



CMSC Podcast

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Pregnancy and MS

Elsie Gulick, PhD, FAAN

Operator: The conference is now being recorded.

Ms. Dottie Pfohl: Hello. My name is Dottie Pfohl, and I direct the website project for the Consortium of MS Care.

It's an honor today to welcome Dr. Elsie Gulick to this, our continuing Pillar Series.

The Pillar Series for the CMSC is well named, knowing that our foundation has its pillars, because we who work with and care for patients with MS, people with MS, stand on the shoulders of giants. And Dr. Gulick is, indeed, one of those.

Dr. Gulick comes to us a Fellow of the American Academy of Nursing. She's Professor Emeritus of Rutgers, the State University of New Jersey College of Nursing. She is known and loved to many of us, known particularly for her research and training activities, the many grants, publications, research, and scholarly presentations. She's also very active in the world of MS, personally and professionally, and serves on our website as one of our project leaders.

She's received so many awards and notices for the--her excellence. And the word "excellence" keeps appearing, excellence in writing, outstanding services, excellence in research, but I won't go into that now.

But, with her permission we will make available her extensive list of publications, etc., so that if you would like to know more about her work after this podcast, we'll invite you to explore with this lady some of the wonderful that she's done.

So, please join me in welcoming Dr. Elsie Gulick.

Thank you, Elsie.

Ms. Elsie Gulick: Thank you, Dottie.

Ms. Dottie Pfohl: Well, let's start, because we have a lot of things to ask you.

And in looking over some of your history, I noticed that you actually have been a nurse for over 50 years, okay, yeah, but most of your career has been involved in academia.

Did you begin with an intention to teach?

Dr. Elsie Gulick: You know how that all happened?

I was a school nurse in the Trenton system. And I was a guest lecturer at the Trenton State College, or College of New Jersey now, to present information on health teaching to children. And they liked what I presented and asked if I would take on a regular teaching role.

Ms. Dottie Pfohl: And I guess it stuck.

Dr. Elsie Gulick: Right.

Ms. Dottie Pfohl: Oh, that's wonderful.

Well, when you look back over particularly some of the decades that you've been working in areas, research in pregnancy in MS, are there any milestones that stand out to the greatest extent for you?

Dr. Elsie Gulick: Well, all of the studies that I've conducted relative to breastfeeding, and it started with my dissertation research on non-MS moms, that showed very clearly the advantages of breastfeeding to infants who are, you know, breastfed. So, I guess that was the beginning.

And then, when I kind of got involved in MS research, I wondered whether--to what extent, since there's, you know, immune problems in MS, would their infants who are breastfed still receive the advantages that a non-MS mother would.

So, that kind of, you know, just expanded further.

Ms. Dottie Pfohl: Hmm.

Well, I know that breast feeding has been an issue over generations, really. My own grandmother chuckled because she said, "Oh, I thought it was out of fashion. Now it's back in fashion."

Dr. Elsie Gulick: Right.

Ms. Dottie Pfohl: Yeah. So, it's been an issue, certainly all my adult life, of interest.

But, when it comes to--when you survey patients, and I know you speak with patients quite an--quite often, are there any questions you're most frequently asked by patients or their partner?

Dr. Elsie Gulick: I guess one question is, first of all, will pregnancy, you know, be--will the result of the pregnancy, the child or children born, in any way be predisposed to MS?

That's one question. Of course, that's a--you know, we feel is no.

And then, they wonder, you know, whether breastfeeding would, you know, make their MS relapses increase in frequency. And, of course, that's a big no.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: So--and I guess some other concerns some others had was fatigue and, you know, will they be able to, you know, do it?

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And is it a choice between breastfeeding and going on immune modulating, you know, drugs.

I think that's a big, big question that needs some resolution.

Ms. Dottie Pfohl: So, I guess there were issues to any mother--any new mother, and then those that are particularly influenced by superimposing MS on the situation.

Dr. Elsie Gulick: You know, there's another issue that needs to be also addressed somehow.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: I've had a number of e-mails, and also telephone calls, from mothers who have been in the various, you know, breastfeeding studies about their attending physician, neurologist, whoever, wants them back on immunomodulating [sp] drugs, you know, right after delivery.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And the mothers are really in a quandary. They really feel their role as a mother and parent, you know, is breastfeeding. And they'd very much like to breastfeed several months, you know, before going back on the immune-modulating drugs.

