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JCL Roundtable. The lipidology team

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Abstract: Clinical lipidology practice works best when implemented by a health care team. The 3 discussants for this JCL Roundtable are National Lipid Association leaders representing essential areas on the team – Registered Dietitian Nutritionist, Advanced Practice Provider, and Clinical Pharmacist. The team approach has been shown more effective than traditional sole provider management for controlling chronic asymptomatic conditions like hypercholesterolemia. Teams also fit better as health care transitions away from fee-for-service into value-based reimbursement. It's worth noting that medicine and even surgery were never entirely solo endeavors. Here we discuss a more expansive team model, which began in the U.S. more than 2 decades ago in the Veterans Administration and certain managed care organizations such as Kaiser Permanente. These health care organizations place themselves at risk, comprising both normative and financial risk, for maintaining their patients' health. Academic medical centers and private health care groups increasingly are adopting the at-risk model and medical teams. Electronic health records facilitate the transition. Team members include not only licensed professionals like our discussants, but also medical assistants, front desk staff, and schedulers. All share decision making and responsibility. Ideally the patient becomes the central member, not merely the focal point, of the team. We explore specific roles within the lipidology team, and we identify continuing barriers to implementation.

DR. JOHN GUYTON: A few generations ago when bed rest was one of the more effective treatments for heart failure and dietary advice for heart attack prevention was a novel idea, the role of a solitary physician as medical provider had some credence. Of course, even then nurses and office staff provided important support. Today health care can accomplish far more, and adequate medical practice demands a team approach. In this JCL Roundtable, we'll discuss how teams can function best in lipidology clinical practice. I'm joined today by 3 exemplary clinicians and thoughtful contributors to the team approach – Lauren Williams, RD, clinical dietitian at Cook Children's Medical Center in Fort Worth, TX, Lynne Braun, PhD, CNP, professor emerita from Rush University in Chicago, IL, and consultant to the Rush Heart Centre for Women, and Joseph Saseen, PharmD, Professor and Associate Dean for Clinical Affairs at the University of Colorado in Aurora, CO, also currently President of the National Lipid Association.

Dr. Saseen, I'll begin with a general question. Looking back, not 60 to 70 years as I alluded to a moment ago, but in comparison with 30 to 40 years ago, what are some fac-

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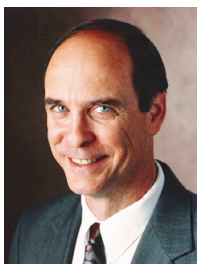
tors that make a team approach to health care increasingly important today?

DR. SASEEN: I think it's probably a combination of two things. First is the knowledge that for chronic diseases, team-based approaches are more effective than non-team-based approaches for controlling chronic asymptomatic conditions like hypercholesterolemia, diabetes, and hypertension. So we do know that when you have a team of clinicians, bringing to the team their unique perspective and skill set, that is the most effective way to get patients under better control.

Second is a greater appreciation for population health and quality of care. We now live in a health care environment where we – that is, health systems - are being assessed based on the quality of patient care that is provided, transitioning away from fee-for-service into value-based reimbursement. We can actually move clinical metrics in ways that align with not only quality, but also with future payment models.



DR. GUYTON: So this very much accords with the trend toward value-based care. But we live in a mixed system now, and I think that's going to be reflected in some of our subsequent discussion.

DR. SASEEN: Absolutely.

DR. GUYTON: In what environment does the team approach work best? Is it in managed care, an academic medical center, the VA (Veterans Administration), community practice? What are some of the advantages and disadvantages in various settings? Dr. Braun, you've worked in an academic medical center and also in a cardiology practice.

DR. BRAUN: Correct. My background is in an academic medical center and the cardiology practice is part of that academic medical center. I believe that in academic medical centers we are rich in resources, including various healthcare professionals compared with other types of settings. Therefore, the team-based model is part and parcel of who we are. Many types of healthcare professionals are involved in the care of a given patient.

I really grew up in a team-based model, where either the physician, or myself as a nurse practitioner, sees the patient directly, but has access to the expertise of others, including a pharmacist, dietitian, exercise specialist, and more. It's important to keep the communication channels open, and of course, to recognize that the patient is central to team-based care.

DR. GUYTON: Very good point.

DR. BRAUN: We can involve many resources (team members) and everyone facilitates the best care for that patient. That being said, there needs to be a quarterback who has the primary responsibility for the patient, the physician, nurse practitioner, or a physician's assistant. However, other team members also play an important role in the care for that patient.

DR. GUYTON: We'll come back to that thought when we talk about collective leadership. Ms. Williams?

MS. WILLIAMS: Our lipid clinic resides within our endocrinology and diabetes clinic, in an outpatient multispecialty building on the main medical center campus. We work very closely as a collective team, including physicians, a clinic coordinator, nurse, dietitian, and clinical therapy team as needed. All of our offices are close together in the clinic, so the entire team is able to work together in each clinic visit for every patient.

DR. GUYTON: Physically together.

MS. WILLIAMS: Physically together. Our new and established patients see the physician, nurse, and dietitian with each visit. During clinic, the team works collaboratively and can communicate via messenger on our computers or physically speak to one another, as needed, to discuss any specific needs for the patient during their visit. It's advantageous for the patient as they see the entire team at one visit, though this can also be a disadvantage as it can be a longer appointment for the patient.

