

Interviews of the Margaret MacVicar Memorial AMITA Oral History Project, MC 356
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Barbara Yawn – class of 1969
Interviewed by Emma Bernstein, class of 2020
June 7, 2019

Margaret MacVicar Memorial AMITA Oral History Project

Barbara Yawn (SB Physics '69) was interviewed on June 7, 2019 by Emma Bernstein (SB Computer Science and Molecular Biology '20) in the Hayden Library Lipschitz courtyard. Yawn was visiting MIT for her 50th reunion with her husband, Roy, whom she met at the Institute as an undergraduate student and who also graduated in 1969.

In Yawn's third year, she turned to medicine after deciding not to pursue a graduate degree in physics. She went on to earn her degree in medicine from the University of Missouri and completed her residency in family medicine at the University of Minnesota, also completing a master's degree in public health. After residency, Yawn joined a rural practice with her husband, a general internist, and they raised two sons. During those 14 years, Yawn found that she enjoyed clinical research in primary care. Her first publication, in the Journal of the American Medical Association, focused her next career move. She returned to school and received a master's degree in statistics from the University of Michigan, Ann Arbor. With her husband, she moved to Rochester, Minnesota, where she opened a research department for primary care research in a clinical environment, in contrast to the tightly controlled studies in academic environments that enrolled few real-world patients and which were characteristic of most work at the time. After 25 years as director of that department, she "retired" and is now a research consultant and Chief Science Officer for the COPD Foundation.

BERNSTEIN: I'd like to start with where you grew up and what it was like.

YAWN: I grew up in a suburb of Kansas City, Missouri, moving from Topeka, Kansas when I was about eight.

BERNSTEIN: What was it like?

It was a pretty traditional, white, middle-class suburb. My father was an engineer and my mother was a musician, and both of them were the first in their families to graduate from college. So education was important, and music was important, but I certainly hadn't thought about the possibility of going to MIT.

BERNSTEIN: What kind of things were you interested in when you were younger?

YAWN: Music. I played in the marching band, and that was fun. I didn't really do sports because girls back then didn't do sports very often. I was also in the jazz band. I played for the school musicals. I rode my bike, certainly did a lot of reading – lots and lots of reading.

BERNSTEIN: When did you start getting interested in math and science, and start thinking about college?

YAWN: I probably was always interested in math and science. My father was an engineer and would talk to me about various things: When I was interested in how things worked, he certainly would support that interest and let me take things apart. (I didn't put them back together too well!) [LAUGHS]

Beginning in third grade, fourth grade, fifth grade, I was interested in math. I certainly was doing more math than most of my contemporaries. I did have a couple of friends who were girls and who were also interested in math and science, so that made it a little easier – not to be the only girl [with that interest] until I got to junior high and high school. Then I was the only girl doing it.

BERNSTEIN: When did you start thinking that maybe MIT may be the college to go to?

YAWN: Well, there was never any question that I was going to go to college. That was my parents' expectation, I think, probably from the day I was born, so it never occurred to me that I wouldn't go to college.

MIT? Probably sophomore year in high school. I had a teacher who taught physical science and then physics. He was a very nice gentleman. He said, "Why not? You're the smartest one around here. You should go to a really good school. Have you ever thought of MIT?" I was surprised. "No, I never thought of MIT. But OK, let's think about it." I think he was the one that probably made the first suggestion. He hadn't gone to MIT, but he certainly was aware of what the opportunities were and thought that I should think about them.

BERNSTEIN: You said you were the only girl in your math and science classes. Had you thought about what it might mean to go to a school where there were so few women? Did that cross your mind?

YAWN: Oh, I think it crossed my mind, but it never really bothered me because I had spent most of my high school classes mainly with guys. There were some women in physical science, or some girls, but there were none in physics. There were none in chemistry. There were none in senior math. And I played the baritone, which is not an instrument that girls frequently play, so that was all guys.

BERNSTEIN: Right.

YAWN: I probably grew up being a tomboy and being very used to being around guys, except for a couple of girlfriends I had who, unfortunately, both moved as we went on to junior high and high school, so they weren't around anymore. In grade school they were around, and they were tomboys with me. We did all kinds of fun experiments and we never thought much about whether we were girls or boys.

