS-ED, MoCA. A lot of these assessments in the literature when we took a look were completed on older adults. A lot of them were based on self report, although there is the option for observation of performance, particularly in the FAS-ED.

So something to consider if you're building an OT and ED program at your facility, is what is this assessment that, what are we trying to achieve with this assessment? Is it fast screening of our patients? In which case a lit review found that the Identification of Seniors at Risk and the Triage Risk Stratification Tool were two of the more psychometrically sound assessments for fast screening identification of patients that maybe have a chance in their function after the health event that brought 'em to the ED versus before. Or is your goal more of a comprehensive understanding of functional performance? In which case the Older American Resources and Services Multidimensional Functional Assessment Questionnaire or the FAS-ED have more expanded ability to really look at various sections or areas, dimensions of functioning such as contextual factors, activities and participation, body functions, environmental factors, clinical impressions and recommendations, and being able to capture that and track that data over time as you're serving different populations.

One that we commonly use at our site, of course, is the Montreal Cognitive Assessment which a lot of folks are familiar with from other practice settings and generally in acute care can act as a quick standardized cognitive screen for presence of mild cognitive impairment. With the FAS-ED, that really was looked at and developed out of Canada. It's now available in English, and it looks at functional status as a person's ability to perform their daily activities and fulfill their societal roles in the most satisfying way possible. So kind of fits with that general rule of OT in the ED based on all the evidence we've looked at so far to help avoid admissions to the hospital, best match the patient's needs with their discharge needs, to maximize their occupational performance.

- [Lyndsay] All right, thank you, Katie, so much. Now that we kinda know OT's unique value and a little bit about how to assess the patients in the ED, I want to dive a little bit deeper in terms of another aspect of our unique value as it relates to delirium. Delirium has been long studied in ICUs as well as just general acute care, but there's not a whole ton of literature out there about delirium in the ED. However, it is quite detrimental, and I'll go a little bit deeper into that. So delirium is described as an acute onset with a fluctuating course and also has alternations in consciousness, orientation, memory, thinking, or behavior. The hallmark features of delirium are inattention and disorganized thinking, and I really want to emphasize that it is an acute onset, which differs, of course, from dementia which is a gradual progressive decline. So this is where we really as OT practitioners want to collaborate with family members or caregivers who may be present at bedside to establish what is the patient's cognitive functioning. Because it may be they have baseline dementia with some of these components of neurocognitive impairment, or somebody may have no history of neurocognitive disease and is experiencing delirium, and it might be a little bit hard for us to tease out. But we'll go into that a little bit later on.

So specifically as it relates to delirium, there are certain predisposing factors which put people at a higher risk for delirium. This includes our patient population over the age of 65, any patient who may have a premorbid cognitive deficit, whether it's a history of a CVA or TBI or our patient populations who do have baseline dementia. Other predisposing factors are anyone with a sensory impairment or baseline multiple comorbidities. Additionally, triggering factors, those are those factors that incite the delirium in either a typical population or a patient population that has several of those predisposing factors. The triggering factors include acute pain, acute infection, periods of immobility, urinary retention, dehydration, and/or potentially psychosocial factors. So if you think about some of those patients that Katie had mentioned early on that are frequent utilizers of ED services, it's those with musculoskeletal injuries, whether it's fractures, sprains, strains.

So you have somebody with an advanced age, over the age of 65, who comes in after a fall, maybe has one of those musculoskeletal injuries, of course they're gonna be in that acute pain cycle, makes them a triggering factor for potential delirium. Additionally, any sort of patient with that acute infection, think of pneumonia or some sort of viral upper respiratory infection. Again, a triggering factor for potential delirium. Also patients who have experienced a functional decline. I know in the ED, we see a lot of patients how have failure to thrive and may be dehydrated or malnourished due to their inability to care for themselves. Or their failure to thrive has led to long periods of immobility or reduced mobility, spending most of the day in bed or a recliner. All of these things are triggering factors of delirium that maybe other providers might not pick up on unless they're doing that in-depth occupational profile with people. Also, the elderly population is a large percentage, almost 50% of those people that are treated within the ED. So we know advanced age is a big risk factor for delirium, so we can anticipate potentially a higher incidence of delirium because this is a large bulk of the patient population that is seen. Based on some research, eight to 17% of patients in the ED have experienced delirium at any given time. However, it is suggested that

