

Transcript: December 2016 CardioLAN Webinar

Cholesterol: The Good, The Bad & The Ugly

Cindy Sun: Hello everyone and welcome to the HHQI December 2016 cardiovascular learning action network, or the CardioLAN. I'd like to thank all of you for taking the time today to join us. We hope that you'll find this information not only interesting but also applicable to your care setting and for those of you that are listening to us in the recording, we appreciate you taking the time as well.

We're very excited today to talk about cholesterol and we have a wonderful guest speaker that I'll introduce you to a little more formally in a little bit. First we'd like to go ahead and mention to everyone that this session today is approved for 1.25 nursing hours of continuing education. You can read the information on the screen. Additional information on how to obtain these 1.25 hours will be discussed a little later in the session.

For those of you that I haven't met, my name is Cindy Sun from the HHQI team we also have Misty Kevech today and she and I are both RN project coordinators for HHQI so we're thrilled to be here. I'm going to keep the announcements very short today just to let everybody know where we stand on things. Starting with HHQI, there are currently almost at 17 thousand participants. We are within just a few of that so that's going to be very exciting landmark for us. We're happy to get to that point. And that's representing about 56 hundred home health agencies. So we want to thank all of you for participating and continuing to support and continue to try to improve the quality of care that the home-health patients are receiving.

A few other announcements I wanted to make. It's our third Thursday as you know. This is our third Thursday event and every third Thursday of the month, there's something on at HHQI so this month's is CardioLAN. January's third Thursday, so you can mark your calendars, will be January 19th. And at that time, I wanted to just read this to you so I don't mess it up. Home and community-based services, HCBS and how partnering with a quality focus organization can improve patient outcomes. We're going to have representatives coming in and telling us about this and how best to partner so that we can continue to improve the quality that the patients receive.

Now February, an event I wanted to mention to you because this is pretty fresh [inaudible 00:02:32] we haven't made any real public announcements about this but the ... very excited. Dr. Janet Wright who is the chief executive officer of Million Hearts, the Million Hearts initiative which is the CMS, CDC initiative focusing on reduction of 1 million heart attacks and strokes is coming on to our event to explain Million Hearts 2.0 and where community-based cardiovascular prevention is going. Community-based, that's home health. So we're just beside ourselves that she has accepted, especially for that specific day. So with that I think I'll end the announcements.

I would like to just take a moment and introduce you to Chelsea Leonard. If you read the My HHQI blog, you've read Chelsea's blog in September of this year with the same title as today's webinar which was, Cholesterol: The Good, the Bad, and the Ugly. After reading her blog and talking to her a little bit more, we decided that she just has a wealth of information to share and she was gracious

enough to join us today to elaborate more, not only on the cholesterol, but also how best to use a pharmacist in the community to help our home-health patients.

Chelsea graduated from East Tennessee State University Bill Gatton College of Pharmacy in May of 2015 and completed a post-graduate community pharmacy residency with Samford University McWhorter School of Pharmacy at Chad's Payless Pharmacy. After the completion of her residency, she stayed at Chad's Payless Pharmacy as the clinical service coordinator and has experience in chronic disease management including hyperlipidemia, hypertension, and diabetes. And with that, I would like to say welcome Chelsea and I will pass the ball to you right now. Thank you very much.

Oh my gosh. Chelsea were you able to get the ball?

Chelsea Leonard: I was but I kept getting muted for some reason. I'm sorry about that. [crosstalk 00:04:59] Thank you so much for the introduction Cindy and thank y'all again for inviting me to be your guest speaker today. I'm really excited about it and I hope that I give y'all some good information. Just up front, I do not have anything to disclose. And listed here are the objectives that we're going to go through today during the presentation and I hope that we will meet these by the end of my slides.

According to the most recent data from the CDC, 73.5 million adults, which is about 37 percent of adults in the United States have high LDL. We'll talk about LDL a little bit more in a few minutes. So having high cholesterol increases one's risk by two-fold to develop heart disease which is the leading cause of death for adults in the United States.

Other risk factors for heart disease include diabetes, obesity, poor diet, physical inactivity and excessive alcohol intake. Some of which commonly go hand in hand with high cholesterol. Less than half of adults with high cholesterol actually receive treatment for it. This is really important because of the fact that heart disease is so prevalent in America. As healthcare providers who commonly have contact with patients, this is something we can effect if we know that patients have high cholesterol and aren't getting treated for it.

As I mentioned previously, heart disease is the number one cause of death for adults in America. The map on this slide shows the prevalence of the disease with the darker colors indicating higher death rates. And so that's why it's important to manage and treat high cholesterol.

What exactly is cholesterol though? It's a waxy, fat-like substance that travels through the blood attached to proteins called lipoproteins. It's produced by the liver to help make hormones and vitamin D and it helps digest fatty foods which may seem kind of ironic but we'll talk about that a little bit later. Cholesterol is also found in foods like eggs, cheese and fatty meats. When you're body has too much cholesterol, it can build up on the walls of your blood vessels and these deposits are called plaque.

