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So these are my learning objectives. First of all, I just want to talk a little bit about basic techniques to identify the patients with dementia in your practice. And then really spend the most of this lecture talking about how to support those patients. I think sometimes as providers we find that you don't know what to do. And I think I do this all the time. And I want to share some of the information I have on this for you. There we go. OK, so I've got no conflicts of interest.

ROSSI:

So first of all, talking about dementia diagnosis. I'm not going to spend much time on this. But I just want to briefly mention it. This is a very common diagnosis. 24 million people worldwide over the age of 60 have been estimated to have this disease, which is a number of diseases. It's Not just one type of dementia. The prevalence increases with age, as you can see. When you get to the age of 90, about 50% of your patients are likely to have some type of dementing illnesses. But in the ages of 80, 85 there is also very common.

And what's kind of interesting is that many physicians don't recognize this. And there's no judgment here. I take care of dementia all the time. But I also have primary care patients that I've taken care of for years. Came into my practice, very well, cognitively intact. And it sneaks up on you. If you're not checking for this relatively routinely, patients can decline, and have problems, and may not be obvious.

What's often seen is that patients can remain very socially appropriate. And they're answering your questions with socially appropriate answers. They may be very oriented to person, place, and time. And so you're not really aware that they're starting to have problems. And it's been shown in studies that physicians 40% of the time may not be aware of this in their patients. And that greater than 50% of patients may never have been tested. Because you are busy. And I understand that this is another thing to do.

So what is normal? So if you have patients who are older, there are some normal changes with aging that can occur. So these changes are people can have very mild changes in memory and a decline in learning. When I say mild, I mean it just takes them a little longer to learn. It takes them a little longer to recall information. But they still do recall the information. And they still can learn.

These changes that are seen are not progressive. So they may become slower. But then it stays at that level. And these changes, most importantly, don't affect their function. So if you start to see that change in function, that's telling you something.

OK. So there were some changes in the diagnostic criteria in the last DSM, DSM 5 from 2013. And I think that these criteria make it a lot easier for the primary care provider to make this diagnosis. It's a lot less, I don't know - more esoteric. It's simpler to understand. So these are the criteria that I've listed here.

To be diagnosed with dementia a patient needs to have significant cognitive impairment in at least one cognitive domain. So these are the cognitive domains. Learning and memory, language, executive function, complex attention, perceptual motor function-- which is kind of visual-spatial-- spatial-- and then social cognition. These have to be a significant decline from previous function. So it can't be someone who's always had this problem because of mental retardation, cerebral palsy, something like that.

There also-- So you're thinking about function. So there's the activities of daily living, which is feeding, dressing, grooming, bathing, toileting, continence, transferring, ambulating around in the home. And then the instrumental activities of daily living, a little bit higher level of function which I have listed here. Use of the telephone, shopping, housework, laundry, meal prep, taking their pills correctly, taking care finances, traveling outside the home, driving, using the bus. So when you start to see loss of some of these functional aspects of the person's life, start to think, what's going on?

Also, as I mentioned before, this impairment must be acquired. So something new. And you have to realize if they're delirious, if this is a cognitive change because of delirium, you can't call it dementia. And delirium, by default and definition, is reversible. The disturbances also can't be accounted by some other mental disorder, such as schizophrenia, bipolar disorder, or depression. So you have to be thinking about these other diagnoses as well.

So what do you use? So just very briefly there's a lot of screening tools out there. The MiniCog, very brief screen I'm going to mention, because it's one of the quickest screens that a provider could use in their office. The Mini-Mental Status Exam is the most widely known, well-known screening tool. But now this is a proprietary tool. And so this company that owns it is basically looking for money if you use it. So a lot of people have moved away from using the Mini-Mental, end up going to some of these other free tools.

Some of them include the MoCA, the Montreal Cognitive Assessment tool, which you can see there's a website here if you want to learn more about it, MoCATest.org. Or the Montreal University Mental Status Scale, the SLUMS. And then here's a website with a number of cognitive screens.