BERNSTEIN: You mentioned that your mentor in high school, or the person who suggested MIT, was your physics teacher. Did you always have an affinity for and aptitude in physics?

YAWN: Oh, I think it was more in math. I mean, I didn't know what physics was probably until my senior year in high school, and then it was pretty simple physics. But I knew a little bit about various things; I had read some. Actually, when I first thought about it, I that that, "Gee, it'd be fantastic to be like Madam Curie." She was kind of a hero. I figured out later on, here at MIT, that Madam Curie died of radiation poisoning – so maybe I should think about medicine, too.

I don't know if I came to MIT saying it was going to be a physics major specifically. Physical chemistry was interesting. Physics, math, any of those would have been fine I believe.

BERNSTEIN: Once you arrived at MIT, where did you live on campus?

YAWN: McCormick. The only place women lived on campus was at McCormick. I mean, It was fantastic. I think the guys were all jealous because it was a new building almost, and beautiful. We had nice lounges. We had decent places to cook. I think the thing that was probably maybe from Mrs. McCormick [BS Biology, 1904; benefactor of Stanley A. McCormick Hall], who helped design it, the second half of McCormick hall had this huge room with floor-to-ceiling mirrors and a barre for ballet. I think she was probably surprised there weren't that many of us that did ballet. It was a great place to exercise, and do things, but it wasn't ballet!

BERNSTEIN: When you were there, it was the single tower?

YAWN: It was the single tower the first year, and they were building the second tower.

BERNSTEIN: What was the community like at McCormick?

YAWN: Well, I think that it was friendly and open in some cases, but most of the women that were there were quite competitive. Most of us have been competing with men, and the saying was that if you were going to compete, you had to be better than the men. So, there were times that it was competitive, and there were times that it was very open and friendly.

I had a couple of roommates and then a woman down the hall with whom I spent most of my time. She and I got to be good friends. We all studied together and did things together. It got harder as we went forward because we all went off in different courses. It's harder to study together when one's studying materials science, and one physics, and one chemistry. But there were smaller groups that worked together, played together, enjoyed together. And then there were others that were less so.

Part of the atmosphere that was very nice was not just having women in your own class: Because there weren't that many of us, all of the women got to know each other. I got to know people like Shirley Jackson [BS Physics 1968, Ph.D. 1973; first African American woman to receive a Ph.D. from MIT; a 2014 recipient of the National Medal of Science], for example, who graduated the year before I did and went on to be an amazing role model for all women in science. She was a mentor and support, which was interesting. She was one of very few black students at the time and a woman in a pretty much all-male school. That was very nice.

Margaret MacVicar [BS Physics 1964, Ph.D. Metallurgy and Material Science 1967; Dean of Undergraduate Education; founder of the UROP program; this oral history project is named in her honor] must have been at least four years ahead of me, but she was around in the dorm, especially my freshman year. I remember talking to her shortly after—the class's big introduction, when they bring all the students. I don't know if they do it anymore, but they used to bring all the students in to Kresge, the freshmen, and then they would put all the SAT scores up. The people I knew walked out of there saying, "Well, where was your score?" We all agreed our scores were all at the bottom, so we all felt horrible. This was before the first class, and we thought, "Oh my gosh, we're all idiots, and we're never going to make it through."

There were people like Margaret, who were just very good at sort of sitting us down and saying, "Wait a minute. Whoa, whoa, whoa. Don't panic here. Let's talk about this. Let's talk about your strengths, why somebody else's SAT scores might be higher. Maybe you didn't go to a private school in New England that specifically was designed to prepare you for an Ivy League or MIT." And it was like, "Oh, yeah, you're probably right."

So there were people like that that were very supportive. Our house parents – I'm so embarrassed to say I don't remember their names. He was a professor in humanities, but he and his wife were also really good at talking. [Prof. Klaus Biemann and Vera Biemann].

My father died three weeks before I came to MIT, quite suddenly and unexpectedly, so I had sort of an extra burden to bear at that time and wasn't sure if I was actually going to even come. But both MIT and lots of my father's friends at home from work-- I don't know how they communicated, I don't know how they ended up talking to each other, I never really found out, but they did. And they figured out that I wasn't going to be able to come to MIT because of money, because there was no longer a salary there. But they were very good at talking, and MIT figured out how to give me a bigger scholarship and more support and make it possible for me to come. Then, after I got here, as I said,

our house parents, as we sort of fondly called them, were very good if I needed to talk, letting me go and talk about my feelings.