DR. GUYTON: Dr. Saseen?

DR. SASEEN: Yes, I can comment on our practice, and I also want to comment on what setting the team-based approach works the best. I work in an academic medical center. I work out of primary care, but I also oversee the activities of our clinical pharmacists that work in specialty clinics. Within our academic medical center, we have more resources to allow for multi-disciplinary team models. They work exceptionally well in primary care and even in specialty care within an academic medical center. However, other settings outside of an academic medical center have done this quite well and quite effectively. Matter of fact, I'd even venture to say that places like Kaiser Permanente and the VA (Veterans Administration) have demonstrated benefits of team-based care a long time ago.

Their successes are founded on a few facts and principles. They have had access to multiple disciplines that form large care teams focusing on chronic disease state management - in particular, cardiovascular risk reduction. They also have had an at-risk philosophy, where improving quality is incentivized based on their model. Not because they're receiving more reimbursement, but because they're at risk for the care of their patient populations.

The strongest data to support team-based care as being effective really started in the VA and in other managed care organizations, like Kaiser Permanente. However, benefits have also been demonstrated in academic medical centers.

The evidence may not be as deep as what we have with other organizations, but community-based practices can have team-based models, though they may have less overall resources. The care team might be a bit smaller in those settings, maybe it is a provider with a clinical pharmacist or a dietitian with a group of medical practitioners. I think that, despite barriers, there still is value to be had with a team-based approach, even if your team doesn't include every discipline.

DR. BRAUN: I completely agree with you that the VA system and managed care organizations such as Kaiser have done this well for a very long time. And I feel that what has facilitated some of this is their very sophisticated electronic health record (EHR) system.

Through the EHR, the lines of communication are open, and team members can weigh in, even when they're not physically present to see patients.

DR. SASEEN: You bring up an excellent point. I couldn't agree with you more that they usually have robust electronic health records or medical records. And that really is key. From a pharmacy perspective, we have some examples where community pharmacists work with clinics and populations from those clinics, but a big potential limitation is lack of data.

Electronic health records not only facilitate communication between different providers, but also provide the necessary clinical information to make informed decisions. For example, if you have a pharmacist titrating medication therapy, you do need access to laboratory data and other patient specific data that is within the EHR.

DR. GUYTON: I recall that the VA was putting in electronic medical records in the early 1990s. My academic institution got a decent electronic medical record in about 2013, 20 years later. We had attempts to do it earlier, but not until 2013 did we have a really good EHR, which has been Maestro Care, also called Epic.

DR. SASEEN: And one thing that is nested within that is the versions of our EHR, they get better and better all the time. Our first EHR in 2002 was fine for documenting and for extracting information. But our 2018 cholesterol guidelines recommend that healthcare organizations should be prospectively implementing strategies to identify patients that need care.

With large EHR systems such as Epic, we can run extensive reports looking for patients that are not provided evidence-based care. Robust EHR can identify patients who have the most need for intervention.

DR. BRAUN: Sure. The patients at highest risk.

DR. SASEEN: Yes.

DR. GUYTON: And the care gap can appear as a pop-up marker.

DR. SASEEN: Absolutely, best practice alerts can be effective. Many pharmacists work as informaticists. Nurses, medical assistants, and physicians also can be informaticists who create algorithms that work to push forward alerts, best practice alerts or clinical alerts. We also run reports within our clinic population to identify patients who meet criteria, such as being in a statin benefit group who are not prescribed statin therapy.

MS. WILLIAMS: Electronic medical records are very helpful. I would even say it's a pivotal resource for the patients to interact with their own healthcare as well, particularly if there's a patient portal they can use. We upgraded our medical record system back in 2018. One thing that's been really phenomenal is that we've had a lot of patients, and their parents as we are a pediatric clinic, come in to clinic well-informed about current lab results and progress.

Another great feature in the electronic record's portal is a message system in which patients can securely send messages to staff to ask questions or look for further guidance. I've had many patients find this much faster and more convenient than calling the office. Overall, these features help patients become more involved in their own care.

DR. GUYTON: Right.

DR. BRAUN: It underscores that the patient is at the center of the team.

MS. WILLIAMS: Yes, absolutely.

DR. GUYTON: That's great. Dr. Saseen, how does collective leadership work? Why is it important? What would you say to an old fart my age who doesn't get it and wants to insist that, well, somebody's got to make the final decision.

DR. SASEEN: I'm glad you brought that up. Teams have to deal with a multitude of different "barriers" and sometimes those barriers are historic practice. Historically, we've run things a certain way and I get that.

If there is collective leadership, there's collective accountability and responsibility where everybody willingly accepts their role, and where we accept other people's roles. It's expected that the physician will acknowledge the role of the nurse specialist, or the clinical pharmacist, or the dietitian for their contribution to patient care. And vice versa. With collective leadership every single member of that healthcare team is accountable for the outcome. So to me, that's what that means. Shared responsibility focused on patient care and patient outcomes.