OK. So just briefly I want to talk about the Mini-Cog, because this is a very brief screen that's been validated. Takes three to five minutes to use. It involves just two things, three word recall plus a clock drawing test.

So first, you give the patient three words. Any words you like. Usually nouns are appropriate. You have them listen to them and try and remember them. Then you do a distractor. You have the patient draw a clock. You give them a blank sheet of paper or a piece of paper with a circle drawn. And you have them draw a clock. You want to have them put the numbers on the clock and set the hands to something which is a little bit more of a complex time, with one hand on one side of the clock and one on the other. So some common times are 11:10, 1:10, 2:45. Clock times that are a little more complex than 3 o'clock for instance.

And then you go back and have the patient recall those three words. The scoring is very simple. If they get-- you give a point for each of the words that they recall. And then you can grade the clock. If the clock is normal, then it's a normal clock. And this is what you do with it. Whoops. Well, I don't see it. But I had a little figure here. Let's see. The figure's missing. But it's in your slides.

So the figure basically tells you how to score this. If the patient has all three words that are correct, then they're considered not demented. And this is a brief screening tool. So it's not going to pick up every dementia case. But it will pick up some. If the patient has two words or three words that are correct-- I mean, excuse me. Two words or three words that they don't recall, then you look at the clock. If the clock is normal then they're fine. If the clock is abnormal, then they're considered demented. So it's very brief, very quick. But it gives you a really quick screen that you can do in a few minutes to see if perhaps your patients-- you have to screen a little further.

OK. So getting back to the screening tools. I also have in your slides, hopefully, a copy of some of the other tools, the SLUMS and the Montreal Cognitive Assessment. What I like about the Montreal Cognitive Assessment is that it sets out which of the screening tests go with each of those domains. So I said, this is a very easy thing to diagnose dementia yourself. The Montreal Cognitive Assessment will say, these are the executive function tasks. These are the delayed recall, the memory tasks. These are the attention tasks. So you can see very quickly which tasks the patient is not doing well. And then you can decide. Is there one domain that they are impaired in?

So coming back to supporting the patient. Supporting the patient with dementia. Once you've defined that the patient has dementia, how do you decide what support needs they have? So dementia-- there's different levels of dementia, mild, moderate, and severe. And I think there's a big misconception that there's some voodoo to figure out where people land. The way that you decide what level of dementia people have is purely functional. So like I said, if you are saying the patient is demented, they must have some functional decline.

So these are what the levels mean. So if someone's got mild dementia, they have functional decline. They're having problems managing their meds. They're getting lost in new places. Problems managing their finances. They're less organized. Decreased insight. They have poor short term memory, missing appointments. Many of these patients are still in their homes. They're still in the community. They're relatively successful. They are starting to have trouble. And some of their needs can be taken care of by informal caregivers, their family coming in and helping them with their bills.

So these are the people that often are missed. Because things are not that bad. But you may start to see that they're missing appointments. You're noticing that maybe their blood pressure is not as well controlled. Their INR is not where you expect. And it goes beyond the usual variability with managing Coumadin.

When people become moderately demented you start to have worse problems with memory. They may perseverate and repeat stories. They're going to have more difficulty with their instrumental activities of daily living. And even maybe some of their activities of daily living. They're going to start to have some of the behaviors of dementia, agitation, aggression, sundowning, delusions. They're gait and balance may be affected. They become lost in familiar places, where before maybe it was just new places. They may be restless. They may wander. And they may have apathy and depression that may be part of their illness.

Severe dementia people are very dependent. These are the patients who are incontinent. They need full care. They may often be bed bound and immobile. They may lose speech. They become mute. They're unable to speak at all. They're not able to recognize familiar people in their lives. So these are people who are very, very dependent. And often, like I said, need full care, maybe in a nursing home.