upwards of 75% of all delirium cases go undetected by bedside clinical providers. All right, so why is delirium relevant to the profession of OT, or why do we really have a unique value? So not only is the presence of delirium, which is those cases that are detected, associated with poor long-term cognitive functioning as well as decreased functional independence in terms of ADLs, IADLs, and mobility at time of hospital discharge, but undetected delirium is independently associated with an increased six-month mortality. So as OTs, we understand that delirium impacts somebody's ability to be independent in life, to be able to be engaging in whatever meaningful activity. However, it also increases their risk of mortality, which is quite profound. So I think the role for us is pretty apparent that we need to intervene quick and frequently.

A study by Kakuma et al. found that the mortality of patients with detected delirium as well as those who did not experience delirium was about 11 to 14% at six months after discharge. However, patients who were in the ED and did not, the delirium was present but was not detected by the bedside provider, their mortality rate was upwards of 30%, so a twofold increase in mortality. So we know that detected delirium is detrimental from a functional and neurocognitive perspective, but we also know that undetected delirium carries a higher risk of mortality, so it's really on us to help look and analyze the patient case, figure out what risk factors are these people presenting with as well as what are those triggering events that might be increasing somebody's risk of delirium, and then really using our role and clinical knowledge to advocate. Additionally, anybody who's been in the ED for greater than 12 hours has a higher risk of delirium. And I know Katie had mentioned earlier on in the presentation that a lot of the elderly population, they are at risk for higher utilization of ED services and higher length of stay in the ED, whether it is they have lack of community resources, lack of insurance, a tough discharge disposition where it requires them to be admitted to the ED for a prolonged period of time. This is putting them at increased risk. So certainly a multi-factorial process that I think OT has a pretty unique lens to provide some intervention and evaluation.

Which segues us into, how exactly do we identify delirium within the ED? So as OT practitioners, outcome measures are something very meaningful to us to be able to demonstrate change, right? So we know that our intervention is efficacious. But I challenge you to make sure that the outcome measure you are utilizing is appropriate for a multitude of reasons. We want to make sure it's appropriate for the patient population that you're working with. We also want to make sure it has strong psychometric properties such as validity, specificity, or sensitivity. And we want to make sure that it's feasible in the setting in which you're practicing.

There are a myriad of different assessments that can be used for delirium, with the Confusion Assessment Method being kind of the gold standard for delirium screening within the ICU and the general acute care. However, it may not be the best for the ED because it requires training. It requires a little bit longer administration time. And it may not be as sensitive in kinda rapid fire situations. So in 2018, O'Sullivan et al. studied the 4 A's Test, and they found that it had good sensitivity and specificity for detecting delirium in kind of a typical patient population as well as a decent sensitivity and specificity for a patient population with a neurocognitive disorder such as dementia. Also, it's a very quick assessment, it takes roughly two minutes or less to administer, which is absolutely essential for the ED because of the fast-paced environment. The other component is there's really no training required. It's just kind of a general handout with four areas you assess and then you write down the scores, tabulate it at the bottom. It doesn't require any sort of formal standardization, as the handout kinda walks you through it. So, again, this is super imperative for the ED because practitioners down there may not necessarily have a ton of time, and they may not have the resources to engage in a more long-winded training component. So as you can see, there's a link to a PDF file. Feel free to copy and paste that link on your web browser after the course has concluded and take a look.

It has essentially four components. It involves some sort of observation of the patient as well a direction interaction and it assesses four A's, as the name states. So the first A is alertness. You will use your observation as the clinician to determine whether you feel like the patient's level of alertness or affect is normal, whether they appear mildly sleepy, or if they're overtly abnormal. And on the scoring sheet you'll see there's certain numbers that correlate with each score. The second A is assessing for orientation. This is done by asking them their age, their date, their current place, type of location, as well as name, and lastly, what year it is. And, again, you will score this. The third A is attention. You will have the patient recite the months of the year backwards, starting at December, and assess for how many errors they make. And lastly, the last A is, is this an acute change? Because as I said before, delirium is an acute onset. It differs from dementia in that it's not a gradual, it is very acute, and that's kind of the hallmark of it. So the last A is acute. And you'll go through and tabulate the score, and anything over a three is considered to be sensitive for a potential delirium process occurring. And this is a great way to be able to communicate with providers what we are finding in our sessions in a very objective and concise manner.