Ms. Dottie Pfohl: Uh-huh. Sure.

Well, that sounds like an ongoing--.

Dr. Elsie Gulick: --Yeah--.

Ms. Dottie Pfohl: --Issue that we're certainly not going to have answers for. But, sensitivity for the mother's wishes, as well as the provider--the healthcare provider's concern of making sure people are being treated as well as possible to keep the disease in check.

I was speaking with a woman recently who said she never felt better than when she was pregnant and breastfeeding her children, and really was considering a fourth child--.

Dr. Elsie Gulick: --Uh-huh--.

Ms. Dottie Pfohl: --For that reason. And I told her, "Well, I think perhaps we have to talk this through a little bit more."

But, I don't--I always chuckle when people say, do you think these are issues for women, because I think reproductive health now has become an issue for their partners, as well--.

Dr. Elsie Gulick: --Uh-huh--.

Ms. Dottie Pfohl: --For the entire family complex. Would you agree?

Dr. Elsie Gulick: Right. Right.

Ms. Dottie Pfohl: We have issues of fertility, and then medications that might affect DNA for the males, as well.

Dr. Elsie Gulick: Uh-huh.

Ms. Dottie Pfohl: Yeah.

Well, I know that you've done some studies on breastfeeding. And perhaps this is a good time for you to tell us a little bit about that, because I know you've done a comparison.

Dr. Elsie Gulick: Yes.

Ms. Dottie Pfohl: Or comparison studies, actually.

Dr. Elsie Gulick: Well, should I talk--?

Ms. Dottie Pfohl: --Sure--.

Dr. Elsie Gulick: --Specifically about moms with MS?

Ms. Dottie Pfohl: Please.

Dr. Elsie Gulick: Okay.

Well, one relatively large study on--that consisted of 140 breastfeeding mothers and only on--there were 35 formula feeding mothers. I followed them prospectively, enrolled them right around delivery, or just before delivery, then followed them every three-month periods through the first year.

And I found that the relapse rate during the first one to three-month period was significantly lower among the breastfed mothers than the formula feeding moms.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: In fact, it was a relapse rate of .49--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --For breastfeeding and 1.71 for formula-feeding mothers.

Now, that was controlling for exacerbations during pregnancy and the year before pregnancy. Also, the duration of MS since diagnosis, the mother's age, and--oh, there may have been one or two other things, also.

So, you know, it's pretty--a pretty strong study.

One thing, though, that is different comparing the study that I just reviewed with the Langer-Gould et al. study, my breastfeeding mothers, I put them in a group of 50 percent or more of the infant feeds.

Now, what Langer-Gould did, they just looked at mothers for the first two months but complete breastfeeding without supplementation of milk, formula, or other foods.

Now, you know, we kind of found similar results, even with the mothers that--in my study that breastfed 50 percent or more.

Now, I can go back and look at my data to look at those that breastfed 100 percent, you know, to see if there's even an improved health outcome, because the sample is, you know, large enough to break it down into various, you know, subgroups, whether it's 100 percent breastfeeding, or 50 or 25, or whatever.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: So, you know, I'm real--really encouraged that, even though the studies by Gulick and Helper [sp] that I just reviewed, the Confrew study in '98, and the Langer-Gould study in 2009 end up with kind of similar results in terms of protecting the mother against, you know, the MS relapses.

A lot of the methodologies are not always comparable, but I think, for the most part, they lack bias and they're pretty good.

Ms. Dottie Pfohl: Uh-huh. Hmm.

It just seems like such a broad topic of pregnancy and breastfeeding and sexual dysfunction, and just so much to consider.

I was thinking, also, of depression being higher in the MS population than the non-MS. Do you find there's more postpartum depression in--?

Dr. Elsie Gulick: --Well--.

Ms. Dottie Pfohl: --Women with MS?

Dr. Elsie Gulick: I did one study on--looking at emotional distress--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --In mothers during the postpartum period. And I defined emotional distress as a combination of depression, loneliness, and anxiety. They're all interrelated.

And I found that--I've also looked at, you know, support.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: Those mothers who lacked support from their family, friends, others, you know, had significantly higher emotional distress.

In another study, I looked at the ADL functioning in mothers, you know, who breast fed and those who didn't.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And again, I found that social support was a mediator between the relapses and also the ADL functioning.

