

WEBVTT

NOTE duration:"00:54:38"

NOTE recognizability:0.830

NOTE language:en-us

NOTE Confidence: 0.60935728

00:00:00.000 --> 00:00:01.070 Again, wonderful.

NOTE Confidence: 0.874890984

00:00:05.480 --> 00:00:06.650 Thanks for doing this, Nancy.

NOTE Confidence: 0.805660954

00:00:07.180 --> 00:00:08.570 Thank you for the invite.

NOTE Confidence: 0.696667244

00:00:08.880 --> 00:00:09.860 Yeah, it should be fun.

NOTE Confidence: 0.786688405

00:00:14.590 --> 00:00:18.040 There we go. People are joining. Excellent.

NOTE Confidence: 0.89844575

00:00:27.310 --> 00:00:28.290 Hello hello.

NOTE Confidence: 0.883129432222222

00:00:33.970 --> 00:00:35.130 We'll get started in just

NOTE Confidence: 0.883129432222222

00:00:35.130 --> 00:00:36.058 a couple of minutes.

NOTE Confidence: 0.852218058333333

00:00:51.190 --> 00:00:52.840 All right, I think we're reaching

NOTE Confidence: 0.852218058333333

00:00:52.840 --> 00:00:54.849 a critical mass of 30 participants.

NOTE Confidence: 0.852218058333333

00:00:54.850 --> 00:00:56.833 Excellent. Hello Mayor,

NOTE Confidence: 0.852218058333333

00:00:56.833 --> 00:01:00.198 thanks for the note. Hi everyone,

NOTE Confidence: 0.852218058333333

00:01:00.198 --> 00:01:03.584 my name is Andres in truck and I want

NOTE Confidence: 0.852218058333333

00:01:03.584 --> 00:01:07.032 to welcome you back to our Joint Sleep  
NOTE Confidence: 0.8522180583333333

00:01:07.032 --> 00:01:09.880 Conference and seminar between Yale BIDMC,  
NOTE Confidence: 0.8522180583333333

00:01:09.880 --> 00:01:12.820 Brigham Women's BMC and Tufts Sleep Center.  
NOTE Confidence: 0.8522180583333333

00:01:12.820 --> 00:01:16.285 So it really sounds like a northeastern  
NOTE Confidence: 0.8522180583333333

00:01:16.285 --> 00:01:18.016 conglomerate and a few announcements.  
NOTE Confidence: 0.8522180583333333

00:01:18.016 --> 00:01:19.870 Before we start and I introduce  
NOTE Confidence: 0.8522180583333333

00:01:19.935 --> 00:01:22.086 today's speaker, doctor Nancy Redeker.  
NOTE Confidence: 0.8522180583333333

00:01:22.086 --> 00:01:25.040 First, Please ensure that you are muted  
NOTE Confidence: 0.8522180583333333

00:01:25.040 --> 00:01:28.280 during the talk and to receive CME credit.  
NOTE Confidence: 0.8522180583333333

00:01:28.280 --> 00:01:29.642 Please see the chat room for  
NOTE Confidence: 0.8522180583333333

00:01:29.642 --> 00:01:31.129 instructions which will be posted there.  
NOTE Confidence: 0.8522180583333333

00:01:31.130 --> 00:01:33.206 A few minutes after we start,  
NOTE Confidence: 0.8522180583333333

00:01:33.210 --> 00:01:34.550 if you're not already registered  
NOTE Confidence: 0.8522180583333333

00:01:34.550 --> 00:01:35.890 with the CME at Yale,  
NOTE Confidence: 0.8522180583333333

00:01:35.890 --> 00:01:38.050 you will need to do so first to get  
NOTE Confidence: 0.8522180583333333