DR. GUYTON: I want to make that a little stronger. I think that everybody has a responsibility to contribute to the medical decision making. Not necessarily to be the final arbiter of the medical decision making, but the decision is made by the team. Somebody will pull the contributions together and suggest that this is what we think, but it's not a top-down type of decision making.

MS. WILLIAMS: Right. It is more of a matrix model.

DR. GUYTON: The idea of a matrix is appealing.

DR. SASEEN: Delegation of responsibility is necessary within an interdisciplinary model of care. Let's say you have a team that includes a medical provider, a nurse specialist, a dietitian and a pharmacist. Responsibility for drug titration may be delegated to the clinical pharmacist, and responsibility for implementing healthy lifestyle therapy and plans may

be delegated to the dietitian. Every decision does not have to be approved by one decision maker. If that's the case, it really is referral care, and not collaborative care.

MS. WILLIAMS: And I would say delegation of responsibility with one common message also communicates a message of unity and overall care to the patient. For example, if a patient hears from a physician, physician assistant, or nurse practitioner that a lifestyle change is important, then a dietitian comes in to provide nutrition counseling, it further reinforces the message. This communicates to the patient that everybody's on the same team for the patient. I feel that elicits a lot of trust in the medical team as a whole.

DR. GUYTON: Sometimes the dietitian might be in a position to assess how much trust the patient exhibits.

MS. WILLIAMS: Interestingly, we've joked within our team that it seems we get the full picture by the end of a clinic visit. It's just that a patient might reveal a bit of the picture to each person that comes into the exam room. Then, we have to work together to put the pieces together.

DR. GUYTON: That's great. Let's turn to specific roles. Dr. Saseen, how has the role of pharmacy providers expanded, especially with regard to direct communication with patients and direct patient management?

DR. SASEEN: The scope of practice for a clinical pharmacist has expanded especially over the past 10 to 20 years. Pharmacists are authorized to engage in what we call in Colorado collaborative drug therapy management.

In other states it's called collaborative practice agreements. In the VA, it's called a scope of practice, which is an agreement that if a pharmacist meets certain qualifications defined by your state, and often through a credentialing process, that you can engage in direct patient care. This has allowed pharmacists to practice at the top of their license. This includes optimizing medication use for a patient by starting, titrating, and discontinuing drug therapy. It also includes ordering and interpreting labs to monitor medication therapy.

The role of a clinical pharmacist in this realm is to get medications used appropriately and optimized. And there's no better example than with hypercholesterolemia where it's not good enough just to be on LDL lowering medication. It needs to be the right dose for the right person, using the right combination when appropriate, and for the right condition. So that's part of what the scope of a clinical pharmacist can entail.

DR. GUYTON: I agree with you. It's hard to express how much my practice improved when our clinical pharmacist began to work with us in the clinic. She teaches injection techniques, fields questions about side effects, and often is the first person to know if a patient develops an alarming concern. She and her team, usually a pharmacy technician and a trainee, pick up the major burden of dealing with insurers and drug companies, taking responsibility for reimbursement approvals and patient assistance programs now that we're using some very expensive drugs.

You said just a little about state regulations. Could you expand on that?

DR. SASEEN: In the world of pharmacy the scope of what a pharmacist can do is governed by state regulations. So, for example, in some states like Colorado we're very fortunate.

Not only do we have collaborative drug therapy management authorization, we are allowed to administer medications, something that nearly every state allows. We are also recognized as providers of healthcare. That's an enabling authorization which requires insurance companies to also recognize pharmacists as providers for purposes of payment. We have new regulations in Colorado that allow pharmacists to bill for Medicaid patients for the provision of direct patient care.

DR. GUYTON: Medicaid certainly is going to vary by state.

DR. SASEEN: Yes, and that's something that is state dependent. Some other states do have recognition of pharmacists as providers of healthcare. Some have statewide protocols where pharmacists can prescribe drug therapy. Colorado has approved statewide protocols for pharmacists to prescribe medications for smoking cessation, contraception, and pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) for HIV. We actively have legislation pending that would allow for statin initiation for patients in certain statin benefit groups.

It's still being evaluated, but we're not the only state with this type of state-wide protocol for pharmacists.

DR. GUYTON: Dr. Braun, I know you've done some advocacy at the state level.

DR. BRAUN: Yes, I was just going to add to what Dr. Saseen stated. Having heard you talk about what's going on in the state of Colorado, some very exciting things, I think it is so important for healthcare professionals to be advocates, on behalf of their practice, and certainly on behalf of their patients, specifically what good patient care entails. It's so important to meet with legislators and let them know about what we do in our various roles as members of the healthcare team. Perhaps even invite them into your practice and ask them to follow you around to see firsthand our roles. Another way to advocate is to write letters to the editor that are published in your local papers so that other individuals and the public at large know what's at stake and the importance of what we're trying to achieve on behalf of our patients.

It's critical that we support one another as well. When Lauren discusses her role as a RDN (Registered Dietitian Nutritionist), I think of how we have supported our dietitian colleagues through one of my other organizations, the Preventive Cardiovascular Nurses Association (PCNA). We have certainly made it a point to advocate for greater reimbursement for the dietitians to which we as providers refer. They need to be reimbursed for the many conditions they treat – not only for patients with renal disease or diabetes. We need them to help our patients with weight loss, dyslipidemia, and risk factor management in general.