So once you've established the presence or absence of delirium, where do we go from here? So the OT practitioner will provide client-centered interventions that either help manage the existing delirium or help prevent the occurrence of delirium in those patients that we know are at higher risk. So interventions that are obviously outside of our scope for managing those triggering factors would be management of acute pain or infection. Obviously, that's not really our role, right? We know that the physicians or the advanced care providers, they will be managing the medical component, but there are various triggering factors that are within our scope, such as reducing the incidents of immobility. Specifically, if somebody comes in, they might have altered mental status, there might be an increased likelihood of providing restraints or some sort of restrictive component to their movement, because people might be nervous. Risk of

falls, they want to promote patient safety and reduce any sort of fall-like risk. So as OTs, we can come in, assess the patient, assess what occupations they want to perform, and then modify the environment to help promote mobility and engagement and activity. The other one is any sort of psychosocial stressor. Through education as well as access to community resources, we can definitely have a major impact in helping manage those psychosocial issues for patients that may be a triggering factor for their delirium.

Additionally, interventions that we know have been proven to manage delirium, specifically on the acute care side, include family involvement. This is great for empowering family members through education and engagement with the patient. A lot of times when people come into the hospital, there seems to be kinda this invisible wall between their loved one and themselves due to just the medical nature of it. But if we can get family members engaged as quickly as possible, maybe it starts out as something as simple as conversing with the patient, reorienting them, or providing calming strategies like telling them a story or reading them their favorite book or maybe putting on some music that's meaningful to the patient. So any sort of family engagement is extremely valuable because we know as healthcare providers we are tight on resources, and the main one is time. So we can't be in the room at all times, and we know that specifically in the ED, even more fast-paced than general acute care, resources are even tighter. So how can we kind of allocate some interventions that family's able to do to help with the prolonged intervention and hopefully help manage that delirium a little bit better.

Another major way that we can help is let's try to regulate the environment and normalize it as much as possible, knowing that the ED environment is so abnormal. It might be something as simple as regulating sensory input, putting in someone's hearing aids, giving them their dentures or their glasses so they're able to see the environment where they're staying, they're able to see the doctor that's talking to

them, they're able to hear the doctor that's talking to them. Oftentimes these are overlooked due to the emergent nature of the ED where I think OT really has a role in trying to empower the patient to be able to engage in daily tasks as normally as possible for them. And lastly, engagement in basic self-care really has a huge impact on delirium management and can also tie in that mobility piece too. I think oftentimes there is, in the ED it's very fast-paced, maybe patients aren't moving as well, there's that risk of falls, so something like a bed pan is often the safest choice. However, those of us who are trained in mobility and progressive activity, we know that transferring to a bedside commode has a plethora of benefits, not only neuromuscular activity tolerance but also the cognitive piece. So I think several ways that OT in general can target delirium.

And that helps us segue into just general OT interventions that can then be provided in the ED. I look at this a little bit in terms of kind of two focuses, the first is direct benefits to the patient or caregiver. The second one is benefits to the overall health of the ED from a resource management or fiscal perspective. Of course, our main focus is patient safety. That is the central theme of all OT interventions that are put up there. We're not necessarily providing a lot of OT treatment in the ED, a lot of it is assessment with some treatment, intervention's tagged on to it, but the ED wouldn't necessarily be a place where you're evaluating somebody on day one and then following up for two or three sessions. It's really kind of a one-and-done environment where we want to maximize patient safety, provide our clinical expertise so that we can set them up for safe discharge. Our main focus is definitely the safe disposition, knowing that the length of stay and the turnaround time is so short. We want to be able to provide the family, the patient, as well as the hospital team, the medical team, with our recommendations as quickly as possible. And we want to give them insight on how we think the patient is gonna be interacting with their current occupations in whatever environment they will be discharging to. We also want to promote safety from recommending necessary equipment. Maybe somebody had a fall in the shower and

didn't have a shower chair, but we know they're a high fall risk, a shower chair would help mitigate some of that risk. So providing education on what equipment is required as well as that equipment training is super important. Also empowering the patient through education, whether it's recommended home modifications or education on fall risk, managing their environment, lighted hallways, as well as setting them up with necessary resources for home or community-based resources.