OK. So the type of support that you have to think about may vary for the level of dementia the person has. But I can tell you that all patients with dementia need support. There are also a number of different types of dementia. I've listed some of the more common ones. And I can tell you that support needs are very similar among these. There's a few subtle differences I want to point out. So Alzheimer's disease is the most common type of dementia that we are aware of. It's often been stated to be maybe more than 50% of cases. Vascular dementia usually is second or third. And this type of dementia-- because it's vascular, based on people having strokes, even microvascular changes-- may remain stable for a long time, presuming that you're controlling those vascular risk factors well.

People can have mixed dementia. There's nothing to say they can't have both types of illness, Alzheimer's and vascular. So in these cases you're going to see decline. But maybe you're going to also see large drops as they get-- if they have a stroke.

Frontotemporal dementia, there's a number of types of this. But this type of dementia can occur at earlier ages. So this is the type of dementia you would see in early 60s, even into the late 50s. People often have disinhibition, very poor judgment. They really make their families suffer, because they may remain competent to make decisions, and yes. have terrible judgment. And are usually physically well, because they're younger old people. Some forms can have aphasia and very predominant language problems.

There's Parkinson's dementia. And this can happen, obviously, in Parkinson's disease. So on top of having dementia, you're dealing with the motor issues of Parkinson's disease.

Lewy body dementia is another form. A little less common. But also people with Parkinson's features, but have predominance of hallucinations. So you're dealing with some of those behavioral issues with the hallucinations.

And then those patients who have chronic traumatic encephalopathy, people who have had multiple brain injuries like football players and boxers, this group also. This can occur at younger ages. And you have the added features of people who have traumatic brain injury. So they may have impulsiveness, aggression. That can be very difficult for her caregivers and families.

OK. So what-- getting into the support. Because that's what I really want to talk about. What are the support options? We're going to talk about treatments. We're going to talk about prevention. Because people will come into your practice and say, how do I prevent this? My mother has dementia. What do I do? We're going to talk about long-term planning, how to support the caregiver. And then support for some very common dementia-related issues that I'm sure you've seen, and sometimes aren't quite sure what to do with. Agitation, delirium, sleep disorders, wandering, weight loss, safety concerns, such as whether they should stay in their home, drive, and then end of life and palliative care issues. So I've got a fair amount to cover. But I want to touch on some of the important issues from all of these.

So first of all, treatments. And I think this is where most physicians have heard of treatments that are out there, that are FDA approved. And you may have handed them out. And then what do you do? So I'm going to talk about what data there is. How effective are these things, anyway?

So there's the cholinesterase inhibitors. Donepezil, galantamine, and rivastigmine are the three that are available and widely used. Donepezil is approved and has been studied for all levels of dementia severity, from mild to severe. Galantamine, from mild to moderate severity it's been shown to be effective. And rivastigmine for all levels of severity.

But what's very important to realize is that none of these pills, unfortunately, is disease modifying. And I think there was a very big misconception when you talk to representatives from drug companies. It seemed to imply that these medications slow down these diseases. And unfortunately, they really don't.

They are something-- they are medications that can help modify symptoms, however. And I wish it was something that would work in all patients. But I think probably anyone who's prescribed these medicines can see that, oftentimes, you don't see much benefit. And that's because in the studies it's been shown that only a small percentage of patients-- and I've seen estimates between 25% to 30%-- only a small amount of people actually have this symptomatic improvement.

And what kind of symptomatic improvement can you see? A small change in cognition. Perhaps a small benefit in improving function. So it's not a huge benefit.

Nevertheless, for some patients it may help. There's also been studies that show that perhaps this can help maintain function. And the studies for that are rather mixed in terms of whether they actually do or not. So very conflicting evidence. You can see from a number of studies here. So some of the studies have shown that perhaps these delay admission to nursing homes, which certainly is something that patients and families want. And perhaps may preserve activities of daily living or function for a short time. So for that reason, oftentimes they're offered. It's something to think about.