Ms. Dottie Pfohl: Hmm.

Dr. Elsie Gulick: So, again, social support is a very, very significant factor or condition that needs to be addressed in mothers who, you know, plan to breastfeed.

Ms. Dottie Pfohl: Could you tell us a little bit more about the role of this ADL scale and how you took that from really assessing the needs of MS patients to taking it to the needs of those who might be considering pregnancy or be pregnant?

Dr. Elsie Gulick: Wait, Dottie, repeat that once again.

Ms. Dottie Pfohl: Yeah. I'd just like to hear a little bit more about the ADL and-
-

Dr. Elsie Gulick: --Oh, oh, okay--.

Ms. Dottie Pfohl: --Yeah, how you began using those scales. Like why did you put that together--?

Dr. Elsie Gulick: --Okay--.

Ms. Dottie Pfohl: --With the social support?

Dr. Elsie Gulick: Right. I have that here somewhere in front of me.

Ms. Dottie Pfohl: The difference in a researcher is that everything you do is backed up by data.

Dr. Elsie Gulick: That, actually, was--here's the emotional distress article. Let me look at the one where I looked at the ADL outcome.

Oh, golly, here it is. Okay.

That was published in 200--2007. And what I did there was look at the number of MS relapses and I looked at the symptoms that they experienced. And I looked at the social support that they received, and also how these variables, you know, affected their functional performance, which was measured by the 15-item ADL scale.

Ms. Dottie Pfohl: Oh, I see. Okay.

Dr. Elsie Gulick: And what I found was that, the more MS relapses that they had, the more symptoms that they experienced. And the symptoms were measured by the MS symptom-related scale that looks at motor symptoms, brainstem, sensory, elimination, and fatigue as well.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: Anyway, the results of that study found that there was a positive relationship between the number of relapses and increase in symptoms, the longer duration of MS, the more symptoms they reported. And again, that's congruent with what's reported in the literature.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And then, there was a negative relationship, which was very significant, between the symptoms experienced and social support--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Indicating that, the more symptoms they had, they had decreased, you know, social support.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And then, the social support was positively related to their ADL functioning. And the ADL functioning included their personal care, their communication with others, their recreation and socializing, and their intimate relationships.

So, social support enhanced their ADL functioning. The MS symptoms decreased their ADL functioning. However, if you throw in your social support--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --That decreases the MS symptoms but increases functional performance.

Ms. Dottie Pfohl: Hmm.

Dr. Elsie Gulick: So, again, it really points to the need for appropriate social support in terms of--not only during pregnancy and getting ready for the outcome of pregnancy, including breastfeeding--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --But ongoing at--very, very importantly through the whole first year. Not the first month or three months, or--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Six months, throughout the whole--.

Ms. Dottie Pfohl: --Well, in the--.

Dr. Elsie Gulick: --First year--.

Ms. Dottie Pfohl: --Concept that it takes a village, probably even longer duration.

Dr. Elsie Gulick: Yeah, right. Uh-huh.

Ms. Dottie Pfohl: Well, you've worked with people from different cultures and people of all different educational levels. What have you learned that other MS professionals should remember as we work with people from different backgrounds?

Dr. Elsie Gulick: Well, one study reported that more highly educated individuals will tend to breastfeed than those who are, you know, less educated.

Ms. Dottie Pfohl: Hmm.

Dr. Elsie Gulick: Some ethnicities--you know, it's their tradition to breastfeed. And so, there are, you know, higher rates in some cultures than others.

I guess, you know, one's feeling the need to, you know, get back to work--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Can be a factor to decrease, you know, breastfeeding, someone who has increased relapses, say, the year before pregnancy, or even during pregnancy. I know in the study by June Helper and myself, and also in Confrew study we found that increased MS relapses the year before pregnancy, or during pregnancy was a factor against, you know, breastfeeding--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --The mother's feeling that perhaps, you know, they're going to continue to relapse.

Now, the study by Langer-Gould et al. didn't support that finding. They didn't feel there was any association between the number of relapses the year before or during pregnancy and the number of relapses, you know, in breastfeeding moms during the first two months.

So, I'm not sure why--you know, the difference between the studies.

Ms. Dottie Pfohl: Uh-huh.