The next kinda component of our intervention in terms of not only are we affecting the patient directly but secondarily we're affecting kind of the health of the ED. So we know that expediting our discharge recommendations reduces wait times. So we're helping with patient satisfaction, we're helping them get to whatever environment is safest for them with whatever resource is safest for them, and we're promoting their patient satisfaction by reducing wait times as well as reducing the resource burden on the ED from a financial and resource management perspective. We can help providers alleviate their general census and also provide overall patient safety.

All right, so we're gonna kind of bring it all together with two case scenarios. The first one is Maria. She was a 52-year-old female that I had worked with a couple years ago. She was originally Nebraska but was traveling out here to Colorado over the summer for vacation. She was walking down the street and there was an uneven piece of sidewalk, she happened to catch her toe, fell down. The fall resulted in a tibial plateau fracture. Orthopedics had reviewed her imaging, found that they didn't really feel like it was in need of acute surgery so they made her non-weight-bearing in a knee immobilizer. As you can see on her occupational profile, Maria was extremely independent prior. She worked as a school teacher, she was just visiting from out of state. She had good support from her husband. However, her children were off at college, so it was just her and her husband here on vacation.

So our main focus for Maria was, how do we optimize her ADL function and provide some caregiver training to ensure her safety so that her and her husband were able to travel the five hours back to their home state? We started by going over just general mobility and ADL engagement with this new non-weight-bearing restriction which involved use of a front wheel walker for toilet transfers, use of a shower chair for shower and transfer training in terms of that, as well as her husband had never provided physical assistance for anybody before. So there was a lot of education for him on how to best manage her environment to set her up for success while also allowing him to be supportive where she needed it in terms of lower body dressing or managing that knee immobilizer. And lastly, we provided a lot of education in terms of community resources. So we knew that they were in Colorado, there was a few pieces of equipment that they really needed to be able to safely get from point A to point B, but there was several other pieces of equipment that were gonna optimize their home safety. So providing them education on how to obtain those once they were back in their local community as well as giving them ways to set up home health services. So as you can see, probably a 50/50 split in terms of hands-on training from an ADL, IADL perspective as well as orthotics management. And then a heavy 'nother 50% in terms of education and empowerment for her own care moving forward.

So in contrast to Maria, we have Thomas. Thomas was an 82-year-old man. He had experienced a short bout of the common cold which unfortunately had led to some immobility, generalized weakness, and subsequently he experienced a fall. He came into our ED, his daughter had brought him in who is his caregiver. Did a whole bunch of imaging and tests and luckily find that there were no injuries. But he did have a pretty decent bruise on his hip and just some generalized soreness from the fall. And then, of course, that lingering generalized weakness from the cold that he had experienced several days prior and also related to that prolonged immobility. A little bit of history on Thomas. He has a history of Alzheimer's, dementia. He's been living with his daughter for the past several years, who also acts as his caregiver. She does not work and is

around 24 hours a day. She provides supervision for all ADLs and complete assistance for all IADLs and transportation. So because Thomas does have a history of Alzheimer's, he had recent immobility as well as an upper respiratory infection. He had three of, well, I guess one of the risk factors for delirium as well as two of those trigger factors for potential delirium.