What these medicines do not do is they do not prevent progression from a mild cognitive impairment to dementia. So if you have someone who's just starting to have early memory problems, giving these medicines is not going to delay in any way them progressing to dementia if that's what's happening in their brain. However, there is the situation that if you have a patient with Lewy body dementia, these medicines seem to have a more marked improvement. So it's definitely worth trying these medications if you have a patient with that particular type of dementia.

There's also the NMDA receptor antagonist, which is memantine. This has a different pathway in terms of its use. But this, too, is not a medication that is disease modifying. It also has very small symptomatic benefit in a small percentage of patients. What's really important to be aware of with this medication is that there are only studies showing benefit in patients that have moderate to severe dementia. There does not seem to be any benefit or negligible benefit in patients with mild dementia. And I see patients who just forgot their car keys yesterday coming into my office for a consult. And they're on memantine. And I go, I don't think this is going to help you. So I mean, this is not the medication to use in those patients with very early disease.

Now there's lots of treatments on the web. And when I was preparing for this, I went on the web to see what else might be out there. Because patients, families are always coming to me saying, what about turmeric? What about omega-3s? What about this? They hear about things. They get on the web to see what might else-- what else might be out there. Because of course, we doctors don't have the answer. So there must be some answer out there on the web.

So this is a short list of things that I found. This is actually-- a lot of this is actually on the Alzheimer's Association website, too. Just to give you some ideas. Do these things work? Unfortunately, there's very little data for most of these. And I've kind of shown you which ones have actually been shown in randomized controlled trials not to have any effect. So things like ginkgo biloba and Huperzine-A, which is a Chinese herb, have had randomized controlled trials showing no benefit.

There's a lot of things that just don't have adequate research. So for instance, the Caprylic acid, which is a medium chain triglyceride, coconut oil, which is also a medium chain triglyceride. There's a little data on these. The Caprylic acid is marketed as a food supplement for patients with dementia, with the thought being that the brain in Alzheimer's disease uses glucose in an adverse way. So if you give patients medium chain triglycerides and change their diet, it improves the brain. There's some studies. It's all done by the company that is marketing this. And they have declined to go to the final phase 3 trial. So people are a little skeptical that this truly has real effect. But it's out there. And patients will show up on this medication.

Some of these other things there's just not enough data. I know turmeric has been sort of a trend among my patients' families. Now among the vitamins, vitamin E does have some data. A number of years ago there were studies showing that perhaps using high doses of vitamin E, 2000 units a day, might prevent the progression of Alzheimer's disease. Then there was other studies looking at this further that were a little skeptical, or showing that the vitamin E had other side effects. I'm not sure. Though if you were going to pick one of these things to pick, perhaps vitamin E would be the one that might have some benefit. Vitamin E. Vitamin E. Yeah, well, there's B, D, E. But E is the one that has some actual data.

OK. So what about prevention? Once again, people have been trying to figure out how can you prevent Alzheimer's disease and other dementias for many years. Looking at the data-- and Baumgart most recently has sort of pulled it all together-- really it looks like being healthy, having a healthy lifestyle, is probably the fountain of youth at the moment. And really exercise is coming out to maybe be top. There's a number of studies now being done in mice showing that exercise may actually help prevent loss of neurons in the brain. So this is a real emerging field. And certainly if you have a vascular dementia, having patients improve their vascular risk factors with exercise, diet, is certainly helpful.

So this is a little bit-- is still an emerging field. But if you're going to suggest something, exercise, healthy diet. And there's been some studies looking at the DASH diet and the Mediterranean diet. These seem to have some benefit. Social engagement, so staying socially active, going to the senior center. There are studies showing that there's some benefit there. Cognitive stimulation. And we always say, well, play games, do crossword puzzles. This is mixed. There's definitely studies showing that you can maintain your brain function, and that helps.