You've mentioned a couple of times the study with June Helper. And being a curious sort--I'll put it that way, instead of just nosey--how did your work or collaboration with June Helper begin? How do you know her?

Dr. Elsie Gulick: Oh, my golly.

This started way, way back. Many, many years ago I had somebody from the Mid-Jersey MS Chapter come to Rutgers, talk to the dean, and wanted somebody to help them with research. And the dean knew that I liked doing research, but I was only a recent PhD graduate at that time. But, I had--and I had not--but, my husband had had MS, so the dean thought, "Well, she likes research. She knows something about MS through her husband."

Ms. Dottie Pfohl: Oh, wow.

Dr. Elsie Gulick: Anyway, so I met with Sally Hennesy from the Mid-Jersey Chapter and developed a proposal for funding by Robert Wood Johnson Foundation. And so, I needed several chapters to recruit subjects for the study.

So, the North Jersey Chapter was, I think, run by June Helper at that time. But, anyway, that's how I got--.

Ms. Dottie Pfohl: --Oh, wow--.

Dr. Elsie Gulick: --Affiliated with June, was to ask her if she would be part of the study and--that I had, you know, proposed that Robert Wood Johnson had funded.

Ms. Dottie Pfohl: Wow.

Dr. Elsie Gulick: So, it started way, way back.

Ms. Dottie Pfohl: Yes, yes.

And you say that your husband had MS, as well. So, you have a unique perspective of a person living with MS within the family as well as being the professional researching it.

Do you think that's given you a particular edge in your work?

Dr. Elsie Gulick: Probably. I think so, because I developed a real appreciation for people with MS.

What I have found from research and from my husband was they're a special kind of people. They're very insightful. There's--they can find a solution to the problem that most of us would never, you know, even consider--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --You know, considering--.

Ms. Dottie Pfohl: --The resilience of the human spirit.

Dr. Elsie Gulick: Yeah.

Ms. Dottie Pfohl: But, you know, it's hard for me to zero in on questions because there's so many things that I'd like to ask you.

But, I wonder if you would like to take a little time and just describe to us a little bit the North American Pregnancy Project, because I know you go back to its roots and could tell us briefly about the phases and goals of this project.

Dr. Elsie Gulick: You mean the study that June Helper and I did?

Ms. Dottie Pfohl: Well, I was--I'm just thinking of the pregnancy project, so if you--you know, whatever you really would like to give us from that. Is there not a larger Great American Pregnancy Project, or the North American--it sounds like the Great American Smoke-Out. But, I know of it as the North American Pregnancy Project.

Dr. Elsie Gulick: I don't know if I'm familiar with that.

Ms. Dottie Pfohl: Then, let's forget that about that. That's obviously not where we want to go.

Well, let's talk just a little bit, then, about the comprehensive care model in MS, because you can't mention June Helper's name without comprehensive care. But, do you feel that that's particularly applicable to people with MS, and family planning and managing issues of pregnancy?

Dr. Elsie Gulick: Well, certainly pregnancy is a family matter, no question about it, because--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --From the beginning to the end of life--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --You know, it impacts the family.

Ms. Dottie Pfohl: Sure.

Dr. Elsie Gulick: And I think there has to be a dialogue, agreement, a give and take--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Support--.

Ms. Dottie Pfohl: --Sure--.

Dr. Elsie Gulick: --And it's a serious, you know, undertaking.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And, I mean, one brings the new life into being and one is given the responsibility to see that that new life, you know, is given the advantages to grow up and be a healthy and prosperous individual.

So--.

Ms. Dottie Pfohl: --I know you've done a great deal of work on diet and nutrition, as well--.

Dr. Elsie Gulick: --Well, certainly the diet of a pregnant mother is very important, and it includes no smoking. As--also, you know, when the child is born, there shouldn't be any smoking in the house either.

But, nutrition for the infant is extremely important. In fact, the nutrition the infant is given through breast milk allegedly increases their cognitive development. And there is significant research, you know, to support that.

Also, the nutrition for the infant, also through the various hormones and B-cells, etc., you know, could cause the infants immune system to mature more rapidly than those that are not breastfed. They're also given protection against, you know, various inflammatory conditions of the GI tract, the respiratory tract, otitis media is decreased, allergy is decreased, diarrhea is decreased, and constipation is decreased.