DR. GUYTON: Ms. Williams, I want to hand this one to you. Where do we stand on reimbursement for nutrition counseling? We're talking about Centers for Medicare Services (CMS), right? CMS does not reimburse the dietitian

visit for high cholesterol and does not reimburse a visit for weight loss counseling. Isn't that correct?

MS. WILLIAMS: That is correct. Coverage for medical nutrition therapy (MNT) is limited to individuals with diabetes, renal disease, or recent kidney transplant. It seems to be very difficult to get coverage for preventive services, to include MNT by RDNs. It seems very few public or private insurance plans cover RDN visits, and it can be at a fairly great out-of-pocket expense for patients if their insurance denies the claim. I've often seen this lead patients to decline nutrition counseling. I also know quite a few private practice dietitians, not affiliated with a major medical system, that no longer accept insurance due to limited coverage for RDN services.

DR. GUYTON: Insurance companies take their cue from CMS.

DR. BRAUN: They do.

DR. GUYTON: And that's an issue. Dr. Saseen, you mentioned what Medicaid would cover, and that's a state-by-state program.

DR. SASEEN: Yes, that was approved in 2021 in Colorado. The rules are being written and it will become fully implemented in 2022. So we're gearing up by credentialling our eligible pharmacists right now.

DR. GUYTON: That's progress.

DR. GUYTON: Ms. Williams, how often in various practice settings is dietary counseling by a registered dietitian routinely provided for lipid patients?

MS. WILLIAMS: Unfortunately, I'm not certain. Perhaps that information exists, but I'm not aware of recent studies.

In practice, I've seen many patients referred, though this has always been in urban areas and within major medical systems. I would imagine it greatly depends on the area, with urban areas providing increased RDN availability and, therefore, increased frequency of referral.

DR. GUYTON: I think it would be an interesting project for the National Lipid Association to examine the frequency of dietary counseling for lipid patients in various practice setting, including academic practices. I think I'm correct in saying that the majority of my patients over several decades have not seen a dietitian.

MS. WILLIAMS: Really? I think it depends too on how many dietitians are available, particularly how many who specialize in lipids, as well as coverage for visits.

I've had the pleasure of being within many different systems in seeing how their dietitians work within that system. But, I've been a little jaded because most of them have been in major medical systems or education centers.

DR. GUYTON: Well, we have always had a dietitian affiliated with our endocrine division, and in recent years 2 or 3. However, diabetes is covered, but abnormal lipids and obesity are not.

MS. WILLIAMS: Right.

DR. GUYTON: And so that first visit might cost $160-$180.

MS. WILLIAMS: It can be pretty expensive.

DR. GUYTON: The dietitian usually spends an hour with the patient on an initial visit, and that time and space need to be paid for. But how extensive is the evidence that dietary counseling works in lipid patients?

MS. WILLIAMS: One of my favorite articles on this topic was published in 2018, a meta-analysis of about 34 studies. They showed that multiple, individual face-to-face MNT sessions with a RDN, over 3 to 21 months, demonstrated significant improvements in BMI, lipid profile, glycemic status, and blood pressure. So I think the evidence is there, it's just whether or not it's financially feasible.

DR. GUYTON: The article you're referring to would be in JCL by Geeta Sikand and colleagues (see Suggested Reading).

MS. WILLIAMS: It is.

DR. GUYTON: It's a wonderful review and meta-analysis. We had to use online supplementary material extensively. It would have taken up the whole print issue.

MS. WILLIAMS: They did a phenomenal job in the meta-analysis. One point I also find to be difficult, just personal opinion, is that it can be very difficult to find outcome measures with nutrition therapy that are quantifiable and not confounded by other factors.

For example, a patient may start a statin while also working on lifestyle changes. So it may be difficult to determine if the MNT moved the needle in addition to the medication, and if so, to what degree. And what might be other outcomes to determine if MNT is effective, particularly if a person is on medication that has improved their levels? Is it weight loss? Is it a reduction in triglycerides?

DR. GUYTON: When I anticipate that diet is going to play a major role, I'll routinely delay starting a medication, even if I think the patient will eventually need medication. If the patient gets a chance to see what dietary change alone can do, that person will be less likely to depend only on the medication in the future and ultimately will have a better outcome.

MS. WILLIAMS: That's a great point! It also seems difficult to quantify lifestyle changes, as much of the information is patient reported. For example: my goal with my patient might be to start exercising for three days per week for 30 minutes each day. At the next visit, they might tell me that they're doing it, but is that accurate every week, and how can I document that in a manner in which that data can be extrapolated at a later date?

DR. GUYTON: I think those are excellent points. I often tell my patients that triglyceride medications really don't work very well and that what does work successfully is changing the diet. If you stop drinking sweet tea daily or a regular soda daily, triglycerides may go down by 200 mg/dL. Many referring providers have never asked about sugar drinks.

To a certain extent hypertriglyceridemia and weight reduction are becoming the unsolved problems. Are we getting better over the last 20 or 30 years at helping our patients to lose weight?

MS. WILLIAMS: I would like to think yes, but it's not something that I would say data truly supports as obesity rates have continued to increase. Then again, obesity rates have also been largely influenced by the COVID pandemic in recent years.