There's also studies showing that people who are more highly educated, that may help your brain. Then there's also studies saying maybe the fact that highly educated people have less dementia is because they started out higher. If you have a superior brain reserve, and you lose 50%, you may be at average. So it's a little hard to say that highly educated people are protected. Nevertheless, there's some thought that stimulating the brain doesn't hurt. And that means, not just watching TV, but taking a class, learning a new skill, things like that.

Certainly controlling and preventing vascular risk factors is always important, because of the potential that the vascular system is highly linked to the risk for dementia. Avoiding head trauma, certainly. Avoiding things that precipitate delirium. There's a little bit of research starting to come out that anticholinergic medications don't just cause delirium, but may actually be linked to causing dementia. Once again, very early studies. Hard to say if that's a cause and effect. But something to think about. And then avoiding things like smoking, alcohol, and drugs. So that's all I can say about prevention.

So now we're back to supporting the patient. Long-term planning. If you discover a patient in your practice has dementia, it's really important to think about long-term planning. So for instance, today the patient may be able to make some decisions about their health care, may be able to name a power of attorney. This is the time to get that in writing, to find out what their wishes are, what their advance directive and health beliefs are. Because later on, you may not be able to get that information from this patient.

You want to think about-- with the patient, with their family-- what future needs might they have? What would they do if they couldn't live in their home? Where would they go? Would they move in with a family member? Would they want to live in a particular personal care home? Maybe send the family and the patient to look at some of these places now, while they still could have an opinion on that. Think about how would they help-- how would you help them manage their medicines? How would you help them with their finances? Who would do that with them? Because some people, they have resources among their family. And it's time now to start thinking about that.

And then also educating the patient and their family about the disease progression. This study by Mitchell was a large study where they just looked at the natural history of dementia in patients. And they found that people who had done this type of long-term planning and done advance directives early were less likely to have inappropriate use of medical services at the end of their life, more likely to have the family, less stressed. So it's really important to try and think about that early. And it's a hard conversation to have. Because patients-- this is difficult to hear. Their family member may have dementia or does have dementia. And to start talking about those things is tough. But like I said, starting that conversation can be very important.

OK. So now we want to talk about supporting the caregiver. Obviously, the patient, as they're in their mild stages, they're doing much of their own care. As this disease progresses, it falls upon their caregiver, which is often family members, but may be other people. And it's been clearly shown that people who are caregivers are under quite a lot of stress. And that caregiver burden puts them at risk for becoming abusive to their family member. So you want to try and think about elder abuse.

So how do we avoid this? Support, support, support, which often means caregiver support groups. And respite care. Respite, respite, respite. So where do we find this? And I think as physicians-- I had no clue how I did this, how I referred people for support. Now that I'm doing geriatrics, I'm practically a social worker. So how do you do this? How do you find out about this?

So first of all, have the caregivers think about, is there support that they can get from family members, from friends, from neighbors, from their church, from other religious organizations? And some really good sources that I've found in terms of religious organization is Catholic Charities has a lot of services. Jewish services in Pittsburgh. Another really good resource-- and this doesn't matter where you're from in this country-- is the Area Agency on Aging. Every county in this country has an Area Agency on Aging in that county. And in Allegheny County, here is the website. There is a wealth of information for older individuals from that office.

And every county is going to have different services. So using their information and their knowledge is critical. They also can guide patients into certain-- they may be eligible for certain services that you or I may not be aware of.

Another really good resource is the Alzheimer's Association. And here is their website. They also have a wealth of services. They also provide support groups in local communities all over the country. So sending patients, families, to those support groups can be very helpful, just to talk about the problems. And also, caregivers often have really good solutions that they share with one another. And that can be very helpful. Things that I would never have thought of.

And then lastly, if you happen to have a patient who's a veteran, the Veterans Association, the VA, has quite a lot of services for older veterans. So it's really important to refer patients to check out whether they have VA benefits. Because it's pretty amazing.