00:01:38.050 --> 00:01:40.312 credit and recording of this session will

NOTE Confidence: 0.8522180583333333  
00:01:40.312 --> 00:01:42.480 be available online after two weeks at  
NOTE Confidence: 0.8522180583333333  
00:01:42.480 --> 00:01:44.590 the link that we provided in the chat.  
NOTE Confidence: 0.8522180583333333  
00:01:44.590 --> 00:01:46.885 And if you do have questions during the talk,  
NOTE Confidence: 0.8522180583333333  
00:01:46.890 --> 00:01:49.340 please make use of the chat rooms  
NOTE Confidence: 0.8522180583333333  
00:01:49.340 --> 00:01:52.110 throughout the hour and at the end we  
NOTE Confidence: 0.8522180583333333  
00:01:52.110 --> 00:01:54.484 hopefully will have a productive session,  
NOTE Confidence: 0.8522180583333333  
00:01:54.484 --> 00:01:56.969 and so without further ado,  
NOTE Confidence: 0.8522180583333333  
00:01:56.970 --> 00:01:59.763 I wanted to introduce with great pleasure  
NOTE Confidence: 0.8522180583333333  
00:01:59.763 --> 00:02:02.660 to a speaker doctor Nancy Reticker.  
NOTE Confidence: 0.8522180583333333  
00:02:02.660 --> 00:02:04.410 And for a joint conference today.  
NOTE Confidence: 0.8522180583333333  
00:02:04.410 --> 00:02:05.274 And so,  
NOTE Confidence: 0.8522180583333333  
00:02:05.274 --> 00:02:07.866 doctor Reticker has completed her nursing  
NOTE Confidence: 0.8522180583333333  
00:02:07.866 --> 00:02:10.648 training at Seton Hall and then earned  
NOTE Confidence: 0.8522180583333333  
00:02:10.648 --> 00:02:13.250 a PhD of Nursing Research NYU in 1990.  
NOTE Confidence: 0.8522180583333333  
00:02:13.250 --> 00:02:15.587 And then she went on to become a professor  
NOTE Confidence: 0.8522180583333333

00:02:15.587 --> 00:02:17.567 of nursing at Wreckers University  
NOTE Confidence: 0.8522180583333333

00:02:17.567 --> 00:02:19.870 before being recruited to Yale School  
NOTE Confidence: 0.8522180583333333

00:02:19.870 --> 00:02:22.390 of Medicine as the director of Yale's  
NOTE Confidence: 0.8522180583333333

00:02:22.390 --> 00:02:24.711 nursing PhD program and director of  
NOTE Confidence: 0.8522180583333333

00:02:24.711 --> 00:02:26.686 the by Behavioral Laboratory here,  
NOTE Confidence: 0.8522180583333333

00:02:26.690 --> 00:02:28.106 which has catalyzed really  
NOTE Confidence: 0.8522180583333333

00:02:28.106 --> 00:02:31.470 catalyzed the research at Yale.  
NOTE Confidence: 0.8522180583333333

00:02:31.470 --> 00:02:33.850 So Nancy has been conducting research at the,  
NOTE Confidence: 0.8522180583333333

00:02:33.850 --> 00:02:34.615 you know, NIH,  
NOTE Confidence: 0.8522180583333333

00:02:34.615 --> 00:02:35.635 funded and otherwise funded  
NOTE Confidence: 0.8522180583333333

00:02:35.635 --> 00:02:36.780 research in chronic illness,  
NOTE Confidence: 0.8522180583333333

00:02:36.780 --> 00:02:37.892 sleep, and health outcomes.  
NOTE Confidence: 0.8522180583333333

00:02:37.892 --> 00:02:39.864 So the past 30 years and reviewing  
NOTE Confidence: 0.8522180583333333

00:02:39.864 --> 00:02:42.123 her CV was really fun and I wanted to  
NOTE Confidence: 0.8522180583333333

00:02:42.179 --> 00:02:44.209 share a first research paper with you,  
NOTE Confidence: 0.8522180583333333

00:02:44.210 --> 00:02:46.730 which was published in 1989,

NOTE Confidence: 0.852218058333333

00:02:46.730 --> 00:02:47.861 titled Health Beliefs,

NOTE Confidence: 0.852218058333333

00:02:47.861 --> 00:02:49.369 Health Locus of Control,

NOTE Confidence: 0.852218058333333

00:02:49.370 --> 00:02:51.956 and the frequency of practice of

NOTE Confidence: 0.852218058333333

00:02:51.956 --> 00:02:54.200 breast self examination in women.

NOTE Confidence: 0.852218058333333

00:02:54.200 --> 00:02:56.874 And in the 150 papers and more.