In terms of as the child grows up, there's a decrease in leukemia, according to the literature. And also, in older individuals, blood pressure is controlled--is--the systolic rate is, you know not as high. And there's even some support for a decrease in type 2 diabetes.

Ms. Dottie Pfohl: Well, do you think hormone therapy has a place in optimizing care for certain MS patients?

Dr. Elsie Gulick: Well, the problem with identifying a particular hormone is difficult because what happens in the development of breast milk, there are a combination of hormones that interact, you know, with them. So, actually, we really don't know the real cause of no relapses in--or fewer relapses in--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Breastfeeding mothers, and all these other positive health conditions. It's a combination of hormones and B-cells and cytokines, chemokines, you know, etc.

Ms. Dottie Pfohl: Um-hmm.

Dr. Elsie Gulick: It's complex and we don't know all the answers. But, all we know is it seems to be very, very protective--that is, breastfeeding.

Ms. Dottie Pfohl: Uh-huh.

Well, I do want to make sure that we have some time to talk about your research. And I have it listed as the North American Pregnancy Project, so--and the various phases. But, if--that's something that we will pass over. I'd just love to hear any aspects of your research that you'd particularly like us not to end this session without exploring with you.

Dr. Elsie Gulick: I couldn't hear that.

Ms. Dottie Pfohl: Oh, I'm sorry.

I wanted to get back to the concept of the--your research. And I have it listed as the North American Pregnancy Project, NAPP.

Dr. Elsie Gulick: Well, you know, it--a lot of that research that I did was actually--it was North America.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: It was Canada and the United States.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: So, you know, what was--the studies that were, you know, published regarding the infant health--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --In fact, that was, you know, a follow-up on the breastfeeding relapse, because I follow the mothers and I also followed the infants as well in terms of their, you know, health.

So, actually, you know, these--several studies from the--what you call the North American Breastfeeding Study--.

Ms. Dottie Pfohl: --Um-hmm--.

Dr. Elsie Gulick: --They're all part of it.

Ms. Dottie Pfohl: I see. Okay.

Dr. Elsie Gulick: Yeah.

Ms. Dottie Pfohl: So, they have individual names as you--different facets were developed.

Dr. Elsie Gulick: Yeah. Yeah.

Ms. Dottie Pfohl: I see. I see.

Well, you know, management of stress, as well as diet and exercise, seem to be so important in MS. Is there any new information to consider in these areas?

Dr. Elsie Gulick: In terms of breastfeeding?

Ms. Dottie Pfohl: In terms of anything, just management of stress and diet and exercise.

Dr. Elsie Gulick: Well, you know, stress is another problem in breastfeeding.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: In fact, the--see, oxytocin--if the baby isn't sucking, oxytocin isn't released from the posterior pituitary gland--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Which causes the milk let down reflex.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And so, the baby's not getting milk because the milk isn't, you know, being allowed to flow out.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: Now, cortisol is usually low initially at the beginning of the postpartum period, but then increases.

Now, the presence of cortisol does reduce stress.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: But, infant sucking, you know, is the important stimulator for the release of oxytocin--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --And also for prolactin. The sucking causes, you know, release of the prolactin and increases the prolactin in breastfeeding moms three or four times more than the non-breastfeeding moms.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: So, stress, you know, is a problem in breastfeeding, as well as in any human being, whether they have MS or not, and throughout life.

Ms. Dottie Pfohl: Uh-huh.

That seems to be so much to consider now. And there's so much talk about vitamin D. Do you have any thoughts about--I've heard the vitamin D being linked to actually generic information, risk factors for offspring.

Dr. Elsie Gulick: Well, sure--.

Ms. Dottie Pfohl: --I don't know much about it--.

Dr. Elsie Gulick: --Well, that's--.

Ms. Dottie Pfohl: --And I'd love your input.

Dr. Elsie Gulick: It's beginning to appear in the literature relatively frequently now. And I'm certainly in support of vitamin D, preferably, you know, through sunshine. If you can get it that way--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --It's kind of more wholesome. Of course, we have to be careful of the heat, you know, and--.

Ms. Dottie Pfohl: --Right--.

Dr. Elsie Gulick: --Its adverse affect on people with MS.

But, you're right, vitamin D is an important vitamin in one's nutrition I think for, you know, all people whether they have MS or not. I know I'm encouraging my granddaughter to get more sun. And I've even suggested she supplement with vitamin D, you know, just as an extra precautionary measure, although she drinks a lot of milk, and you know, milk is fortified with vitamin D.