As your blood vessels build up plaque deposits over time, the inside of the vessels narrow and allow less blood flow through to your heart and other organs. When a plague buildup totally blocks and artery carrying blood to the heart, it can cause a heart attack. Then another cause of a heart attack is when a plaque deposit bursts and releases a clot in the artery. Angina is caused by plaque partially blocking a coronary artery which reduces blood flow to the heart and causes chest pain. In this picture

here you can kind of see where the plaque has built up and it's limiting the blood flow through the artery.

When a patient has their blood work done, the cholesterol panel will come back with a few different numbers. The most common numbers include, HDL. This is a good cholesterol. HDL absorbs the bad cholesterol and takes it back to the liver to be flushed out of the body. That's how high cholesterol can help digest fatty foods. Having higher levels of HDL can reduce the risk of heart disease and stroke. The ideal level for HDL is around 40 or higher, typically between 40 and 60 is what we aim for.

The next one is LDL and this is the bad cholesterol. This is the one that makes up the majority of the body's cholesterol. This number is often the one that's the target of most medications. High levels of this is what causes the plaque buildup that can lead to heart disease and stroke. The ideal level of LDL is less than 100 milligrams per deciliter. Again, we'll talk about some ways to improve these numbers later on.

The next type of cholesterol are the Triglycerides. I called these the ugly cholesterol just for the sake the catchy title. That's not typically what they're referred to as. They are a type of fat found in the blood. If you were looking at real blood, these would look like blobs of grease just floating through there. Triglycerides are really affected by eating fatty foods, refined sugars, and carbohydrates. The ideal level of triglycerides is less than a hundred and fifty. However, if the triglycerides are really high, typically over 500, this is when they would become the main target to treat with medications.

I want to show you all what a triglyceride looks like here on the next slide. They're made up a glycerol backbone with three fatty acid chains attached. Glycerol can be a building block for glucose or sugar. Essentially a triglyceride is a sugar with fat attached to it. This is why high triglycerides are common in patients with diabetes. If we decrease the amount of sugar a patient eats, we can help decrease the triglycerides because the fat doesn't have anything to attach to.

All these numbers are combined to be the total cholesterol and the ideal level is less than 200 milligrams per deciliter. The CDC recommends that all adults over 20 years old have a fasting lipid panel performed at least every five years. Although there are some providers who choose to do this annually or more frequently if they're having a hard time getting their cholesterol under control. It's also very important to ensure that a patient has been fasting for at least eight hours with no food or drink except for water or black coffee. If not, the results will be inaccurate and the sample might end up looking something like what's in this photo here. That looks pretty gross. That would probably be what it would look like if I went for a lab draw right after I had a giant breakfast platter from Cracker Barrel. You don't want to do that. You want to make sure that patients aren't ... that they have been fasting. Because if the results come back inaccurate, it could potentially lead to unnecessary medication or treatment. We don't want patients to be on medications unless they absolutely have to be.

This leads me to my next topic. Now we know what the lipid panel and what those numbers mean, so what do we do with that? That'll be our first polling question. What is the ideal level of total cholesterol? We'll give y'all a little bit to respond. I'll keep going while you all respond to this question.

The guidelines that I'll be talking to y'all today about are from the American College of Cardiology and the American Heart Association. These are the guidelines that they posted and published

in 2013. These guidelines shifted the focus of treatment from just treating the numbers to treating the risk that the patient had of an adverse cardiovascular event. You'll hear me mention the term ASCVD or Atherosclerotic cardiovascular disease and ASCVD outcomes. ASCVD itself includes, acute coronary syndrome, myocardial infarction, angina, stroke, transient ischemic attacks, and peripheral arterial disease. Their goal is to prevent ASCVD outcomes. The outcomes they typically look at are myocardial infarction, stroke, and even death. Again, these guidelines are aiming to prevent these outcomes from happening.

Before we get further into the treatment guidelines, we want to show the response of the poll question. The majority of y'all got it right. The ideal level of total cholesterol is less than 200. Back to the guidelines, they suggest four groups who will benefit from statin medication therapy. I'm sure most of you have heard of statin medications and we are definitely going to talk about those. The four groups that they recommend for treatment with a statin medication are patients with clinical ASCVD. Patients who have been diagnosed with one of the diseases that I mentioned on the previous slide. Patients who have an LDL greater than 190 and then the next group are patients who are 40 to 75 years old who have diabetes and an LDL of 70 to 189. Then the last statin benefit group are patients who do not have a diagnosis of clinical ASCVD. They don't have diabetes but they do have a ten-year risk score of 7.5 percent or higher.

I've been talking about this risk and this next slide will show how the risk is calculated. The ten-year risk estimate is the probability of the patient having one of those ASCVD events within the next ten years, a stroke, heart attack, or death. A number of factors go into this calculation of the ten-year risk including gender, age, race, certain numbers from the cholesterol panel, whether or not they smoke, and if they have diabetes or high blood pressure. I've also included the link here on this slide. If y'all want to test it out on yourselves, you can do that.