So there were a lot of supportive things, but there were a lot of things at MIT at that time that were not good for a student's mental health. But if you found the right people, you could find people to support you.

BERNSTEIN: What kinds of things?

YAWN: Well, I mean the competitive nature of the way the classes set you up against other people. I don't remember a lot of professor's open doors and warm and fuzzies. It was like, "Well, you make it, or you don't. That's the way life is. If you're smart enough to be here, you're smart enough to figure it out." There wasn't a lot of attention to the human side of things.

BERNSTEIN: You mentioned that Margaret MacVicar and Shirley Jackson were mentors of yours. Are there any other people who stand out to you?

YAWN: Those are the two that I really remember the best. Certainly I had classmates that were important to talk with, but they weren't exactly mentors. We were kind of all in it together at that point. Margaret and Shirley were the two that I really remember. Also, Sandra Foote was a good friend. She was two years ahead – she was in graduate school, but she stayed around in the dorm too, kind of like Shirley and Margaret did, and she was a mentor too.

BERNSTEIN: Did you feel well-prepared when you got to MIT?

YAWN: Oh, no. No, no. I went to a suburban high school in Kansas City, Missouri! We didn't even have calculus. I had to take calculus at summer school before I came, and we finished all of the calculus here that I did in the whole summer in the first two weeks. So, no, there's no way I was prepared.

I think probably like a lot of the people who came at that time, I was in the accelerated classes at my high school, but those classes weren't exactly difficult. I didn't know how to study. I had no clue how to study. I had never had to study. "Oh, you have a test?" "OK, fine." You keep up in class, and you might look at the material the night before, and it's no big deal.

But that's not the way it was here. I mean, they moved fast, and there was a lot of material. Some of it was quite complex and totally new concepts. Even in the humanities courses, it's like, "OK, here's a book. Why don't you read it this week?" "Oh, sure, why don't I read it while I'm trying to do all the other things I was supposed to do too!" So, no, there's no way I was prepared. There's no way I knew it was going to be like when I got here, no idea.

BERNSTEIN: What was did your first year look like, and how did you start figuring out that maybe you wanted to pursue physics?

YAWN: My first year was pretty much like everybody else's. We all were just basically taking the same classes. I studied very hard my first year and did very well. And Professor French [Anthony French, BA 1942, PhD 1948; leader in physics education], in physics, was really an excellent teacher. I really, really enjoyed 8.01 and 8.02 and thought maybe I would major in physics. Although I was still looking, at 18, at math at the time, too. I think it was probably 18.05, linear algebra, that helped me decide physics seemed more interesting. Theoretical math just wasn't my thing exactly. Theoretical physics, now, OK, you can live with that. But theoretical math is a little too abstract, perhaps, for where I was at that time. I think it was probably somewhere in my sophomore year that I decided physics was going to be it.

BERNSTEIN: Were there any other courses or professors that stood out to you as an undergraduate?

YAWN: Well, certainly the calculus professor that we had for 18.01 and 18.02, he was very talented. I really enjoyed his class. Even though we had these huge lecture halls, you still felt like he was really doing a great job of putting concepts forward. That was really one of the things that was exciting. You know, in high school, you learned a little. You just memorized stuff, and that's not that exciting. I think both Professor French and-- I cannot remember his name. [At our 50th reunion, we] were trying to remember today the name of our calculus professor. Anyway, both of them didn't let us just regurgitate things; we had to think. We had to learn new concepts, ideas, and the homework wasn't just regurgitating whatever. That was exciting. It was something I had always wanted to do and kind of did with my dad with various things, but I had never gotten to do it in school before.

BERNSTEIN: What do you think was your biggest achievement at MIT?