So I started off right away by doing the 4 A's Test. I really wanted to rule out any concern for delirium. Luckily, the test was negative, and I was able to utilize information from his daughter who is around 24 hours a day for information. She didn't feel like she had noticed any changes, but we wanted to do the 4 A's Test just to be sure. And luckily it was negative. So knowing that he is of advanced age, he does have baseline Alzheimer's disease. One of the things we wanted to target first was really optimizing that sensory regulation. So making sure that he had his glasses on and his hearing aids on. Which, one of 'em had popped out during the fall, so being able to put that one back in gave him 100% hearing back, which was extremely important. Additionally, after our functional assessment and kinda initial interview, we discovered that Thomas was moving decently well, but he was requiring contact guard for a little bit of decreased balance. And he was requiring use of a front wheel walker for fall prevention, which he had used previously. His daughter had never provided hands-on physical assistance before for ADLs or mobility, she was just there for supervision and some safety awareness and verbal cueing. So a huge part of our intervention was providing that skilled hands-on training for this daughter to be able to adequately assist him with ADL transfers, mobility to and from ADL environments, as well as ADL performance. They did have all the recommended DME, but, again, daughter just had never physically utilized it before, so it was just a couple of cues here and there and family training to ensure safety with that. Again, educating on fall prevention and safe transfer techniques for tub transfers as well as general transfers for ADL performance. And given that he had several years of Alzheimer's and the family had not been hooked with community resources, we provided education on family support groups and

education, there's a wonderful call line through the Alzheimer's Association that you can call for resources as well as hooked her up with the local chapter of the Alzheimer's Association. And lastly, we recommended some home health OT for continued rehab, given his recent stint of immobility and generalized weakness, we wanted to make sure that he maximized his recovery. And one caveat, I will say that all of these were done in conjunction with physical therapy. So we want to make sure to highlight that this is not an isolated intervention, that all of these have been done with a large interdisciplinary group in the ED and I think that's a really important thing to highlight that OTs, we never work in isolation. We have to utilize our interdisciplinary team members and it's definitely a group effort.

All right, so to wrap it up. We know why OT is valuable. We know what we can offer and what outcomes measures we should utilize, but what are maybe some potential challenges we're gonna face? So the first one is it's fast-paced. If we thought acute care was fast-paced, oh goodness, the ED is so much faster. They want those beds turned over ASAP. And everybody is truly discharge pending. So really if we are practicing in the ED, we should be expediting our presentation and assessment of these patients because time is money for the patient, absolutely, from an insurance perspective as well as the hospital.

Something that Katie had alluded to earlier is the ED environment isn't really ideal for a lot of our assessments. So we kind of have to do the best we can with what we have, and everybody's facility will obviously differ. At our facility, we are lucky enough to be able to bring significant amounts of equipment down to the ED for different training or education with family. But the environment is not necessarily ideal. The bathrooms are down the hall, and so it may a 250 foot walk for somebody who maybe at baseline only walks 50 feet. Also, the elevated gurneys are probably four feet off the ground. So somebody trying to do a transfer out of bed who happens to be of a petite stature, it can get pretty interesting. Also, lack of specialized equipment down there can

specifically be a barrier in which we have to bring our own equipment down. And then the interdisciplinary education for appropriate referrals is something I'm sure as OTs we experience in every setting, and the ED is no different. So really empowering our interdisciplinary team members, specifically those that will be consulting us, whether it's the physician or the advanced care provider, we want to make sure we have educated them on what are appropriate consults and what is the appropriate timing to consultation. So I think here is where we can rely on our supervisors or maybe ourselves just to go down and really build rapport through conversation and advocate for our services where appropriate.

And the last one is insurance barriers. I'm sure, again, these are experienced in a multitude of settings, and the ED is no different. As Katie stated earlier, the number one user of ED services are those with Medicaid. So in the state of Colorado, Medicaid insurance does not provide the patient access to subacute rehab benefits. So being able to provide appropriate recommendations that are also feasible for the patient from an insurance standpoint is extremely valuable. And Katie had mentioned the third and fourth utilizers of insurance, or of the ED services, have Medicare insurance and self pay. So, again, self pay may have fewer resources and they're utilizing those emergency department resources because they really don't have access to a lot of other community-based resources, so how can we assist with that. And from a Medicare standpoint, the ED is not inpatient, so we are utilizing their Medicare Part B benefit. So being aware and really collaborating with our care management teams to figure out what insurance these people are presenting with and then how do we best serve them with the insurance that they have available.