OK. So what else? What does respite care involve? So respite care is giving the caregiver a break. There's inpatient respite care. And this is to give the caregiver a break long term. They need a vacation. So it might be having family step in and take care of someone for a time. Or sometimes patients may need to be admitted to a nursing home or another facility for that time. That could be very expensive. But once again, look into the VA. They do cover some of that.

Adult daycare. Adult daycares are all around. They basically are senior centers with more supervision. They make sure the patient is not going to walk away. They usually have some type of health professionals there to take care of giving them pills and doing other services. So it does have a cost. But this is a really useful day-to-day service where a family can get some respite for maybe a day a week, or even five days a week.

There's also in-home respite where nurses can come in. Once again, this may be through the county office or through the VA. Neighbors or friends may sit with the patient to allow the caregiver to get out and get their hair done, or go shopping, or just take a nap.

Another really important thing to be aware of is there are some income-based services that are available for dually eligible patients. And these are people who have both Medicaid and Medicare. So in our area it's called Community LIFE or PACE. And PACE programs are national. They're all over the place. It's a program where patients have very comprehensive health care and services. They can be brought into the center. It's like a senior center for these patients. It allows them to remain in their home. But they do have to be Medicaid. And they have to be nursing home eligible. But many patients fit into this category. And this is something that through the Area Agency on Aging a patient's family could find out if they're eligible.

There's also something in our area called the PDA waiver program, which is also for these patients. But it allows patients to receive extra services, so that they can remain in their home. And it's very useful for patients that are qualified for that.

OK. So moving on to some of our other issues. Agitation. This is a big issue. You as the primary care provider may get a call. My mom is agitated. And she's hitting. And she won't sit down. And what do I do? So what do we do? A lot of times people reach for their prescription pad and pull out a medication. Unfortunately, looking at the literature, there's very little data that shows that there's benefit for any medication for agitation. And unfortunately, some of the medicines that are chosen are benzodiazepines and anti-psychotics. And there's data showing that there are significant risks for using these medications. Antipsychotics-- in this population of patients with dementia, there's an increased risk of mortality. So you have to be a little cautious when you're trying to pick a medicine.

Now, there is a little bit of data saying that SSRIS, and specifically citalopram, has the potential to help with agitation. And I have here a couple studies by Pollock and Porsteinsson that show that this effect is real. There also is a little bit suggesting that perhaps the cholinesterase inhibitors, donepezil, galantamine, et cetera, may have some effect for agitation. And what I would suggest is if you're using an SSRI-- certainly if you have any inkling that the agitation may be related to mood, like an anxiety-based thing, like someone is saying, I want to go home. I want to go home. And they're anxious about that. That type of agitation an SSRI may indeed help. It's certainly-- these are relatively safe medicines if you wanted to try something.

What about restraints? I mean, sometimes restraints might be used. More in the hospital setting. But these also have not been shown to be helpful. And there are significant side effects and adverse effects of using restraints in these type of patients.

What is effective? If you look at the research, it's amazing that behavioral techniques have come up over and over again to be the most effective. And then you go, well, how in the world am I supposed to know what behavioral techniques are? What they are-- and you can look into this a little more. But I must say it's tricky to find specifics-- are things like redirection. So if the patient wants to go home, you say, here mom, let's go eat a cookie. And you just change the subject. And with a demented patient, oftentimes that's very effective.

Oftentimes, too, families will argue with someone. The patient will say, I want to see my mother. And the patient's 90. Their mother has been dead for many years. And the patient's family will say, your mother is dead. And now the patient gets more agitated. So teaching the family not to engage and argue with a demented person can often avoid the trigger for this agitation. So that, too, takes some time with some families, to make them understand to avoid those triggers.

Other things that are important is trying to meet unmet needs. So some patients will become agitated and try and get out of their chair or bed, because they've got to go to the bathroom. They know they've got to go to the bathroom. They might not know where the bathroom is. But they're getting up to go. And now they're classified as agitated. Well, if you toilet them regularly so they don't have this unmet need, they may no longer be agitated. So trying to find those unmet needs. Structuring the environment to avoid the triggers. Avoiding changes in their environment. Keeping everything very scheduled and consistent. That can help quite a bit with agitation. And it's not a quick fix, unfortunately. But these are very effective methods.