YAWN: Graduating! [LAUGHS]

It probably really was graduating, and it wasn't easy. Because in my junior year, I decided that I really wanted to go into medicine instead of studying in physics. That meant I had to get the premed requirements in addition to the physics requirements. And there were a few little things that happened, like I got hepatitis when a little kid at my summer job bit me. I missed the first four weeks of my junior year and came back. I didn't want to miss the whole semester, because then you're behind a whole year. So that was a whole lot of work to catch up.

BERNSTEIN: It sounds like it would be.

YAWN: It was. And there were a couple of physics professors whose name I don't remember well, and a couple of TAs, who were helpful then, realizing I was so far behind and trying to help me catch up. That was very nice of them. It was

easier to catch up in all the other classes, but not in physics. That one took more doing to catch up. So: graduating.

Also, I was president of the band my senior year. And I was president of the Baton Society, which is the music honor society. Those were fun things that I don't exactly consider an MIT accomplishment, but they were important because they kept me sane.

BERNSTEIN: What was your social life like here?

YAWN: Well, my freshman year, I don't think I had a social life, really. Probably we would think it was really wild if my roommates and I went over to the student center and had a Coke or an ice cream or a Big Dome. Do they still have Big Domes?

BERNSTEIN: I don't think so. What's a Big Dome?

YAWN: The Big Dome is this big goblet – it said on MIT on it – a big glass goblet, and they put 10, 12 scoops of ice cream in it. Then they poured chocolate all over it, and then they poured caramel all over it. And then they gave you whipped cream. If we really had done well on something, five or six of us, or as many as we could get, we'd go over and share a Big Dome. It probably wasn't until my sophomore or junior year that I started getting out and figuring out there was something out there called Boston.

Then we actually went to Old North Church for church on Sunday, which was fun because there were such historical things there. We walked the [Freedom] trail, went to some of the museums, and learned about the very cheap tickets for the Boston Symphony. I'm sure that I was pretty much a geek the whole way. Parties and things like that, they're not me. That's not what I ever did. I still don't do that. Social life was those things with friends. I really didn't start dating until my junior year, when I met my husband Roy. Then he was pretty much my social life after that. It was him.

BERNSTEIN: When you decided to go into medicine your junior year, what kinds of things made you want to make that switch?

YAWN: As I said, I figured out Madam Curie didn't do so well. Also, I just really didn't like being in the physics lab: I really enjoyed talking to people and interacting with people rather than machines and labs. I think that had a lot to do with it.

I also had a family physician who gave me some books on medical physics the summer before my junior year, and that was really very interesting. Now it would seem very simplistic, but they talked about some of the ways that physics was making medicine better. It was like, "This sounds reasonable. I think I like this."

I think it was that, and probably a realization that I would not enjoy going on for a PhD in physics and spending that much time in a lab. I just wasn't going to like that. And I couldn't see stopping with a bachelor's degree. What you do with a bachelor's degree in physics? Teach in high school, maybe? It didn't seem to be a terminal degree, and what was I going to go on to graduate school on? And medicine seemed very attractive.

BERNSTEIN: What was the thing that you're most thankful to have learned?

YAWN: Persistence. You just keep on keeping on, even when it seems really hard and you're not sure you're going to survive it. Persistence, having people around you that help you persist is, obviously, extremely important too. Probably those two. And don't be afraid to think. Don't just assume that what somebody else tells you the truth is. Think it through and make up your own opinion. That wasn't always highly thought of by some of the professors at MIT or in medical school, but there were others that clearly pushed you to do that. I think some of the people that I was around, the Shirleys, the Margarets, and some of the other TAs said, "Yeah, think for yourself."

BERNSTEIN: After you graduated, what was on your mind? How did you decide what to do? You wanted to go to medical school--

YAWN: Well, I went to medical school. You have to apply in your junior year or early your senior year, so you know by halfway through your senior year that you're going to medical school. It was just, "OK, I'm going to go somewhere else where I may not be totally prepared either, so let's get ready."

I had never taken a course in biology, ever. I didn't take biology in high school. I didn't take biology here. I took an MIT quasi biology course, and that was genetics. That was from the Nobel Laureate Dr. Luria [Salvador Luria, who became chair of Microbiology at MIT in 1959] that was teaching it. It was Mendelian genetics. It had nothing to do-- I mean, peas, and whether peas are going to be green or brown. So I had a whole lot of opportunities in medical school to learn all about the biological sciences. But I do think that having a hard science, as we called it then, a hard science or a physics background and lots of math was really helpful because I approached medical problems differently than some of my colleagues who came from other disciplines. I've always thought the math and science was extremely helpful.