NOTE Confidence: 0.852218058333333

00:02:56.880 --> 00:02:57.636 Since that time,

NOTE Confidence: 0.852218058333333

00:02:57.636 --> 00:02:59.820 she's focused on a wide range of topics,

NOTE Confidence: 0.852218058333333

00:02:59.820 --> 00:03:00.566 including sleep,

NOTE Confidence: 0.852218058333333

00:03:00.566 --> 00:03:02.058 health and underserved communities,

NOTE Confidence: 0.852218058333333

00:03:02.060 --> 00:03:04.424 children and adults with severe comorbid

NOTE Confidence: 0.852218058333333

00:03:04.424 --> 00:03:07.332 conditions such as heart failure and in

NOTE Confidence: 0.852218058333333

00:03:07.332 --> 00:03:09.858 addition to being a prolific researcher,

NOTE Confidence: 0.852218058333333

00:03:09.860 --> 00:03:12.488 Nancy has been a committed mentor,

NOTE Confidence: 0.852218058333333

00:03:12.490 --> 00:03:14.515 helping junior investigators from many

NOTE Confidence: 0.852218058333333

00:03:14.515 --> 00:03:16.135 different fields including nursing,

NOTE Confidence: 0.852218058333333

00:03:16.140 --> 00:03:16.848 physiotherapy,  
NOTE Confidence: 0.8522180583333333

00:03:16.848 --> 00:03:18.264 psychology physicians,  
NOTE Confidence: 0.8522180583333333

00:03:18.264 --> 00:03:20.588 myself included to careers in research.  
NOTE Confidence: 0.8522180583333333

00:03:20.588 --> 00:03:21.269 So thank you,  
NOTE Confidence: 0.8522180583333333

00:03:21.270 --> 00:03:24.498 Nancy for myself and Oreo mentees.  
NOTE Confidence: 0.8522180583333333

00:03:24.500 --> 00:03:26.320 And Nancy is more recent.  
NOTE Confidence: 0.8522180583333333

00:03:26.320 --> 00:03:27.815 Focus has been improving quality  
NOTE Confidence: 0.8522180583333333

00:03:27.815 --> 00:03:29.635 of life in individuals with sleep  
NOTE Confidence: 0.8522180583333333

00:03:29.635 --> 00:03:30.980 disorders and heart failure which  
NOTE Confidence: 0.8522180583333333

00:03:30.980 --> 00:03:33.118 we all know is a highly prevalent  
NOTE Confidence: 0.8522180583333333

00:03:33.118 --> 00:03:34.458 and highly morbid condition.  
NOTE Confidence: 0.8522180583333333

00:03:34.460 --> 00:03:37.012 And So what Doctor Recker has done is  
NOTE Confidence: 0.8522180583333333

00:03:37.012 --> 00:03:39.429 focused beyond the sleep disturbance as  
NOTE Confidence: 0.8522180583333333

00:03:39.429 --> 00:03:41.574 classically attributed to sleep apnea.  
NOTE Confidence: 0.8522180583333333

00:03:41.580 --> 00:03:42.492 In this vulnerable population.  
NOTE Confidence: 0.8522180583333333

00:03:42.492 --> 00:03:44.086 And so I'm excited to hear her

NOTE Confidence: 0.8522180583333333  
00:03:44.086 --> 00:03:45.016 talk on the topic today,  
NOTE Confidence: 0.8522180583333333  
00:03:45.020 --> 00:03:48.284 and so let's please give a warm welcome,  
NOTE Confidence: 0.8522180583333333  
00:03:48.290 --> 00:03:49.508 digitally or otherwise,  
NOTE Confidence: 0.8522180583333333  
00:03:49.508 --> 00:03:52.350 to Doctor Rediker and go ahead and  
NOTE Confidence: 0.807542504615385  
00:03:52.428 --> 00:03:53.550 Nancy thank you.  
NOTE Confidence: 0.737207265  
00:03:55.780 --> 00:03:56.998 Can you see are we good?  
NOTE Confidence: 0.737207265  
00:03:57.000 --> 00:04:00.000 We got the slides up OK, yeah.  
NOTE Confidence: 0.737207265  
00:04:00.000 --> 00:04:02.632 So anyway, thank you everyone.  
NOTE Confidence: 0.737207265  
00:04:02.632 --> 00:04:05.366 I have nothing to disclose here and the  
NOTE Confidence: 0.737207265  
00:04:05.366 --> 00:04:07.634 information is here about your CME credits.  
NOTE Confidence: 0.737207265  
00:04:07.640 --> 00:04:09.796 So thank you for that nice introduction.  
NOTE Confidence: 0.737207265  
00:04:09.800 --> 00:04:11.636 I think it's funny that you  
NOTE Confidence: 0.737207265  
00:04:11.636 --> 00:04:12.860 mentioned my first paper,  
NOTE Confidence: 0.737207265  
00:04:12.860 --> 00:04:15.360 so I had to do research and I had little  
NOTE Confidence: 0.737207265  
00:04:15.422 --> 00:04:17.898 children in the daycare setting and I  
NOTE Confidence: 0.737207265