But I also wonder if weight loss should be the main target or talking point, or if telling a patient to lose weight (without further, in-depth lifestyle targets) is setting a hard-to-achieve goal. Is it realistic, or are they going to go to Dr. Google and find the most recent weight loss fad, either fad diet or fad supplement?

I don't know that we're getting any better at helping people to lose weight, but I hope that we're getting better at getting the message across that weight loss isn't the end game. That it's more than that.

DR. GUYTON: That's a terrific perspective on it.

DR. BRAUN: I think we're getting better at understanding behavior.

MS. WILLIAMS: Yes, I agree.

DR. BRAUN: Sometimes we don't see the outcomes on an individual level that we would like, but we're getting better at having important conversations with patients, assessing behavior and knowing what triggers less healthy behaviors, as well as other aspects of behavior that are important for the outcomes we wish to see in our patients. I think we're making some progress to help our patients live a healthier lifestyle.

DR. GUYTON: The National Lipid Association has been good at bringing in the nutritional aspects.

MS. WILLIAMS: Absolutely, it has.

DR. GUYTON: But one of the things that I have realized recently is that nutrition science is one of the most difficult sciences. Giving a pill or a placebo for 2 to 5 years to 20,000 people is relatively easy, compared to obtaining the same level of evidence for a nutritional intervention.

And I think we've underestimated the depth of understanding required to give good dietary advice. To some extent, we've made mistakes. The low-fat advice from the 1970s into the 1990s led to unanticipated consequences. People shifted to carbohydrates, and now we have the obesity epidemic. That is still not a settled issue.

How important is it that the medical provider and the dietitian are in sync on dietary recommendations and goals?

MS. WILLIAMS: I think it's pivotal. As much as I can talk to my patients and build rapport with them, they will very likely put more stock in what the physician or the nurse practitioner says.

For example: If I go in to see a patient, note that their LDL-C increased, and they tell me they've started the ketogenic diet and greatly increased saturated fat. I would try to meet them where they're at, and discuss ways to choose unsaturated fats instead. Then, if their provider comes in and says the type of fat doesn't matter, they're probably going to believe the provider and continue what they're doing.

I think it's pivotal, and in the best interest of the patient, to have one cohesive message the team is communicating to the patient.

DR. GUYTON: Now, just one quick question. Did the physician in your clinic really say that the type of fat doesn't matter?

MS. WILLIAMS: No, he absolutely did not. Actually, I am very thankful and lucky to work in a clinic in which the physician puts a lot of faith and trust in the RDN, and provides support for nutrition goals set with patients. Our physicians supporting nutrition goals has been essential.

DR. GUYTON: Thanks! Another note about nutrition science. Some infrequent effects can fly under the radar. It's amazing that the extreme cholesterol elevations found in a few people on ketogenic diets have been known to internet discussion groups 10 to 15 years before the phenomenon was first published last January in JCL.

MS. WILLIAMS: Wow! I wasn't aware of that.

DR. GUYTON: Are dietary guidelines changing, or they constant?

MS. WILLIAMS: I would say that fundamentals have been constant, but details and focus are changing. Not necessarily because guidelines were incorrect, but rather because more information came along. That is the nature of science in general. Although, I will say that it's also a source of great frustration for both providers and patients as well. We have people come in all of the time that ask if they can eat eggs. Is butter good or is butter bad? It's frustrating because what patients read online and fad diets are constantly changing.

But, we change our guidelines and recommendations as we learn more over time.

DR. GUYTON: Very helpful. Dr. Braun, both the 2013 and the 2018 cholesterol guidelines emphasize the importance of patient-provider discussion in formulating the treatment plan. What are the elements of that patient-provider discussion that lead to treatment success?

DR. BRAUN: Sure. The clinician-patient risk discussion was introduced in the 2013 cholesterol guideline, and it was highly emphasized in the 2018 guideline. I like to think of it as relevant to any situation, certainly the patient who has clinical ASCVD (atherosclerotic cardiovascular disease), but it's primarily discussed in the guideline as it relates to the primary prevention patient. Sometimes in primary prevention, you have a little wiggle room where prescribing a medication isn't necessarily an absolute must and, perhaps, a trial of lifestyle can be accomplished first to reduce CVD risk.

When I have a discussion with a patient, I follow a particular order of topics. The very first is to estimate the patient's ten-year risk for ASCVD. We do that by using the Pooled Cohort Equations that yield a percentage – for example a 10-year ASCVD risk of 8%. I'll usually explain it this way to my patient: If there were a hundred people who look just like you, same risk factors, same sex, same age, we estimate that eight of them in the next 10 years would go on to have a heart attack or a stroke, or perhaps die from a heart attack or a stroke. And we talk about what this might mean and how we can reduce this level of risk.

Next we talk about whether or not there's anything beyond the traditional risk factors that might impact a patient's risk, since only the traditional risk factors are considered in

the 10-year risk estimation. In the 2018 guideline, we introduced the notion of risk enhancing factors. These are conditions that are known to increase cardiovascular risk but are not part of the 10-year risk calculation. Some examples are preeclampsia with pregnancy, premature menopause, and a strong family history of premature ASCVD. There are many others listed in the guideline.