Ms. Dottie Pfohl: That's right, 300, I think, milligrams a glass.

Dr. Elsie Gulick: Right.

Ms. Dottie Pfohl: Does research shed any light what needs to be considered when a person with MS, particularly a woman of childbearing age, is considering disease modifying therapies? I--we all know that there are different classifications for our

platform therapies, but that, for the most part, we do not have patients continue those therapies during pregnancy.

But, are there any other considerations? Now we have drug coming along that carry other risk factors, or may even--I'm--I've heard it described as either a class D or class IV. They may have those warnings on them.

Do you have any thoughts about how we can help people sort through the disease modifying therapies in relation to their reproduction health?

Dr. Elsie Gulick: Well, that's a difficult question.

Ms. Dottie Pfohl: A big question.

Dr. Elsie Gulick: Most drug companies, you know, don't recommend administration of the drugs during breastfeeding--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Or pregnancy. However, there were five or six mothers in my 140 breastfeeding moms who did proceed with the immune-modulating drugs. In fact, one of those mothers was a neurologist--.

Ms. Dottie Pfohl: --Hmm--.

Dr. Elsie Gulick: --Which is rather interesting, and had no adverse effects.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: Now, I read in one study where they didn't support the immune modulating drugs, but they were kind of suggesting that progesterone--not--IV--what's the medication they give for sudden relapse?

Ms. Dottie Pfohl: Solu-Medrol?

Dr. Elsie Gulick: Oh, well--.

Ms. Dottie Pfohl: --The steroid treatment for relapse, or--well, there are so many infusion therapies. But, the--on the market is the Tysabri right now. But, that, of course, we don't use with any other disease modifying therapies, and it's not indicated for pregnancy.

Dr. Elsie Gulick: Well, you know, I really--I leave that up to, I guess, the pharmacist and the--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Studies that have been conducted in terms of what they show, you know? That would be a difficult decision to make.

Ms. Dottie Pfohl: Sure. I'm just trying to--.

Dr. Elsie Gulick: --They--it really is--.

Ms. Dottie Pfohl: --Get perspective and then make choices--.

Dr. Elsie Gulick: --Hmm--.

Ms. Dottie Pfohl: --In judicious timing on some of these things.

Dr. Elsie Gulick: See, we don't know the long-term potential adverse affects of these drugs. They may work really well the first couple years--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --For some. And--but, then again, what's the sequelae further down the road?

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And, you know, just taking the drugs on a daily or weekly, or periodic basis--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --You know, that's not easy for a lot of, you know, people.

And, I mean, a lot of people are looking forward to maybe an oral--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Immune suppressant drug, you know?

Ms. Dottie Pfohl: Uh-huh.

And then, we're going to be in just another situation of new medications that we're learning again about.

Dr. Elsie Gulick: Yeah.

Ms. Dottie Pfohl: But, since the drugs in development, that will be orals, are not the drugs that we're giving, the platform drugs we're using by injection.

So, it is a very changing time, and lots to absorb. And it makes it difficult for us to know the best ways to look at disease management, and--which makes it even harder for patients to try to make responsible and well informed decisions.

But, just to shift gears a little bit, because I knew that this time was going to fly by--and indeed it has--but I would like to just shift our focus a little bit.

And you've been recognized and awarded many times for your prolific writing and outstanding contributions to MS literature. I know that you can talk about your work with such passion that I know it's a labor of love. But, what has been your greatest challenges and/or satisfactions?

Dr. Elsie Gulick: You mean in doing research?

Ms. Dottie Pfohl: In doing research, or over your long nursing career?

Dr. Elsie Gulick: Well, I think trying to find answers to troubling problems is really what I like to do and find satisfaction in.

I mean, if you can bring comfort or bring information to people so that they can use it to help them, you know, live a more comfortable, more healthy life, I think that's really what we need to do. And I know that's kind of what I like to do.

Ms. Dottie Pfohl: It's so hard to find time for research, and yet I've heard you, with people who have a question, present the idea of doing research. And you're so generous in being willing to show people how to do research or support them as they get started that I think--I think that perhaps that's the most remarkable thing, your willingness to mentor others. Like, even terms like locus of control, we hear about it.

Maybe you could describe just briefly your understanding of the importance of that concept, locus of control.