OK. So moving on to delirium. So patients with dementia are at very high risk for delirium. So that's taking someone who already has dementia, who's already confused, and layering delirium on top. The reason for this is these patients have very low cognitive reserve. They've lost a fair proportion of their brain cells. And they just can quickly become delirious. And I mean from things that you wouldn't expect. From being constipated, from having urinary retention, from just having a change in the schedule, like the holidays where everything's different at their home, can makes these patients delirious. So be aware of this.

The other thing to be aware of-- and I educate families about this-- is that this delirium may linger. Not just for a day, but for months in some of these patients. And I think many physicians are not aware of how long a delirium can linger in these patients. It's also very tricky sometimes to distinguish between, is this just their dementia getting worse, or is this delirium? Frankly, you have to just do your best to make everything as good as possible with their medication regimen, with their health. And then give it time. And these are things that certainly can lead to delirium. So you want to treat these things and be aware of them.

Sleep disorders. So many patients with dementia have problems with sleep. What's very common is that patients will have a reverse in their day and night. So patients are up all night, happily sleeping all day long. And frankly, most of the time this probably isn't harming the patient. They're getting their sleep. They're getting perhaps enough sleep. But it's harming their caregiver who's spending the whole night up to make sure the patient is safe, and then has to do their usual tasks the next day. So they are sleep deprived.

Often this is multi-factorial. And as I mentioned before, it leads to quite a bit of caregiver burden. So patients families will come to you and say, how do we get them to sleep? And medications are usually prescribed at the request of the caregiver. But there's really no data that there is the medicine that's going to help in this situation.

So what is helpful? Sleep hygiene, non-pharmacologic treatments should be tried first, if you can. And so what I suggest is keeping that patient up during the day. Avoiding those daytime naps. And it's tricky, because a lot of times the caregiver is tired. They want to nap. So everybody is sleeping all day. But you really need to get that patient engaged in activities, so that they don't sleep all day. And that can help quite a bit to shift their cycle back. Avoiding alcohol, caffeine in the evening, excess fluids at night. Having very consistent sleep and wake times can be helpful. Getting them exposed to that morning light, kind of getting their circadian rhythms back in sync. And getting some exercise during the day.

Sometimes the caregivers just cannot manage this. This is where getting them into a program like an adult day care may be very helpful, so that this is not put onto the caregiver's back as well. Because it gets really hard to keep your family member engaged when you're really stressed, and burdened, and tired.

OK. Safety concerns. And these are big issues. So driving is one. When do you decide that your patient no longer should drive? Unfortunately-- and I've looked at this literature rather extensively, because I also do a driving clinic for these patients at the VA-- is that there is no one test out there that you can just do and say, if you get this score, you should drive. And if you get this score, you can't. It's much more complex than that.

Be aware if you have a patient who has more moderate dementia that they are likely to be less likely to be safe to drive. The patient with mild dementia may be OK. Of note, there's certain areas of the brain that are really important for driving. And top of that is executive function. So if you have a patient that is having trouble with complex tasks in their daily life, like taking their pills and doing their finances, that's really, really likely that that patient's executive function is impaired. So if they're having troubles with that, I would expect that other complex tasks like driving are also likely to be impaired.

If you're using a screening tool like the Montreal Cognitive Assessment, it actually has a couple of executive function tasks. One is the clock drawing task. And the other is that little 1-A 2-B, 3-C, which is something called trails B if you do the longer version. And trails B in many studies has come out as being linked to patients who have higher risk of crashes if they are impaired in that trails B. So if you are doing that sort of test, or if you're getting neuropsych testing, and people have executive function impairment, that's kind of a sign that driving is probably more risky.