00:04:17.898 --> 00:04:20.320 wasn't that interested in breast self exam,  
NOTE Confidence: 0.737207265

00:04:20.320 --> 00:04:22.795 but I knew I could get all these preschool  
NOTE Confidence: 0.737207265

00:04:22.795 --> 00:04:24.979 mothers to fill out my questionnaire so  
NOTE Confidence: 0.737207265

00:04:24.979 --> 00:04:26.989 it's interesting how our work evolves.  
NOTE Confidence: 0.737207265

00:04:26.990 --> 00:04:28.754 Anyway, after that I became a corner  
NOTE Confidence: 0.737207265

00:04:28.754 --> 00:04:30.600 carry unit nurse and that's how I  
NOTE Confidence: 0.737207265

00:04:30.600 --> 00:04:31.895 got interested in heart disease.  
NOTE Confidence: 0.737207265

00:04:31.900 --> 00:04:34.978 So the title of my talk today is cognitive  
NOTE Confidence: 0.737207265

00:04:34.978 --> 00:04:37.166 behavioral therapy has sustained effects  
NOTE Confidence: 0.737207265

00:04:37.166 --> 00:04:39.836 among people with stable heart failure.  
NOTE Confidence: 0.737207265

00:04:39.840 --> 00:04:42.157 So as most of you probably know,  
NOTE Confidence: 0.737207265

00:04:42.160 --> 00:04:43.870 heart failure presents a large  
NOTE Confidence: 0.737207265

00:04:43.870 --> 00:04:45.238 burden in the population.  
NOTE Confidence: 0.737207265

00:04:45.240 --> 00:04:47.196 There's about 26 million people throughout  
NOTE Confidence: 0.737207265

00:04:47.196 --> 00:04:49.310 the world who have heart failure,  
NOTE Confidence: 0.737207265

00:04:49.310 --> 00:04:50.950 and of course they have



NOTE Confidence: 0.737207265

00:04:50.950 --> 00:04:52.470 lots of comorbid problems,

NOTE Confidence: 0.737207265

00:04:52.470 --> 00:04:55.280 but they also have high symptom burden.

NOTE Confidence: 0.737207265

00:04:55.280 --> 00:04:56.396 They have a lot of fatigue.

NOTE Confidence: 0.737207265

00:04:56.400 --> 00:04:57.123 They have dyspnea.

NOTE Confidence: 0.737207265

00:04:57.123 --> 00:04:58.810 I think I learned that in my

NOTE Confidence: 0.737207265

00:04:58.869 --> 00:05:00.359 second day of nursing school,

NOTE Confidence: 0.737207265

00:05:00.360 --> 00:05:02.166 but they also have a lot of

NOTE Confidence: 0.737207265

00:05:02.166 --> 00:05:03.640 depression and sleep disturbance.

NOTE Confidence: 0.737207265

00:05:03.640 --> 00:05:05.672 And we'll talk a little obviously talk a

NOTE Confidence: 0.737207265

00:05:05.672 --> 00:05:07.625 little bit more about that in a minute,

NOTE Confidence: 0.737207265

00:05:07.630 --> 00:05:10.753 as well as poor function and quality of life,

NOTE Confidence: 0.737207265

00:05:10.760 --> 00:05:11.558 cognitive dysfunction,

NOTE Confidence: 0.737207265

00:05:11.558 --> 00:05:14.351 and it also costs the healthcare system

NOTE Confidence: 0.737207265

00:05:14.351 --> 00:05:16.635 quite a lot of money to be able to

NOTE Confidence: 0.737207265

00:05:16.635 --> 00:05:18.930 treat them as well as what we've often

NOTE Confidence: 0.737207265

00:05:18.930 --> 00:05:21.587 focused on in terms of specific sleep  
NOTE Confidence: 0.737207265

00:05:21.587 --> 00:05:24.317 disorders such as sleep disordered breathing.  
NOTE Confidence: 0.737207265

00:05:24.320 --> 00:05:26.016 When we think about sleep disorders in heart,  
NOTE Confidence: 0.737207265