I started doing not bench research, but clinical research in medical school. So I did research in medical school, then in residency, and in practice. And then I switched and did it full time. I don't think I would have done that if I hadn't come from a math and science background, where I thought differently. Maybe asked questions differently. I solved problems differently than some of my physician colleagues, who didn't find that as fascinating as I did.

BERNSTEIN: You mentioned to me before that you got married the year after you graduated. How did you balance the fact that you were going to medical school and that you were also married? How did you decide about locations – where you would both be?

YAWN: Well, it's kind of an interesting story, too. My husband, who I was dating at the time at MIT, neither one of us told the other one that we had applied for medical school. Because probably you don't want to admit if you don't get in that you've failed, right? He applied and didn't tell me, and I applied and didn't tell him. They have one day when they'd tell everybody that they get into medical school. The day that we found out, he came over and said, "Gee, let's go grab a sandwich." And I was like, "Well, wait a minute." We grabbed sandwiches only on Thursdays because neither one of us had a heck of a lot of extra money. He couldn't pay for sandwiches twice a week, and I think this was a Tuesday night. I thought, "That's really weird, but, OK, great. Let's go." And we get over there and he says, "I have to tell you what happened today. I got into medical school." I said, "Well, that's really interesting, because so did I."
[LAUGHS]

Neither one of us knew the other one had applied, and by then we were getting reasonably serious about maybe this is going to be a long-term relationship. So he went off to the University of Georgia, and I went off to the University of Missouri, because neither one of us could afford to go anywhere except the schools for the state where you could pay in-state tuition. Then we decided, oh, probably three months into the first year of medical school, that this really wasn't a great idea to be this far apart, and studying, and all the other things. So he actually transferred to Missouri, because Georgia had some really strange requirements. Even though I was in medical school, to transfer there after my first year, I would have had to go back and take two biology courses. I decided, "Forget that. That's crazy." And Missouri was thrilled to have him because he was an excellent student and they were very excited.

So he transferred to the University of Missouri, and we got married that summer. Then we went to medical school together. That was great because my poor friends who were trying to date and have a social life in medical school, that was hard. But he and I both knew we had to study. We had to study many, many hours, but, OK, so we'd finish studying at 10:30 at night, well, then you have some time to talk to each other. And OK, you went out to get a Coke at 10:30 at night. And some weekends you could go walk in the park, and some weekends you couldn't go walk in the park.

It was really, I think, a lot easier for us because we were both in medical school together and had the same expectations of the hours we were going to work and study. So it worked out just fine.

BERNSTEIN: When you got to medical school, was the gender ratio the same as it did always been?

YAWN: It was the same as it had always been, just like it was at MIT. Yes. Actually, it might have been a little better. There were 10 women in my class out of 110. Eight of them graduated, two didn't. It was a man's world in medicine at that time, too, but it was interesting.

I didn't remember at MIT ever feeling a gender issue that was explicit. I'm sure it was there. But it wasn't until I got to medical school that people said specific things. I had professors in medical school that said, when I went to interview, "Why should we let you in? Because you're just going to get married and have a family, and there's some man who's going to end up in Vietnam and get killed because you got into medical school." I was like, "Whoa." [LAUGHS]

That professor and I had a little friendly discussion after that, after I got in. He was my physiology professor, and figured out that I wasn't a dummy. He got a little better about it. He never apologized, but he certainly should have. And there were other times that it was much more explicit in medical school that there was a gender bias. There was a racial bias too. I don't think we had anybody but whites in our class, but that's a different story. But it's interesting.

By then I was pretty used to it. Yes, I was willing to stand up for women and say, "Wait a minute. This is not right. You can't do this." But you had to learn how to survive and live in basically a world of mainly men. And it wasn't until I opened my own research department, after I had been out of residency for 16 years, that I really worked with mainly all women.

That was very interesting. In my research department, I hired pretty much all my coordinators, nurses – all were women. The only man in the department was my statistician. It was the first time I ever worked with all women. That was really strange for a while. I felt, "This just feels different. This is interesting."