The statin medications are listed here on this slide. The more common ones you'll see are Atorvastatin which is Lipitor, Rosuvastatin which is Crestor, and Simvastatin which is Zocor. There's also Lovastatin and Pravastatin which I accidentally left off of this slide. Then the less common statins are Pitavastatin which is Livalo and Fluvastatin which is Lescol. Probably the reason that these are less common is because they're more expensive than the other statin medications.

Statins work to inhibit an enzyme in the liver called HMG-CoA Reductase. This enzyme is used in the production of cholesterol. By inhibiting this enzyme this decreases the amount of cholesterol floating around in the blood. Statins are the most potent total cholesterol and LDL lowering agents. They also help increase HDL and decrease triglycerides as well. The reason that statins are first-line medications for cholesterol treatment is that they have shown a proven decrease in morbidity and mortality. These medicines help you live longer.

They also exhibit some effects that don't have anything to do with lowering cholesterol. They can help increase the stability of those plaques in the arteries. They keep them from breaking off and travelling to other areas in the body. They can help decrease inflammation and inflammation can lead to coronary artery disease. They can inhibit the thrombogenic response. This is what causes blood clots. Statins do have some effect on the clotting cascade that happens when the blood is trying to clot. The way that these effects occur in the body is not quite understood yet. However, there is research being done to determine the full extent of these effects.

This slide here shows the algorithm for choosing a statin for a patient. Depending on their risk factors and their age, they will either receive a low, moderate or high intensity statin. These aren't hard limits though because there are other factors that can play into the decision.

This slide here just shows each statin broken up by intensity. Low intensity statins can help lower LDL by about 30 percent. Moderate intensity statins can help lower LDL by 30 to 50 percent. High intensity statins can help lower LDL by more than 50 percent. I would like to point out here that the only two high-intensity statins are Atorvastatin or Lipitor and Rosuvastatin which is Crestor.

Statin are typically given in the evenings or at bedtime because this is when the majority of the cholesterol is produced. Atorvastatin, rosuvastatin and pitavastatin can be given at any time of the day because they last longer in the body than the other medications. The most common side effects reported, and I'm sure you've all heard about this, are muscle symptoms. You will hear many patients complain about muscle cramps, pain and weakness. The risk of this occurring is more common in women. If symptoms become an issue, the dose of the statin could be lowered or they could be potentially switched to a different statin altogether. However this should always be discussed with the prescriber before a medication is changed. I forgot to put this on the slide but statins should not be used if the patient is pregnant or breast feeding.

There are also some important drug interactions with statins that I would encourage you to watch for when you're reviewing patients medications lists. The patient's pharmacist should also be checking for interactions and should alert a prescriber if a serious interaction is detected. It's good to know what interacts with these medications. One that you can really help with is the interaction with grapefruit and grapefruit juice. Grapefruit juice inhibits the metabolism of statins so it sticks around in the body longer. It increases the risk of side effects, particularly the muscle symptoms. I know we have a ton of patients, I don't like grapefruit juice, but we have people who love it. They're always concerned about whether or not they can drink grapefruit juice with their medications because they've heard that they can't with their statins so they think it's for all medicines. It's always good to check and see if there are any interactions with medications.

Next we'll talk about some of the non-statin medications used to treat cholesterol. Although these are not recommended first line, these are other medications that can help lower total cholesterol.

The first category we'll talk about are the Bile Acid Sequestrants. I'll go back to this slide to show you. This includes Cholestyramine, Colestipol, and Colesevelam. The sequestrants bind to bile acids in the intestine and prevent them from being reabsorbed in the blood. Then the liver produces more bile to replace the bile that has been lost. Because the body needs cholesterol to make bile, the liver uses up the cholesterol in the blood which reduces the amount of LDL circulating in the blood. That's how the Bile Acid Sequestrants work to lower cholesterol. They can help lower LDL by about 15 to 30 percent. They're also useful when a patient has diabetes because they also help lower blood sugar. The most common side effects of this medication class are the gastrointestinal effects. They commonly cause constipation, bloating and belching. We have people complain about it all the time.

To help with these side effects, the dose should be titrated up slowly and gradually increased. They should take it with lots of water and help increase their fiber intake to prevent the constipation.

These medications can also bind with other medications or even prevent them from being absorbed. They should be separated from any other medications that the patient is taking. It should be given either before or four hours after other medications.