00:05:26.020 --> 00:05:26.303 failure,  
NOTE Confidence: 0.737207265

00:05:26.303 --> 00:05:26.869 of course,  
NOTE Confidence: 0.737207265

00:05:26.869 --> 00:05:29.633 and I'm sure many of you in the room  
NOTE Confidence: 0.737207265

00:05:29.633 --> 00:05:31.438 are from a pulmonary perspective,  
NOTE Confidence: 0.737207265

00:05:31.440 --> 00:05:34.184 are aware and have focused on sleep disorder.  
NOTE Confidence: 0.737207265

00:05:34.190 --> 00:05:36.989 Everything and we know 50% or more have  
NOTE Confidence: 0.737207265

00:05:36.989 --> 00:05:39.707 either central or obstructive sleep apnea,  
NOTE Confidence: 0.737207265

00:05:39.710 --> 00:05:40.652 or both.  
NOTE Confidence: 0.737207265

00:05:40.652 --> 00:05:42.536 There's also some prevalence,  
NOTE Confidence: 0.737207265

00:05:42.540 --> 00:05:43.794 increased prevalence of  
NOTE Confidence: 0.737207265

00:05:43.794 --> 00:05:45.048 restless leg syndrome,  
NOTE Confidence: 0.737207265

00:05:45.050 --> 00:05:47.666 but there's also a lot of self reported  
NOTE Confidence: 0.737207265

00:05:47.666 --> 00:05:49.503 sleep complaints which we could call

NOTE Confidence: 0.737207265

00:05:49.503 --> 00:05:51.950 insomnia and I'll get to him in a minute.

NOTE Confidence: 0.737207265

00:05:51.950 --> 00:05:52.982 How I defined that,

NOTE Confidence: 0.737207265

00:05:52.982 --> 00:05:54.530 but there's a lot of questions

NOTE Confidence: 0.737207265

00:05:54.589 --> 00:05:56.542 in the literature you know in in

NOTE Confidence: 0.737207265

00:05:56.542 --> 00:05:57.850 our clinical practice as well.

NOTE Confidence: 0.737207265

00:05:57.850 --> 00:05:58.378 If so,

NOTE Confidence: 0.737207265

00:05:58.378 --> 00:05:59.698 is there a sleep disturbance

NOTE Confidence: 0.737207265

00:05:59.698 --> 00:06:01.230 only due to sleep apnea?

NOTE Confidence: 0.737207265

00:06:01.230 --> 00:06:03.426 Is it due to nocturnal symptoms?

NOTE Confidence: 0.737207265

00:06:03.430 --> 00:06:05.059 Is it also?

NOTE Confidence: 0.737207265

00:06:05.059 --> 00:06:07.774 Comorbid with depression and anxiety.

NOTE Confidence: 0.737207265

00:06:07.780 --> 00:06:09.572 We also know that heart failure patients

NOTE Confidence: 0.737207265

00:06:09.572 --> 00:06:11.479 are on many different medications,

NOTE Confidence: 0.737207265

00:06:11.480 --> 00:06:13.200 of which many are most,

NOTE Confidence: 0.737207265

00:06:13.200 --> 00:06:14.940 could contribute to poor sleep.

NOTE Confidence: 0.737207265

00:06:14.940 --> 00:06:15.744 But finally,  
NOTE Confidence: 0.737207265

00:06:15.744 --> 00:06:18.558 is it also a learned behavior associated  
NOTE Confidence: 0.737207265

00:06:18.558 --> 00:06:21.245 with perpetuating factors as well as  
NOTE Confidence: 0.737207265

00:06:21.245 --> 00:06:23.986 hyper arousal from a physiologic as  
NOTE Confidence: 0.737207265

00:06:23.986 --> 00:06:26.236 well as a psychological perspective?  
NOTE Confidence: 0.737207265

00:06:26.240 --> 00:06:27.686 And are these things that might  
NOTE Confidence: 0.737207265

00:06:27.686 --> 00:06:30.410 be amenable to treatment?  
NOTE Confidence: 0.737207265

00:06:30.410 --> 00:06:33.542 So when we drill down a little bit more  
NOTE Confidence: 0.737207265

00:06:33.542 --> 00:06:35.737 into specific symptoms and this comes.  
NOTE Confidence: 0.737207265

00:06:35.740 --> 00:06:37.120 From some of our earlier work,  
NOTE Confidence: 0.737207265

00:06:37.120 --> 00:06:39.325 as many as 70% of heart failure  
NOTE Confidence: 0.737207265