And with that, we'll take some questions. And it looks like we got a couple here. The first one is, can the 4 A's Test be used in environments outside the ED acute care SNF? How do you recommend educating providers on the results of an unfamiliar assessment? Phenomenal question. Yeah, the 4 A's is one of those that is kind of in

the battery of delirium screens. So the CAM, the Confusion Assessment Method, is the most widely-researched and kind of the gold standard, but if the 4 A's is something that you would like utilize, it has good sensitivity and specificity and it is 100% okay to utilize in environments outside of the ED. That is just the one that has been shown to have kinda the best application to the ED, so that's why we highlighted that here. And in terms of how do I recommend educating providers, usually it's some sort of verbal conversation, saying, hey, here's the assessment that I have. Here's the components of it, it's looking at the acute onset, the attention, orientation, and based on this valid screening tool, it suggests a higher likelihood or an incidence of delirium. And then I'll document that in my note.

The next question is, the OT interventions seems to overlap with those that social services provide. Absolutely, and like I mentioned, a lot of these, they're not done in isolation. They are done in conjunction with other interdisciplinary team members, and I think the value of OT is being able to provide them education on resources that support their home safety in terms of ADL, IADL performance, as well as caregiver burden. That is 100% in our scope and something that we are more than capable of providing. Can some of those services be provided from like a social work perspective? Yes, albeit they come from a different lens and from a different skill set. So I think as long as we're staying true to our core value and unique value as occupational therapy practitioners, we can definitely provide those services.

Next question, do hospitals employ OTs to work in the ER or do you just to the ED whenever you need a consult? Great question. So I can only speak to our hospital, but, yeah, that we have a staff of acute care therapists that service all of inpatient and then the ED coverage does come from our inpatient caseload. So if like I am one of them that I cover the floors, and then if I'm assigned to the ED that day, I may have one or two consults. So I'm carrying about a 75% inpatient caseload. And then I've got one or two consults in the ED. But I would maybe reach out to some other resources to see

how they operate. That is just how ours operate. We do not employ somebody specifically for the ED or house them there eight hours a day. We house all our therapists in inpatient and then float to the ED when needed, great question though.

Next question, in our hospital oftentimes they're in observation status and so we discharge after the eval, how can they qualify for a three-day SNF stay? Great question. In my experience, they can't. So knowing that under Medicare they need those three midnights of inpatient status, yeah, patients that are under observation status, they do not qualify. So I think that's where we either need to decide, is this something that could be maybe referred to an acute rehab facility if it's a qualifying diagnosis or if it's appropriate, or is it somebody where we have to pull in family for family support and be able to support them from a community standpoint? I think that's kinda the ethical struggle. That is the ethical struggle we face in the ED, that our current healthcare system just may not provide the support that patients need. Another piece that is super important to note is communicating with your care management team, whether it's social work or case management, 'cause if a patient has had a qualifying hospital stay in the last 30 days or if they do have a managed Medicare, they might be able to qualify for a subacute stay, which is obviously outside of my scope. I don't have that knowledge base. So I would advocate for potentially having the care management team look in a little bit more in-depth on that.

And one last question here, do you ever use a cognitive assessment such as the SLUMS? I personally don't. The MoCA is what I use for kind of a general screen, because it has great normative data for age and level of education. The author on that is Rossetti et al. But I think the SLUMS would definitely be appropriate if you feel that it would meet the needs of your patients. Sincerely, I would like to thank everybody for hanging in with us for the last hour. It was an absolute pleasure to talk to you guys a little bit more about the unique value of OT in the emergency department. If you have

any more questions, please funnel those through occupationaltherapy.com and Fawn, and she'll pass those along to us. Thank you all and have a wonderful day.

- [Fawn] Thank you to Lyndsay and Katie today for a great talk. Thanks for all the great questions that came in as well. I popped up the virtual conference overview slide here. I hope everyone can join us tomorrow for our Acute Care Back to the Basics Gerontology talk. And we should hopefully have some of the initial courses up in our library shortly as recordings. So I hope everyone has a great rest of the day. You join us again at Continued and occupationaltherapy.com. Thanks everyone.