BERNSTEIN: Do you think there was anything that was unique about going through medical school as a married woman? Do you think that you were perceived differently?

YAWN: Oh, probably yes. There were two different divergent views. One was that you were perhaps more mature, you'd settle down, and you know where you were going. The other one was you're crazy because you can't possibly be a wife and a medical student at the same time. Then there was always that you're just going to get pregnant and be a mother too, and that's impossible.

So there were divergent opinions. I tended to listen to the ones over here and forget the ones that thought it was a problem. It was the same thing that I think many women had done all along: you just show them. You show them that you are quite competent, perhaps more competent, than many of your male

colleagues are. You do extra. You go out of your way. And if you spend more hours, that's just what you did because that's what it took to be accepted as equals.

BERNSTEIN: Did you have children after medical school then?

YAWN: We had one between our second and third year of residency, which was probably not a great time, but that's the way it was. So the final years of residency we had a son. It was tough to find enough time to spend with him and do the residency. Then it was four years after we got into practice that we had a second son.

There was never a good time for a working woman at that time to have children because you weren't supposed to take any time off. For my residency, I had to stay an extra six weeks because I had taken some time off after the birth of my son and no maternity leave, nothing.

BERNSTEIN: That's crazy.

YAWN: Yes.

BERNSTEIN: Could you give like a brief timeline of what happened after your residency?

YAWN: Sure. I'm a family physician. My husband's a general internist and geriatrician. We went into rural practice. He's from a small town of 400. He liked rural areas, and I thought, "Well, let's go for it. It was interesting because I was the only woman physician for about a 75- or 80-mile radius. I got a whole lot of patients very, very quickly.

Rural practice at that time was crazy. It was 24/7: you were it. I was delivering 100 to 150 babies a year. I don't care what they say, they all are born in the middle of the night – really, they must be. Anyway, I felt like I needed to do something more than that.

As I said, I had done some research and clinical research in medical school, and I did some in residency, so I started doing some when I was in practice around pre-term birth prevention. I really liked it. The results were published in JAMA [the Journal of the American Medical Association], which is a big deal for medical journals. And here I was, a small-town, rural doc, publishing in JAMA. And I thought, "I think I need to rethink what I'm doing." And I went back and got a degree in statistics then.

Then my husband and I moved from the small town to Rochester, Minnesota. He joined a private group and I opened a research department in that medical group and we were there for 25 years. I was lucky. Our department got grants from NIH and other federal funders, and I published about 300 papers and more since I have "retired." We were really quite successful. We helped lead the charge for primary care clinical research. Up to that time-- Most people who

aren't in medicine may not realize this, but big studies published in the fancy journals are usually done in academic medical centers, and they're done with patient groups that are very specific. You know, they will have patients that have lung disease but have never smoked a day in their life. Well, yeah, I think I saw one of those people once. So the medical research that was being published was not pertinent to primary care.

I was very fortunate in being able to start and help move primary care-based research forward. And now it's quite accepted that we do need to do pragmatic studies in a real-world settings. Even the FDA says we need real-world evidence. And if you can move the FDA, you can move anyone.

Then, about three years ago, I decided I was really tired of having to get grants. It was really a lot of work – to get them, and do them, and write them up, and all the other things – so I decided to close my research shop. I jokingly said I was going to retire. I continue to work: I'm the chief science officer for the COPD Foundation, and I work on several large research studies that are being done in primary care, but by some of my academic colleagues from places like Harvard, Cornell and places like that. They figured they needed to partner with primary care, so that's been exciting. I'll probably do that another three years, and then maybe I'll figure out how to really retire.

BERNSTEIN: Is there a reason you chose lungs specifically?

YAWN: That's one of those convoluted stories probably too, but I was active politically in my national academy of family physicians, and they had an opening for somebody to work in asthma with NIH. I said, "Sure, why not?" I'd see asthma patients, so I started working in that area. Then I got on the National Asthma Guidelines and the International Asthma Guidelines panels. And then I moved on to COPD, which is more in older adults. When an opportunity comes, and you either take it or ignore it. I chose to take it, and it made a huge difference in where I went with my research.