00:06:39.325 --> 00:06:41.280 patients both heart failure with  
NOTE Confidence: 0.737207265

00:06:41.280 --> 00:06:43.160 preserved ejection fraction heart  
NOTE Confidence: 0.737207265

00:06:43.160 --> 00:06:45.040 failure with reduced ejection  
NOTE Confidence: 0.899674967857143

00:06:45.107 --> 00:06:47.843 fraction have symptoms such as difficulty  
NOTE Confidence: 0.899674967857143

00:06:47.843 --> 00:06:49.648 initiating sleep, staying asleep,

NOTE Confidence: 0.899674967857143  
00:06:49.648 --> 00:06:51.946 waking too early, not enough sleep,  
NOTE Confidence: 0.899674967857143  
00:06:51.946 --> 00:06:54.200 they nap a lot during the day.  
NOTE Confidence: 0.899674967857143  
00:06:54.200 --> 00:06:55.470 We have nocturia. In fact,  
NOTE Confidence: 0.899674967857143  
00:06:55.470 --> 00:06:57.025 people have said to me, well of course,  
NOTE Confidence: 0.899674967857143  
00:06:57.025 --> 00:06:58.959 heart failure patients get up a lot at night.  
NOTE Confidence: 0.899674967857143  
00:06:58.960 --> 00:07:02.260 They have nocturia difficulty sleeping flat,  
NOTE Confidence: 0.899674967857143  
00:07:02.260 --> 00:07:04.330 but there's also a huge amount  
NOTE Confidence: 0.899674967857143  
00:07:04.330 --> 00:07:06.020 of hypnotic use prescribed and.  
NOTE Confidence: 0.899674967857143  
00:07:06.020 --> 00:07:08.760 Not prescribed in this population.  
NOTE Confidence: 0.899674967857143  
00:07:08.760 --> 00:07:10.454 So some of these might be specific  
NOTE Confidence: 0.899674967857143  
00:07:10.454 --> 00:07:11.899 to one sleep disorder or another,  
NOTE Confidence: 0.899674967857143  
00:07:11.900 --> 00:07:13.718 and in a minute I'll explain  
NOTE Confidence: 0.899674967857143  
00:07:13.718 --> 00:07:15.660 how we got to insomnia.  
NOTE Confidence: 0.899674967857143  
00:07:15.660 --> 00:07:18.236 So when we looked at these in a  
NOTE Confidence: 0.899674967857143  
00:07:18.236 --> 00:07:20.419 sample which which was collected.  
NOTE Confidence: 0.899674967857143

00:07:20.420 --> 00:07:22.900 Oh, I can't believe it's almost 20 years  
NOTE Confidence: 0.899674967857143

00:07:22.900 --> 00:07:25.720 ago we started this work when I was in  
NOTE Confidence: 0.899674967857143

00:07:25.720 --> 00:07:28.018 New Jersey and Robert Wood Johnson.  
NOTE Confidence: 0.899674967857143

00:07:28.020 --> 00:07:29.898 Hospital I'm looking at sleep symptoms  
NOTE Confidence: 0.899674967857143

00:07:29.898 --> 00:07:31.620 and people with heart failure.  
NOTE Confidence: 0.899674967857143

00:07:31.620 --> 00:07:34.110 We recruited 59 patients with heart  
NOTE Confidence: 0.899674967857143

00:07:34.110 --> 00:07:36.188 failure and healthy controls which  
NOTE Confidence: 0.899674967857143

00:07:36.188 --> 00:07:38.300 were pretty well matched on age,  
NOTE Confidence: 0.899674967857143

00:07:38.300 --> 00:07:40.358 gender and comorbidity, and we said,  
NOTE Confidence: 0.899674967857143

00:07:40.360 --> 00:07:41.890 well, do heart failure patients really  
NOTE Confidence: 0.899674967857143

00:07:41.890 --> 00:07:43.519 have poor sleep than other people?  
NOTE Confidence: 0.899674967857143

00:07:43.520 --> 00:07:45.128 And we weren't looking at some  
NOTE Confidence: 0.899674967857143

00:07:45.128 --> 00:07:46.200 sort of breathing here.  
NOTE Confidence: 0.899674967857143

00:07:46.200 --> 00:07:47.838 This is a pretty low budget study.  
NOTE Confidence: 0.899674967857143

00:07:47.840 --> 00:07:50.000 We were looking at self report  
NOTE Confidence: 0.899674967857143

00:07:50.000 --> 00:07:51.848 and actigraphy, but so on.