The next class of medications are the Fibric Acid Derivatives. This is fenofibrate and gemfibrozil or Lopid and fenofibrate is TriCor. These medications can help increase HDL and decrease triglycerides. The way that they do this is they activate a receptor that helps increase the breakdown and elimination of triglycerides. With these medications, there have some GI side effects as well. We see more nausea and vomiting here with these than we do constipation with the Bile Acid Sequestrants. With the Fibric Acid Derivatives, if they are combined with statins, this can also increase the risk of muscle symptoms. The patient should be monitored for these effects. However, if you happen to see a patient on gemfibrozil and Simvastatin or Lovastatin, this is a combination that should be avoided because it can greatly increase the risk of the muscle symptoms. Again another administration point of note, gemfibrozil should be given 30 minutes before a meal. That would also help alleviate some of the side effects.

The next class is the Cholesterol Absorption Inhibitor and the only one in this class so far is Zetia. This can decrease LDL by about 17 percent. This class of medications does exactly what it says it does. It inhibits the absorption of cholesterol in the small intestine. These medications are typically tolerated very well with very few side effects. It can increase liver enzymes so these should be checked when patients have their normal blood work done. They're probably already being monitored anyway.

The next medication that's used in addition to statins, is Niacin. To be honest, they're not really sure how niacin works to help with cholesterol but it is able to decrease LDL, increase HDL, and decrease triglycerides. The most common side effects with Niacin is flushing and itching. I'll tell y'all a story. When I was in pharmacy school they had us take a big dose of niacin just to experience what the flushing felt like. It was not fun. Anytime I have a patient on it, I'm always sure to ask them what they do to help with flushing or if they even know about it. It's important to educate them on the side effects because they might stop taking it if they don't like the way it feels. There are things that can be done to alleviate this side effect.

The first thing is to get 325 milligrams of aspirin about 30 minutes before niacin. You want to be sure to make sure that they are not already taking an aspirin or another blood thinner. Again, be sure to consult with their prescriber before adding anything. It's also helpful to tell them to avoid spicy foods and hot beverages. There's also an extended release formulation that's prescription only. This can reduce the flushing side effects as well. Just like the Fibric Acid Derivatives, the combination with statins can increase the muscle symptoms. Be sure to monitor this with patients. That's just as simple as asking them if they're having any muscle pain. Again, it can be given with food to help reduce the side effects. The no-flush formulations, which I'm sure you've all seen advertised, I have patients ask me about it almost weekly. They should be avoided because they're missing a key ingredient in them that does not actually affect the lipid panel. Avoid the no-flush formulations.

That will lead us to our next poll question. Which class of medications does not decrease LDL? Is it the Fibric Acid Derivatives, Statins, Bile Acid Sequestrants, or Cholesterol Absorption Inhibitors? I'll let y'all answer that question and we'll keep going.

In addition to medications, it's very important that we encourage patients to implement lifestyle changes to help improve their cholesterol and their overall health. I think I skipped a slide. Lifestyle changes are recommended as background therapy for all patients and these changes are typically started for three to six months before medications are started because there are some patients who can control their cholesterol with lifestyle changes alone. However lifestyle changes should not be stopped just because a patient starts medications.

I had a patient tell me that they're taking a statin; they can eat whatever they want; their cholesterol is going to be just fine because of their medication. That's not really how it works. You can help patients with their lifestyle modifications by encouraging a heart healthy diet, low fat and high fiber. Then the American Heart Association recommends the DASH diet which calls for low sodium and low saturated fat. Many patients don't know how to read nutrition labels so this is a huge area for you to be able to help with. You can show them what they need to be looking for when they're at the grocery store and help them make better choices with their food.

Excuse me. Regular exercise is also important. The recommendation from the American Heart Association now is 40 minutes, three to four times per week. Avoiding tobacco products and maintaining a healthy weight are also important in managing high cholesterol.

In addition to the prescription medications and lifestyle modifications, there are also some over-the-counter supplements that can aid in improving cholesterol. Again, just a disclaimer, a prescriber or a pharmacist should be consulted before adding any over-the-counter supplements.

I'll go back to our polling question. Which class of medications does not decrease LDL? The correct answer was the Fibrin Acid Derivatives. The majority of y'all got that right.

All right, the first over-the-counter supplement that I'll talk about is CoQ10. The Coenzyme Q10 is depleted when a patient is taking a statin. By adding that back in, this has shown some benefit in reducing the muscle symptoms from statins. This supplement is pretty inexpensive and relatively low risk. It should not be taken if a patient is on a blood thinner like warfarin.

The next supplement is the Omega-3 Fish Oil. This can help decrease triglycerides and increase HDL. It will help increase the good cholesterol as well. The most common complaint with the Omega-3s is a fishy aftertaste. There is an enteric-coated version that can prevent this but the enteric-coated version is a little bit more expensive. If cost is a factor for your patients, you could tell them to freeze the capsules and take them with food to help avoid a yucky aftertaste. These should also not be taken if the patient is on a blood thinner like warfarin. If they don't want to take the fish oil capsules and they just want to get it through the foods that they eat, Omega-3s can also be found in flaxseed, chia seeds, walnuts, and then just eating seafood.