BERNSTEIN: You mentioned the International Health Guidelines. I think I saw somewhere that you developed some guidelines for the World Health Organization. How did that happen?

YAWN: That came about because I was on the NHI's Asthma Guideline Committee, and had also started working with some of my colleagues in the UK trying to see if maybe we could learn something from each other back and forth. I got an invitation that sort of sprung out of that saying, "Would you work with WHO?" And I was like, "Sure. Of course, I would work with WHO."

BERNSTEIN: Looking back on your career so far, what are some of the most meaningful things that you've done?

YAWN: Besides having children and grandchildren, which is probably the most important thing I've ever done, I think helping highlight the need for new therapies, new treatments and new ways of delivering health care and for those things to be tested in real-world primary care settings. That's probably the thing that I've done that I'm most proud of. I'm not saying I did it alone; I would never say that. There were many people – well, there weren't many, but there were several people around me. Probably you can count them on one or two hands in the beginning. And I'm very proud that we've moved clinical and pragmatic health care research forward.

Now that the NIH and FDA are saying, "Well, we've got to have the evidence from the real world, we've got to do some of the research in the real world." Sometimes you feel like saying, "Yes, that's what we were telling you 20 or 25 years ago." So that feels like a success.

BERNSTEIN: That's really cool, and a big change.

YAWN: But it's not one that's ever going to be on the front page of *The Wall Street Journal*. I mean, it's not. It's fine. I feel very good about it, but it's one of those things that probably is going to stay behind the scenes. And nobody's going to know the 10 or 15 people that helped move that forward, and that's fine. I mean, I really don't feel badly about that. I don't need to be recognized that way, but it is good to know that I was part of a groundswell of a group that did move it forward.

BERNSTEIN: We talked about you had children during your residency. Do you have reflections on having a family life as well as a career?

YAWN: Well, I think that some of the best reflections are probably what our son's told us. Our eldest son, who is the one born during residency and lived through those first early years of practice. He said as early as when he was 10 years old, "There's no way I'm going to be a doctor because I'm not going to live like that. And I'm not going to put my family through that." I thought that was pretty telling.

Our second son is a physician, a family physician, and his comment was, "I really liked what you were doing, but I think I can do it better." And I said, "Well, what do you mean better?" He said, "I think I can figure out how you have a life and do it." And he actually has. He's done very well.

For my husband and me, it was very difficult in the beginning, especially because we didn't live in a place close to the family, so we had no family around. Fortunately, after we had been there about three years, another young physician came, and his wife chose to be a stay-at-home mom. They lived across the street from us, and she was so helpful, because there are times that you just – you have to go when you have to go. The other thing that was helpful was the

nursing staff at the hospitals – this is a small, rural hospital. They were wonderful because they could have been jealous, and angry and nasty to me, which sometimes happens if you see a woman come in and she has a higher ranking, so to speak, than you do. But they were not that way at all. They were very, very good, very understanding, and very supportive.

I could bring one or both of the kids with me when I had to make rounds on Saturday and Sunday, and they would help find things to entertain them. It's just all kinds of really supportive things that they did that I really appreciate, and I'm not sure it would happen today.

BERNSTEIN: Was there anything that was unique about your situation, given that your husband is also a doctor?

YAWN: Well, at the time, we were kind of unique and peculiar for the two of us to go into rural practice together. There were not too many married couples in rural practice at the time and trying to deal with a family with two docs. That was probably unique. It was probably also really not smart to go somewhere where we had no family and no support, and we couldn't afford a nanny for the first few years.

Also, I don't know if it was unique, but I went to the first place because it was where my husband wanted to go practice. We then moved from there to the second place. He went because I wanted to go to the second place. It was very nice to have that kind of a relationship that we took turns choosing.

BERNSTEIN: You mentioned that when you were organizing your team to do research you had a team of all women. Was that deliberate, or did that just happen to be the way--

YAWN: It happened because of who I needed to hire. Because I was doing clinical research, I needed nurses, and almost all nurses are women. And I needed an admin assistant or secretary. Almost all of those were women. So that happened. I think it was because of job descriptions.