Other areas that are important in cognition are attention, visual-spatial, and processing speed. Memory itself is not that important for driving. It is important if patients move to a new area, and they're trying to remember how to get to the new grocery store, or the new route to their daughter's house. But if these patients have lived in the same home for many, many years, they're going to have an old, deeply ingrained memory of that path. And they will get there for a long time. But once again, it's tricky. Be aware, though. If family are reporting problems with driving, take note of that. And in Pennsylvania we do have mandatory reporting if you have any concerns. So you could report that you're concerned and ask PennDOT to perhaps test the patient a little more thoroughly as well.

Living alone. So when should a patient not live alone? Once again, poor memory may lead to problems with function in their home. Things like forgetting to pay the bill, leaving pots on the stove, forgetting their medications, forgetting appointments. So if the patient doesn't have other support from family to help with supporting them with some of those tasks, they may need to move into a different location where they have more support sooner. But if they have family support, they may be able to remain in their home a little longer.

I do have problems when patients have problems with executive function. Because that entails problem-solving may be impaired. And these are the patients who may not know what to do if there's a fire in their home. So trying to figure out if they can cope during an emergency is tricky. But like I said, executive function impairment is a clue.

And then financial capacity. Once again, executive function is closely related to the ability to manage bills and their finances. And memory also.

OK. Wandering. So wandering, very serious problem. And there have been data showing that six out of 10 patients with dementia have wandered, will wander. Even if they've never wandered before. Certainly the patient who is physically impaired is unlikely to wander. But many patients are still able to walk, and therefore could wander. This also is a higher risk when they're unattended. But there have been many cases where patients have a family member there, and they still have wandered. So this is something to consider. There's certainly increased risk of death if a patient is wandering into a less populous area, a natural area, especially if it's winter or hot part of the summer. And 46% will die if they're not found within 24 hours.

So how do you prevent this? Once again, this is something to consider with families if you're concerned. Alarms. You can get alarms that you can buy on the web that can go on the door, that can go on their bed. So that the family at least is aware if they're getting out. Locks on the door. So you certainly don't want the family member to get locked into the house in case of a fire. But I suggest that they get a deadbolt which the spouse or the family member wears around their neck, so they can open the door. But the family member with dementia cannot get out. Or a lock that's really high or camouflage, so that patient can't find it. Because they're not able to figure that out.

In some cases, just camouflaging the door. And you can buy these just pieces of fabric that have a bookcase on them or something. And they can put that over the door. And the patient with dementia will say, oh, there's a bookcase, and turn around and never try and go out the door. Or a stop sign. You can get these little stop signs that you put on the door. And for some patients, that's enough of a stimulus that they'll stop and turn around. So simple things like that, or those child-proof door covers where it's hard to turn the door knob. Sometimes that, too, can be the answer. I've also seen suggestions of just putting something really interesting by the doors, so that the patient will get distracted, and see this really interesting thing, and never-- and kind of get redirected automatically.

Keeping the patient tired so they're not getting up at night is helpful. Having someone with the patient at all times. The Alzheimer's Association also has something called the Safe Return program where they provide ID tags, necklaces. That's very useful and sort of registers the patient in a system, national system, so that if they are lost, it's more likely that they may be found. There's also GPS tracking devices that families can buy now that they attach, somehow, to the patient's clothing. So that if they are lost, they can be more easily found.

Weight loss. So another really-- OK. So am I done? OK. OK. So weight loss, real quick. Weight loss is a problem. In severe dementia, patients will not eat well. But if you are thinking about a PEG tube, this is something that has been proven not to be very useful. So something to be offered. Other things like appetite stimulants like Megace and Dronabinol, also not very useful in this population.

So let me move along. End of life. We talked about discussing goals. So conclusion. Dementia's common. Lots of problems. Issues for the patient and the family change as the disease progresses. And just understanding how to support the patient and the family through this is very useful. And thank you very much.