Some are biochemical factors, such as an elevated lipoprotein(a) level or an apolipoprotein B level. The patient and I identify and discuss how risk enhancing factors contribute to their overall risk.

We next talk about the benefits versus risk for both a medication, usually a statin, and lifestyle, in combination and lifestyle by itself. It's so important to fully talk about medications, including their side effect profile. And then, the patient should weigh in about their preferences and values. What does that patient really want to do?

I have found that sometimes patients are a little bit dichotomous. Some patients will want a medication for almost anything. They feel like it can be a quick fix to take care of a problem such as hyperlipidemia, while others say they will do anything except take a medication. So it is really important to listen to the patient, to understand what they want to do, what their value system is, what's important to them. We use a 10-year risk score around 7.5% to consider starting statin therapy, however that is not an automatic trigger for medication. If a patient can really explain how they plan to introduce lifestyle changes, and we can establish goals and a timepoint, it is worth it to provide a patient with this opportunity.

When a patient is successful at lifestyle changes, it can be beneficial to all cardiovascular risk factors, such as better blood pressure control, reduced LDL and triglycerides, weight loss, etc. If they're a smoker and they quit smoking, their risk score can fall dramatically, and we can show them that on the risk estimator that we use.

DR. SASEEN: The public enemy number one, in my opinion from, at least for hypercholesterolemia is what Dr. Google says about statin therapy. Sometimes shared decision making, and the patient-clinician discussion really needs to focus to give a fair balanced assessment of what risk versus benefit is with statin therapy. There is a line in our 2018 guidelines to refer patients to trustworthy resources. Dr. Braun mentioned the Mayo Clinic where there are good decision tools where you can evaluate risk versus benefit. The National Lipid Association also has some excellent patient tear sheets (informational recommendations).

DR. BRAUN: Yes.

DR. SASEEN: They've been recently revised and provide simple explanations about why a patient should be on a statin. I'm proud that these revised patient tear sheets focus on statin therapy. There's also one for each statin benefit group and provide understandable messages, using appropriate language.

DR. GUYTON: Great.

MS. WILLIAMS: I really appreciate that the tear sheets are at an approachable level of health literacy.

DR. BRAUN: Yes. Those are all good points. If the decision, the shared decision, is to start a statin, it has been my practice to address potential side effects upfront. I want my patient to be able to distinguish a true side effect from the medication, or at least feel comfortable discussing it with me. First of all, I'm going to assess what their baseline comfort level is. Do they have any aches or pains now, do they have any joint issues or muscle pains now, and I'm going to document it. If something changes after they start the medication, I will want to compare it with baseline. I'm able to refer back to it and revisit that conversation with the patient to see whether or not something has truly changed.

I discuss how true statin myalgia feels, since they hear about muscle pain with taking a statin. I tell them, if it happens, it will be on both sides of the body, not in one localized part of one side of the body. It typically involves large muscle groups. I'll give them an example of the inability to get out of a chair or raise your arm because it's those large muscles that are affected by the statin.

DR. GUYTON: I've had people tell me it's hard to get the left leg out of the car after they have driven somewhere.

DR. BRAUN: Yes, that's what it can feel like. If you have these conversations in the beginning, I have found that fewer patients stop their statin because of side effects. I want them to know that they need to contact me if they have any concerns like this. I prefer not to hear about it at their next appointment. This way I can make an assessment and make a change between visits if necessary.

DR. GUYTON: On the topic of the patient-provider discussion, one of our nurses, a Certified Diabetes Educator, taught us that the most motivating thing you can ever say to a patient is "I think you are onto something!" It's the patient's idea, right?

DR. BRAUN: Right

DR. GUYTON: You are reinforcing their own idea.

DR. BRAUN: Yes, and I think we learn from our patients every single day. We learn to be better at what we do for our patients.

DR. GUYTON: I think that lipidology is an excellent field for APPs (Advanced Practice Providers), because you may get to spend a little extra time with patients, something more reasonable than the 10-15 minutes allotted to many physician visits. But the role of APPs is still evolving. Who comes under the label of Advanced Practice Providers, and to what extent do APPs independently engage in medical decision-making?

DR. BRAUN: APP is the preferred abbreviation for Advanced Practice Provider or Advanced Practice Professional. APPs are nurse practitioners, clinical nurse specialists, and physician assistants, and I believe there's some movement for the physician assistants to change their name to physician associates to drop that assistant role, because there's greater autonomy in what they do.

DR. GUYTON: Yes.

DR. BRAUN: I obviously can speak mostly about the nurse practitioner role. Just like the pharmacist profession, there is variability throughout the country for what we call

full practice authority. There's a published map of states labeled green, yellow and red based on level of practice. The green states have full practice authority. which now is almost half the country. The yellow states require a written collaborative agreement with a physician that states what the NPs practice entails, including prescriptive authority. Then the red states have a more restrictive practice. In the red states NPs often function under protocols that are developed either by physicians or in collaboration with APPs. Here is a website for the state practice environment for NPs: https://www.aanp.org/advocacy/state/state-practice-environment

DR. GUYTON: Thanks.