As we went along, one of the things we got to do the last seven or eight years that was really a lot of fun is we had medical students who would come and spend the summer with us, or spend a month's rotation, and we'd get to mentor them in what research. Because even in medicine, people think research is all bench research. It isn't. There are really other very important kinds of research that go on, so we got to educate them. A lot of those were young men, so we had young men around the department, eventually.

BERNSTEIN: Were there any students in particular who you mentored who ended up working on what the same things you were?

YAWN: Yes, there were two women, as a matter of fact, back when I was studying postpartum depression and leading the charge for screening for postpartum depression. These two young women thought that was really very interesting when they were freshmen in medical school – actually, across the street at Mayo Medical School – they came over and asked if they could work with me. They worked with me for most of the four years of medical school. Then one went off to the Brigham [Brigham and Women’s Hospital in Boston]. And the other one went off to – was it Stanford or USC in California? Well, they both continued to work with me through their residencies. One of them is now a general internist, and the other one is an obstetrician. They're in academic careers, but they both continued to do clinical research. I feel very proud of them and that maybe I got to help a little bit to start their careers in that direction. But they're amazingly talented women.

BERNSTEIN: Do you have any advice you would give to maybe either a young MIT student or a young medical student?

YAWN: Women or in general?

BERNSTEIN: Women.

YAWN: I think the women probably know a lot of it already because they have figured it out and there is a huge cultural change between when we started in 1965 and now. I know that women still feel that they're oppressed, but it's really, really changed. And I think they need to know where women came from in math and science and how they got to where we are now, because I think that would help them continue to push us forward in math and science.

Many of my colleagues in my class over there [at our 50th MIT class reunion], they're women who did some very impressive things but still had a family. You can do both, or not, as you choose. Don't let someone force you into saying you either have to have a career or a family. You can do it, maybe together. You can do it sequentially. You can do it any way you want. Just don't let somebody else decide what you want to do. Do what seems right for you. And then find some other people who maybe have done the same thing and just get some support from them.

Now we've got email and texting and Skype and all the other things. Even if you find somebody that's halfway across the country or the world, just connect with them and get continuing support. And it may change. As you get to different stages of your career, you probably need different kinds of support and different people to support you. But don't ever forget to get those people in your life and try to keep them there.

That's the same for women in medical school as it is for undergraduates.

BERNSTEIN: What have been your reflections, having returned to MIT for your 50th reunion?

YAWN: Well, the first time we came back was for the 50th anniversary of the band, which was 25 years ago. I remember then walking outside. It was a nice day, and we walked out by Kresge. My husband and I both looked at each other and said, "Where did all these women come from?" Because we hadn't been back really since then, and suddenly there are all these women. So that was interesting.

The other thing I noticed in the list of MIT coursework, there are so many sub-courses. When we were here it was 1, 2, 3, 4 up to 18. I'm not even sure we had all of them between 1 and 18. And then there was 21; I don't think we had a 19 or 20. But maybe we did. I was looking, and now there's, you know, 1P and 6W. The computer and software engineering certainly was not there at all, so the 6-9 combination [Computation and Cognition] is really fascinating. Also, how much we have learned, and that there are so many expansions of science and so many ways that math and science impacts the world.

I was also very impressed with the humanities and the writing-- As I was reading some of the posters and things in the halls around here, it was sort of a sub-statement of, well, "You can do fantastic science, but if you can't tell anybody else about it, it's not worth a whole lot." So, the importance of writing skills, communication skills, and all the new kinds of communication that are available. I mean, they don't just write a paper in a medical journal now. You may do a video clip about it, and you may do a cartoon clip about it. Those are the kinds of things are just very exciting to see here at MIT, too.

And, of course, you know, Kendall Square and all of the biotech and medical companies. And the fact that MIT and Harvard now play nice together in the medicine area, when we didn't used to play nice. I didn't think they did much of anything together before. All of that is a huge, huge change from what I think was the opinion that the only real sciences were physics, physical chemistry, maybe math, maybe architecture, electrical engineering, mechanical engineering, and maybe materials science – but all the rest that stuff is soft. And that's not true. That's not where it's going now. And that's good to see. I also didn't mind the fact that there are women with pretty important roles at MIT now.

BERNSTEIN: Well, thank you so much for taking time to talk to me, and for taking part in this oral history project.

YAWN: Of course. You're very welcome.