The next supplement is Red Yeast Rice. It is considered the natural statin. Y'all can't see me doing this but I just did my air quotes over natural statin. It's called that because it contains the substance called monacolin K which is chemically identical to the active ingredient in lovastatin. Since it's pretty much the same ingredient, the side effects and the drug interactions are very similar. Be sure to watch for that. It also may be useful if a patient has tried a statin and they weren't able to tolerate it or they did have some of the muscle symptoms. This could be a potential option for them if you're still

having trouble helping them get their LDL lowered. Just like the regular statins, this medication should not be used if the patient is pregnant or breastfeeding.

The last one we'll talk about today, you wouldn't necessarily consider this an over-the-counter supplement but it is something that is not medication that they could use. It's red wine. Red wine has a key ingredient in it called resveratrol that helps lower, and I made a typo on this slide, helps decrease LDL and protects against plaque buildup in the arteries. I know it's a controversial topic, but if you do have a patient that likes wine and they also have cholesterol problems. This could be a potential option for them. The recommendation for red wine is five ounces of wine is considered one drink. For women and men greater than 65, the recommendation is one drink per day. In some men younger than 65, they could do up to two drinks per day. It's very important to emphasize that it's five ounces of wine because some people have different definitions for what the size of a drink is. This ingredient, the resveratrol, is also found in red and purple grapes, blueberries and cranberries, but there's not really good evidence behind them. Just getting the resveratrol from these ingredients may not be as beneficial.

If you ever have questions or concerns about medications or over-the-counter supplements, please contact your local pharmacist. I can almost guarantee that they'll be happy to help you. If they're not, give me a call. My contact information will be at the end of the presentation.

That brings us to our next polling question. Do you have a community pharmacist you communicate with regularly? I'll let y'all answer that question and we will keep on going.

The first thing your pharmacist can help you with is helping your patients be adherent. I'm sure we all know that medications are not going to be effective unless they're taken properly and taken exactly as prescribed. Most of the adherence issues that I've seen have been because of cost. Your pharmacist can help you identify cheaper alternatives and make recommendations to the prescriber if cost is an issue. Another adherence issue I see a lot is that patients are on lots and lots of medication. Their pharmacist might be able to help you look at their med list and see if there's anything that they maybe don't need and help to try to streamline their therapy to decrease the number of medications that they take.

The next adherence issue is forgetfulness. I know this one very well. I forget to take my multi-vitamin almost every day. I can imagine how difficult it is to keep up with several medications. I'll usually tell patients to keep their medications where they'll see them every day. Usually by like the kitchen sink or a cabinet near the refrigerator, somewhere they'll be every day. Just not in the bathroom because heat and moisture is not a good idea. It's not a good combination for medications. If a patient is tech-savvy, I'll encourage them to set an alarm on their phone. Some pharmacies might even package medications to help make them easier to deal with for patients. My pharmacy, we do weekly packs that we'll give to the patient. We'll give them four packs per month. They're divided up into morning, noon, evening, and bedtime. We have so many patients that use these, and they're really helpful to help them keep track of when they're taking their medication.

The next one we'll talk about is side effects. This is another common reason for adherence problems. I mentioned earlier that some of the side effects can be reduced by taking a medication with food or at a different time of the day. That's something that we can help you all with if you notice that a patient is having a side effect, we can try to take a look at it and see if there is that can be done to

alleviate it. If not, we can check to see if their dose is too high and we can communicate with the prescriber to make other recommendations. Again, like I said, with the statins, if you're having muscle cramps, CoQ10 might be an option.

Your pharmacist can also recommend over-the-counter agents that might help with side effects. We can also identify drug interactions and communicate these with a prescriber if an action needs to be taken. We can also help determine if the interactions can be prevented if the medications are separated. Like the Bile Acid Sequestrants where they need to be given either an hour before or four hours after another medication. This is a great way to use your pharmacist because they will be able to let you know if they see any interactions that are concerning.

At our pharmacy, we also provide point-of-care testing. Many pharmacies around the country have the capability to check cholesterol in the pharmacy. If you have a patient who has a trouble getting to the doctor or they live far away from their doctor but they're close to a pharmacy, check with that pharmacy to see if they have the ability to check cholesterol in the store. We can provide results in about five minutes and then we can make recommendations from there. This also helps save the patient a co-pay at their doctor's office if cost is something that is limiting to the patient. I encourage you to find a pharmacist that you trust and communicate with them regularly because they can be great resources for you and your patients. I've just gotten the poll results back. It's split about half and half for those of you who do have a community pharmacist that you can communicate with regularly.

There are some new updates for cholesterol guidelines that you all might have heard about. The United States Preventive Services Task Force released very new recommendations in November. They recommended that all patients 40 and older, who have at least one of these risk factors listed, should be screened to see if they need a statin regardless of their cardiovascular disease history. There's not a lot of information out on this yet. I just wanted to let y'all know about this because it might be coming down the pipeline. There might be more people on statins than we could have imagined. They might be putting us all on one.