DR. BRAUN: Even though we have this practice by state map, there is variation across states, and in particular practices. It is often the role that an individual has negotiated. I practice in the state of Illinois. The Illinois Nurse Practice Act refers to NPs as APRNs (advanced practice registered nurses), which includes NPs, nurse midwives, and clinical nurse specialists. Illinois is technically a yellow state although we can earn full practice authority after 4000 hours of practice from the time of national certification and completion of at least 250 hours of continuing education. The collaborating physician must attest to the APRN's clinical hour requirement and signs a form which is necessary for full practice authority.

Full practice authority removes the written collaborative agreement requirement with a physician. However, that doesn't mean a nurse practitioner will never collaborate. Nurse practitioners collaborate with physicians and other health care team members all the time and will always do so.

I think the notion of full practice authority and removal of the written collaborative agreement in Illinois has been kind of a hot button with the medical community because it may sound as though we're managing patients totally on our own without any form of collaboration, and that's never going to be the case. What it does mean in the states that have full practice authority (green states) is that I could open up a practice based on my education, training, and certification. I could hang a shingle and open up a practice called the Braun Health Care Clinic, for example. There are many successful NP owned practices in states that allow full practice authority which improve access to care, especially for the underserved.

DR. GUYTON: Sounds good.

DR. BRAUN: I was very fortunate in my preventive cardiology practice that I'm a Clinical Lipid Specialist. I've always had a very autonomous practice. My physician partners would refer patients to me. They didn't necessarily want to address complex lipid disorders. Primary care providers in the organization would also refer patients to me. For several years, I was the lipid clinic, and I would have a steady flow of patients. The FH Foundation also referred patients to me. More recently, we hired some physicians who loved prevention and managing lipid disorders.

DR. GUYTON: Yeah.

DR. BRAUN: As an NP managing complex lipid disorders, I would occasionally call upon my physician colleagues outside of my organization to consult on difficult patient cases. Dr. Michael Davidson used to practice with us, and he has remained a close professional colleague. He was always willing to discuss patients with me and provide recommendations

DR. GUYTON: I want to recognize some of your contributions to the National Lipid Association as well.

DR. BRAUN: Oh, thank you.

DR. GUYTON: You've been tremendous as a leading light in the organization, and that applies to Dr. Saseen and Ms. Williams as well.

DR. BRAUN: Well, Dr. Saseen is the current President of the NLA!

DR. SASEEN: She's the chair of my fan club.

Dr. BRAUN: Of course I am.

DR. GUYTON: How does the Clinical Lipid Specialist correspond to what has, in the past as I understand it, been called the Certified Diabetes Educator (CDE), now renamed as Certified Diabetes Care and Education Specialist.

DR. SASEEN: Oh boy, yeah. One thing that I think shoots us in the foot and I get to speak from the pharmacist's perspective, is how we change our terminology.

However, I really like the fact that we're all lipid specialists in a way to harmonize a few things. I do recognize that the former CDEs do have a new title and to be more broad and holistic perhaps. Lipid specialists have an intersection that may crosses over into a lot of the things that might be in the traditional "CDE realm" as far as educating patients about lifestyle modification, and about treatment options.

DR. GUYTON: Yeah.

DR. SASEEN: I think it's equally important to educate a patient with hypercholesterolemia as it is to educate a patient with diabetes.

DR. BRAUN: Agree.

DR. SASEEN: Now, the messaging might be slightly different or there may be additional things that we may not include, but there's an intersection. The lines are so blurred to me and I think that's probably a good thing. At the end of the day, it's probably not so important what we're called; it's much more important to focus on what we do.

DR. GUYTON: I really agree with you. I think a dietitian can be a CDE.

MS. WILLIAMS: Yes, they can.

DR. GUYTON: Some physicians are CDEs.

DR. SASEEN: Yes, pharmacists too.

DR. GUYTON: So I think that's a model that the NLA looked at very carefully.

DR. SASEEN: I work with several CDEs and they are outstanding clinicians. However, from the pharmacy perspective there are some things that we don't do.

We do not diagnose, it's not within our Practice Act. It's not appropriate for a pharmacist to diagnose. That's not what we bring to the table.

DR. GUYTON: Right.

DR. SASEEN: Within the care team, we bring in a unique perspective focusing in on medications, titrating and optimiz-

ing medications, and other complementary therapies including lifestyle modifications that augment therapy.

DR. GUYTON: Just one thing. I would say that pharmacologic therapies augment lifestyle therapy.

DR. SASEEN: Absolutely.

DR. BRAUN: Many years ago, the NLA created the certification program. The ABCL (American Board of Clinical Lipidology) provides certification for physicians, and the ACCL (Accreditation Council for Clinical Lipidology) provides certification for nurses, pharmacists, and dietitians who work in the field of clinical lipidology. I was involved in the ACCL early on, and Dr. Saseen, maybe you were. We created the first exam.

DR. SASEEN: Yes.

DR. BRAUN: The program itself and the exam were modeled after the CDE credential as it existed before ours did.

DR. SASEEN: Yep.