Dr. Elsie Gulick: The importance of what concept?

Ms. Dottie Pfohl: Locus of control.

Dr. Elsie Gulick: Oh, yeah.

That's important. In fact, that's important in breastfeeding.

There's one article that I recall that identified the need to feel something was important--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --That they had to feel that there was a need and they could get it. And so, they went after it. And that's part of an internal locus of control versus external. But, external is when you go to outside people. But, I think you need a combination of both.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: But, certainly your internal locus of control allows you to look at what outside people, you know, tell you, you identify what your needs are, you identify how you can go about to operationalize this particular thing that you want to do.

So, yes, I think one's locus of control is important. I think their ability to cope, I think their ability to look at their self-management needs, all these I think are interrelated to locus of control.

Ms. Dottie Pfohl: Hmm.

Are there any areas where you see the greatest opportunities for breakthroughs in the treatment of MS?

Dr. Elsie Gulick: I hope stem cell research may be one of these scientific approaches that will help to resolve this dilemma.

Ms. Dottie Pfohl: So, regeneration.

Dr. Elsie Gulick: I certainly hope so.

Ms. Dottie Pfohl: Yeah.

Well, just one final question. And wonder just maybe in summarizing, Dr. Gulick, are there perhaps some takeaway messages that you'd like MS professionals and our patients to remember on the topic of MS and pregnancy?

Dr. Elsie Gulick: Well, yeah, there really are. I really feel that there is a place for breastfeeding in persons with MS. It's not for everybody. And I think I would be cautious if they have a history of many relapses the year before and/or during pregnancy. There I would be cautious.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: Also, the information that they need with regard to breastfeeding, I think there needs to be a lactation consultant that is paired up with the mom who is expecting, and also with the significant support person in the family, whether it's the spouse or whoever. I think they need to get together before the baby arrives and do the planning and discuss the needs of a breastfeeding mother in terms of support for emotional, for physical, both with keeping the house going, care of other siblings, getting a little extra, you know, social--or at least some social needs met by the mother. And they need ongoing support.

So, I think support is extremely important by the healthcare providers, the physicians, neurologists, the nurses, the nutritionist, the physical therapy where needed, psychologists, or psychiatrists. I think it's a team approach that's needed and it's an ongoing need starting in pregnancy and going right on through the breastfeeding period, however that--long that may be, one year or two years because, you know, the World Health Organization suggests that at least breastfeed for six months--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --And longer if possible, you know, right through two years. And I know a number of moms who breastfed through two years. I know moms who breastfed twins with no problem.

I mean, it's very gratifying to these mothers.

Ms. Dottie Pfohl: Uh-huh.

Dr. Elsie Gulick: And it's certainly gratifying to the child who's freer of illnesses, so that the mother has a child with few illnesses that can take care of herself better--.

Ms. Dottie Pfohl: --Uh-huh--.

Dr. Elsie Gulick: --Than having to devote with the care of an ill child.

Well, I better stop.

Ms. Dottie Pfohl: It sounds like a win/win.

Dr. Elsie Gulick: You're right.

Ms. Dottie Pfohl: Oh, dear.

Well, I want to thank you very much for being so generous with your time, and of course for a career of giving to others. And I personally have benefited from your wisdom, and also, on your reliable and steadfast devotion to the work of the CMSC. Whenever there's something to be done, you're there.

Dr. Elsie Gulick: Well, thank you.

Ms. Dottie Pfohl: You've received many, many prestigious awards. But, the "Shirt Off My Back" award from the website project--.

Dr. Elsie Gulick: --I still have it--.

Ms. Dottie Pfohl: --Is the one that we gave you with great admiration, because it is quite true. Any project that you've worked on has been done with thoroughness and professionalism and a joy for teaching, and one of the reasons we wanted to recognize you as one of the pillars of the CMSC.

So, thank you.

Dr. Elsie Gulick: Thank you very much, Dottie.

Ms. Dottie Pfohl: Thank you for being with us.

And I do hope that our members will take advantage now and download the podcast and enjoy this conversation with Dr. Elsie Gulick, Professor Emeritus of the Rutgers University.

And thank you, Elsie, again.

Dr. Elsie Gulick: Thank you, Dottie.

Ms. Dottie Pfohl: Bye-bye now.

Dr. Elsie Gulick: Bye-bye.