We are going to be taking questions I guess in a little bit. Feel free to reach out to me if you have any additional questions that might arise. I've got my contact information listed here and then all of my references that I used for this presentation are right here. Now I will turn the ball over to Misty if I can get back to that.

Cindy Sun: While you're doing that, this is Cindy. If you don't mind Chelsea, we'll just stop for a minute for a few questions that have come in.

Chelsea Leonard: Yeah.

Cindy Sun: One of the first questions that came in was about asking about patients concerns with Lipitor or one of the statins causing diabetes.

Chelsea Leonard: Okay. Yes. I've heard that several times as well. I think the problem there is, you know I mentioned when patients start taking medications they stop caring about the foods that they eat. They think that just because they're taking that medication, they don't have to worry about what they're putting in their body. Then they're doing that and they're eating poorly and they aren't

exercising so they end up developing diabetes. It seems like it might be a side effect of the medication but really it's just because patients aren't taking care of themselves and they're not eating properly. That's all I've seen on that. There's not really any data supporting that the medication actually causes diabetes.

Cindy Sun: Thanks for that. I think all of us, especially in the home, we're dealing with patients that sometimes don't have the best information coming at them. They're catching their news, as we all do, on different news sources that may not actually be news [crosstalk 00:42:30]. It's a good place for us in home health to be able to help the patients understand, not only this information but how to discern what is accurate medical information and what is something to maybe discuss a little further.

Quite a few more, let me just go ahead through a couple of these, if you don't mind.

Chelsea Leonard: Okay.

Cindy Sun: If total cholesterol is greater than 200 ... Sorry. It just jumped on my screen here. I want to get this question. I want to read it correctly. If total cholesterol is greater than 200, but HDL is very high and LDL is very low, is there a concern?

Chelsea Leonard: You know, I have never heard any practitioner be upset about a high HDL. Then again, the total cholesterol number being that high, there might be some concern. That might be a call for maybe another cholesterol panel. Maybe there was something wonky that happened with that first one. Then that too, their triglycerides might be high with that total cholesterol number being as high, if that makes sense. Just want to check on all of those things. Typically if the HDL is higher, I'm not going to be as concerned.

Cindy Sun: I agree with you. I read something recently that was similar to that. It seemed to be, the conclusion of the article was basically a case by case basis, exactly what I think you're saying there. That was a really great question, person who sent that in. Thank you.

Chelsea Leonard: That was a good question.

Cindy Sun: One more and then we're going to move on. We'll come back to questions at the end. For those of you that continue to have questions, continue sending them in in the Q and A section and we'll come back to questions for Chelsea in just a moment. This next one is, I heard that there's a contradictory recommendation related to fish oil supplements. Which supplement would you recommend related to absorption?

Chelsea Leonard: That's a great question. I don't know. The one that we have most of our patients on is just the thousand milligram Omega-3 fish oil. All the patients who it from our pharmacy get the enteric-coated version to prevent the side effects. As far as absorption goes, I'm not really sure about that. If you want to send Cindy your contact information, I can get back to you on that one.

Cindy Sun: I know that I said that was your last question but this one kind of relates to that. Could you repeat why the statins shouldn't be taken with Omega-3s?

Chelsea Leonard: Yes. The statins can be taken with Omega-3s.

Cindy Sun: Okay.

Chelsea Leonard: Let me pull up that slide again to make sure.

Cindy Sun: I thought that you mentioned that the Omega-3s would help with the leg cramps. I was taking a lot of notes here. I'm sure everybody was doing the same things. I was scribbling as fast as I could. I can tell I'm personally going to be re-listening to this webinar.

Chelsea Leonard: I apologize. I did probably talk too fast.

Cindy Sun: No. You did great. It wasn't you. It was that you had such great information. For me personally, you laid it out really logically that I hadn't seen it before. Anyways, I'm very pleased personally about this. Thank you.

Chelsea Leonard: Good. Thank you. The Omega-3s can be taken with statins. They are really great at helping lower triglycerides and then increase that good cholesterol, the HDL. I might have said statins, if I did, I misspoke. They should not be taken if someone is on a blood thinner.

Cindy Sun: Okay. [crosstalk 00:46:31]

Chelsea Leonard: Warfarin and Eliquis and Pradaxa, stuff like that, should try to avoid the Omega-3s.

Cindy Sun: Wonderful. We'll go ahead and turn it over to Misty Kevech who's going to talk about resources to help you improve the cholesterol levels of your patients in the home health setting. Also talking about the CEs and how to obtain them. Then we'll come back to Chelsea for questions. Continue putting your questions in the Q and A box. Misty, I'll turn it over to you.

Misty Kevech: Thank you so much. Thank you Chelsea so far. I thought the questions the were great. I know I'm working on my cholesterol level so I've learned a lot of information and so has some of my colleagues too. We've been back and forth. Thank you so much so far.