DR. BRAUN: We looked at the CDE credential in developing our program. Similar to the CDE, in order to sit for the ACCL exam (or the ABCL exam for that matter), you need to have a given number of practice hours in managing patients with lipid disorders, as well as continuing education focused in lipidology. We encourage prospective candidates to attend NLA Clinical Lipid Updates, Scientific Sessions, other classes given by the NLA, as well as complete the NLA self-assessments to earn continuing education hours.

DR. GUYTON: That's terrific. Just a quick question here. When APPs were first brought forward, it seemed to me that there was a category called an advanced practice nurse who was not a nurse practitioner, but maybe fit the category of an APP? No?

DR. BRAUN: Yes, that is correct. Clinical nurse specialists are also considered to be advanced practice registered nurses or APRNs. Clinical nurse specialists are experts in a particular specialty or for a certain population of patients, such as diabetes, geriatrics or women's health. They practice in a variety of healthcare settings and often lead quality improvement for a unit or an organization. They may not provide direct patient care, although they could. The role is quite flexible. Like nurse practitioners, clinical nurse specialists have at least a masters' degree and many have doctoral degrees.

DR. GUYTON: What about those nurses, medical assistants, technicians, phlebotomists, and schedulers, all the people in the clinic and at the front desk, how do you bring them into the team? Up to now we've been talking about people with advanced credentials.

DR. SASEEN: I'm happy to address that one just based on some of the things that we've done it where I work.

We've gone through primary care redesign with a goal to utilize those members of the team more appropriately. We hired a higher number of medical assistants to be part of the team, to assist in the workflow, to be scribes, to be the person to schedule appointments to decrease the time needed to conclude a visit.

For example, things like scheduling future visits, sending in referrals, providing the after-visit summary so that it gets into the patient's hand. We have found that using medical assistants in newer ways can increased the efficiency of our medical providers, even the non-physician providers such as myself

DR. BRAUN: Very often in a practice, when a patient has a concern or needs to contact a health professional, the patient first reaches the nurse. Therefore, it's very important to involve the nursing staff in the team and to give them all the education that they need to do their job well, as they're often the ones that are counseling patients over the phone. They also have to triage and figure out whether or not the patient actually needs to come in or can be managed with this phone call. My patients get to know the nurse who works with me directly almost as well as they get to know me. So it's critical to involve them and to convey that they're an important part of the team.

DR. GUYTON: Fantastic. So what are the challenges and barriers at this point in time? Are we making progress?

DR. SASEEN: I'll say maybe the obvious is financial.

DR. BRAUN: I definitely agree.

DR. SASEEN: It is challenging to reimburse the full healthcare team in a fee-for-service model. However, we are making progress. Value-based contracts that support quality can be leveraged to support the other members of the team who cannot generate revenue through fee-for-service.

DR. BRAUN: And another barrier can be lack of communication. The more team members there are, the more people you have involved with the patient that need information. There could be a greater risk of information not being shared.

Time is a barrier as well with team-based care. If the organization doesn't support the greater amount of time that is required for team-based care, then it's not going to work. It has the potential to fail.

MS. WILLIAMS: I would add, too, that another challenge is availability of resources. Are there enough people on the team to support seeing the patients in clinic? Or, to further Dr. Saseen's point, is there enough reimbursement to support the team members needed?

Getting reimbursement for various services is pivotal in offering a multi-provider lipid team approach.

For example, getting a dietitian, social worker, or clinical therapist into the lipid clinic sounds fantastic and may be a really great asset, but if it's not something that can be financially supported by the patient or the organization, then it's not going to happen. But this does seem to be getting better as the benefit of the team approach and preventive care is further discussed and recognized in improving overall outcomes.

DR. GUYTON: Prevention is essential. The fee-for-service model has been dominant, and it leads to a lot more income to the hospital for taking care of a heart attack or doing bypass surgery for a condition that was totally preventable. Until we understand this better as a country, as voters who can put this into real terms and get the kind of recognition for the value of the lipidology team, the diabetes team, the preventive health care team, the value of prevention in primary care as well – this will remain a key chal-

lenge and barrier. But we can show them models for what works. And that's what you have been describing so well in this Roundtable.

Suggested Reading

Dixon DL, Khaddage S, Bhagat S, Koenig RA, Salgado TM, Baker WL. Effect of pharmacist interventions on reducing low-density lipoprotein cholesterol (LDL-C) levels: A systematic review and meta-analysis. *J Clin Lipidol*. 2020;14:282–292.e4. doi:10.1016/j.jacl.2020.04.004.

Sikand G, Cole RE, Handu D, deWaal D, Christaldi J, Johnson EQ, Arpino LM, Ekvall SM. Clinical and cost benefits of medical nutrition therapy by registered dietitian nutritionists for management of dyslipidemia: A systematic review and meta-analysis. *J Clin Lipidol*. 2018;12:1113–1122. doi:10.1016/j.jacl.2018.06.016.

Martin SS, Sperling LS, Blaha MJ, Wilson PWF, Gluckman TJ, Blumenthal RS, Stone NJ. Clinician-patient risk discussion for atherosclerotic cardiovascular disease prevention: importance to implementation of the 2013 ACC/AHA Guidelines. *J Am Coll Cardiol*. 2015;65:1361–1368. doi:10.1016/j.jacc.2015.01.043.