We do have some resources for cholesterol management. Our cholesterol management and smoking cessation best practice intervention package or, as we call them, the BPIP which is part two in our cardiovascular series. It includes all the current guidelines that were from the ACC and the AHA, lots of clinician and patient tools and resources are included there. Including a lot of the lifestyle modifications, including some DASH resources that she mentioned earlier about a really good teaching aid for us, for our patients.

I'm going to show you just quickly two nice patient tools. Because, with cholesterol management, sometimes in home health, we don't know what the cholesterol levels are unless we're drawing the lab work ourself. They're usually not ordered on a frequency that we might catch that blood work. What we can do to help activate and engage the patient is to send them with this simple tool of questions they have for their doctor on their next visit. It's asking the questions about when their blood

work is due. We can help them fill in what their blood pressure pills might be. Then asking what their cholesterol levels are. Then, from a health literacy perspective, trying to use the green, yellow and red, so they have an understanding of where they are and not just what a number is. Put the number, but also an idea of where they are in the range.

Another really nice tool to use with our patients is an education sheet, taking control of your cholesterol. It's a two-page tool that goes over just some basic information about how to control your cholesterol. It is health literate, written at a 5th-grade level and there's a way for them to even track it on the back page so they'd be able to watch what their levels are to compare. I know if I don't have a copy of what my level is, I don't remember exactly what it was when I get my next level at the physicians office.

I think because Chelsea also brought up about med adherence being a problem. Typically it's because of side effects they don't always tell us. They tend to tell us what they think we should hear. We do have permission to use and then provide for you Morisky Medication Adherence Scale which we've had for the last couple of years. It's available. We have a tip sheet for it. It's just a simple way to have patients answer these couple questions to determine if there is potential adherence. The best piece of advice, you should assume that all patients are non-adherent until they prove otherwise. Then really dive into what the underlying causes are. It's usually something that's buried deeper and that the patient doesn't disclose.

We also have our HHQI Medication Management Focused BPIP. In there there is a really good tool on guiding your patients toward medication adherence as well as some other really simple and good tools that you can use.

Now I'm going to tell you a little bit about the continuing ed. Today, as Cindy said at the beginning, our session is worth 1.25 hours of CEs for nursing. That credentialed through the ANCC. To get that, you need to log on to HHQI University. Make sure that it's not the HHQI general webpage or where you go for your data reports or the BPIPs. It is the university. When you finish the webinar today, if you're on live, you will be directed to it immediately. It'll only take you a couple minutes to finish out what you need to do or you can do it later. You will receive an email with the link in it as well. As well it is linked within your slides.

You will go to the university and you will go ahead and sign in. If you've never been to the university to take one of the courses, then you will set up a registration. If you've been here before but can't remember what your user name is, like all of us, don't set up a second account because then you're going to have your certificates split between two accounts. It's easier to have everything in one. We would rather you email us at our mailbox that will be on the last slide or HHQI@qualityinsights.org. We will be happy to look you up to see if you're in there. If you're having any password issues, there is a button to click and they'll send you a computerized-generated key to go ahead and put in a new password. If you have any problems whatsoever, contact us through the mailbox and we'll be very happy to help you out.

Once you get logged in, and honestly that might be the hardest part of all of this, you need to go to ... We have course catalogues. Go to the cardiovascular health. There are lots of topics that are there and lots of courses that you can take. You will find the cholesterol, the good, the bad, and the ugly

course. Go ahead and click on enroll which is the little apple icon. In your My Account tab, that course is going to be loaded for you or at least showing you're registered. You just click on the My Account and it's going to take you to where you will see the course and you'll click on the green little book icon that's going to start the course for you. It'll get you to your first lesson and there's only one lesson. It's simple once you open it. It's just a welcome making sure.

Any colleagues that you work with, you can share the information. They can take it. The recorded webinar will be up later today or early tomorrow and they can listen to the recorded webinar as well. All you're going to do is you will click next when you hit that because you've already listened to the webinar. You will do the evaluation and one simple reflection question and that's it. As soon as you finish, you'll go to My Account and you will your certificate on the left side of the slide. You'll be able to print it or save it electronically. Really, that's as simple as it is but we're always willing to help if you have any problems. Cindy, I'm going to send it back to you for any additional questions.

Cindy Sun: Thank you Misty. Chelsea, I think we're ready for rapid fire. Are you ready?

Chelsea Leonard: I hope so.

Cindy Sun: We're going to get through as many questions as we can. Everyone please continue sending in your questions. Any questions we don't get to, we'll find an alternate way to get your questions answered and posted on the website. Chelsea, the next question is, why avoid Omega-3s with Warfarin?

Chelsea Leonard: Omega-3s, they don't know exactly how it works but the Omega-3s also do something with inhibiting platelet aggregation. The Omega-3s itself could potentially increase your bleeding risk. Then when you add a blood-thinner too it, it could also really increase the bleed risk. This is typically rare and everything I've read has said that this has rarely happened but because it happened at least once, there has to be a warning that is on there.

If you do have a patient that is on both of these, make sure that they are getting their INR monitored and that you talk to them about signs of bleeding, any weird bruising or bleeding from their gums or in their urine or stool. If we're educating them about that, that could really help prevent any problem.

Cindy Sun: I think a lot of our patients and the patient population in the home health, many of them are on both medications so that's really important to [crosstalk 00:55:25] Thank you. Next question, where can we find red yeast rice? Is it a grocery store or pharmacy item?

Chelsea Leonard: It's a pharmacy item and it's in a capsule. We keep it with our vitamins. I would say that's where most pharmacies would stock it.

Cindy Sun: Thank you for that. Next question is, I have a patient with high triglycerides and a low LDL, what is the best treatment? He is on extremely high statins.

Chelsea Leonard: Okay. He's on the statins already which is first line. You could potentially add one of the fibric acid derivatives. There's fenofibrate or gemfibrozil. Those really help bring down triglycerides. You could also try the fish oil with that would be my recommendation.

Cindy Sun: I just want to ask and it's not anything on the polling question but for the fifty percent of us, and I was one of them, that does not have a community pharmacist that we work with, are you starting to see the benefits? Sorry. I'm thinking of all my patients that didn't have your knowledge and expertise guiding. This is great. Next question, can you explain more about how red wine helps increase your LDL and protect against plaque buildup?

Chelsea Leonard: Yeah. This is another one where they don't really understand the extent of how it works. The ingredient that I talked about in red wine which is resveratrol is potentially an anti-oxidant. They think the anti-oxidants help increase HDL which helps get rid of the bad cholesterol and protect against the plaque buildup.

Cindy Sun: Wonderful. Next one is, once a statin is started, when should we see their lipids decrease?

Chelsea Leonard: I'll typically tell people to check again around three months or so after they start a statin and see if that has helped.

Cindy Sun: Okay. At this time the last one that we have is, can you explain again about the needing to administer statins in the evening?

Chelsea Leonard: Yeah. Cholesterol is made when your ... I'm trying to see how to phrase this right. It's made when your body is not taking in anything is when the majority of it's made. They say to administer statins when your asleep because, obviously, you're fasting while your asleep and that's when the majority of cholesterol is produced. There are a few statin medications that you don't have to worry about dosing at bedtime. We typically just say, "Hey. If they're okay with taking it at bedtime, go ahead and do it at bedtime just in case." The statins that it doesn't matter when they're given were Atorvastatin which is Lipitor and then Crestor and I already forgot what the other one was. It's one of the ones that's not common. I think the Fluvastatin but let me make sure. Okay yeah. Lipitor, Crestor, and Pitavastatin which is the Livalo, those can be given anytime during the day.

Cindy Sun: Okay that's great. We have one more for clarification purposes. I think this is something we need to clarify. It says on the PowerPoint that the red wine may increase the LDL, was that supposed to be HDL?

Chelsea Leonard: No. I may not have said this but I have it written out on my notes. That was a typo. Red wine can help decrease LDL by increasing HDL.

Cindy Sun: Got it.

Chelsea Leonard: Kind of a backwards thing there but it can increase HDL and decrease LDL.

Cindy Sun: [crosstalk 00:59:56] Sorry I didn't mean to talk over top of you there. [crosstalk 01:00:01] I want to thank Irene for catching that and bringing it out [crosstalk 01:00:02] so that we can clarify that. We don't want any misconceptions and that was a great catch. I apologize. I didn't catch it either but that was wonderful. You guys in the CardioLAN world, we know we're all in this together. [crosstalk 01:00:19] That's just a classic example.

With this we're at the top the hour so we're going to go ahead and say thank you to everybody for joining us. Mark your calendars, January 19th is the next UP underserved population call. I know that all of you are on here are cardiovascular-oriented, but never forget your high-risk populations and that usually with your underserved population.

Again, February 14th for those of you, I understood from some of your comments that I cut out. February 14th 2017, Valentine's Day, Doctor Janet Wright, executive officer of the Million Hearts Initiative, is going to explain where Million Hearts 2.0 is going to go into the community and that's where we all work. I want to encourage you to set your calendars. We don't have the time secured yet. I'm sure it will be in the afternoon. Once we have that, you'll be one of the first groups to know so that you can register. There will be limited space as always with all of our webinars. Just mark it.

Our next CardioLAN will be on March 16th at 2 o'clock eastern. I know that it's late in the call. You don't have to tell us now but we'd like to hear from you what other topics you would like discussed during these CardioLAN events. Because of your feedback in requesting cholesterol information, we were able to discuss with Chelsea and have her present her expertise on here. We want to encourage you. Let us know what topics you're interested in and we'll see what we can do. With that we would like to say, from all of us at HHQI and Quality Insights and Chelsea, we would like to say thank you for joining us this year. We want to wish you, you patients, your families, your friends, everyone a very peaceful and safe holiday season. With that we'll say, have a great day. Bye everybody.

Chelsea Leonard: Thank you.