NOTE Confidence: 0.899674967857143

00:07:51.848 --> 00:07:53.882 Almost every measure, falling asleep,

NOTE Confidence: 0.899674967857143

00:07:53.882 --> 00:07:56.137 staying asleep, waking too early,

NOTE Confidence: 0.899674967857143

00:07:56.140 --> 00:07:58.800 not enough sleep, more naps.

NOTE Confidence: 0.899674967857143

00:07:58.800 --> 00:08:01.698 Over 50% of heart failure patients took

NOTE Confidence: 0.899674967857143

00:08:01.698 --> 00:08:04.982 naps during the day pauses during this sleep.

NOTE Confidence: 0.899674967857143

00:08:04.982 --> 00:08:06.856 Interestingly enough, leg twitching.

NOTE Confidence: 0.899674967857143

00:08:06.856 --> 00:08:08.868 They had nocturnal dyspnea,

NOTE Confidence: 0.899674967857143

00:08:08.870 --> 00:08:11.036 but notably the control group had

NOTE Confidence: 0.899674967857143

00:08:11.036 --> 00:08:13.709 just had as much as more snoring,

NOTE Confidence: 0.899674967857143

00:08:13.710 --> 00:08:16.188 but also had as much more nocturia.

NOTE Confidence: 0.899674967857143

00:08:16.190 --> 00:08:17.884 So these are sort of common things

NOTE Confidence: 0.899674967857143

00:08:17.884 --> 00:08:18.870 that we think are,

NOTE Confidence: 0.899674967857143

00:08:18.870 --> 00:08:19.749 are, you know,

NOTE Confidence: 0.899674967857143

00:08:19.749 --> 00:08:21.507 related to their their staying awake

NOTE Confidence: 0.899674967857143

00:08:21.507 --> 00:08:23.268 with the heart failure patients?

NOTE Confidence: 0.899674967857143

00:08:23.270 --> 00:08:24.866 At least in this.  
NOTE Confidence: 0.899674967857143

00:08:24.866 --> 00:08:27.260 And this was self report data.  
NOTE Confidence: 0.899674967857143

00:08:27.260 --> 00:08:29.815 We're not higher on those other things.  
NOTE Confidence: 0.899674967857143

00:08:29.820 --> 00:08:31.980 So we also collected actigraphy.  
NOTE Confidence: 0.899674967857143

00:08:31.980 --> 00:08:33.576 This is data from a little bit  
NOTE Confidence: 0.899674967857143

00:08:33.576 --> 00:08:34.260 more recent study,  
NOTE Confidence: 0.899674967857143

00:08:34.260 --> 00:08:36.003 but the data from the early study  
NOTE Confidence: 0.899674967857143

00:08:36.003 --> 00:08:38.333 looked the same and most of you are  
NOTE Confidence: 0.899674967857143

00:08:38.333 --> 00:08:39.553 probably familiar with actigraphy.  
NOTE Confidence: 0.899674967857143

00:08:39.560 --> 00:08:41.723 Each one of these lines is a  
NOTE Confidence: 0.899674967857143

00:08:41.723 --> 00:08:44.117 12 hour day from noon to noon,  
NOTE Confidence: 0.899674967857143

00:08:44.120 --> 00:08:46.196 and the little black marks here  
NOTE Confidence: 0.899674967857143

00:08:46.196 --> 00:08:47.234 are their activity.  
NOTE Confidence: 0.899674967857143

00:08:47.240 --> 00:08:48.992 The red marks is where the  
NOTE Confidence: 0.899674967857143

00:08:48.992 --> 00:08:50.160 device says they're awake.  
NOTE Confidence: 0.899674967857143

00:08:50.160 --> 00:08:51.738 The line along the bottom and



NOTE Confidence: 0.899674967857143  
00:08:51.738 --> 00:08:54.035 then here in the blue is where it  
NOTE Confidence: 0.899674967857143  
00:08:54.035 --> 00:08:55.817 indicates this is their sleep time.  
NOTE Confidence: 0.899674967857143  
00:08:55.820 --> 00:08:58.312 What you notice here is there's a  
NOTE Confidence: 0.899674967857143  
00:08:58.312 --> 00:09:00.259 lot of irregularity and bedtime.  
NOTE Confidence: 0.899674967857143  
00:09:00.260 --> 00:09:02.339 There's also a lot of little tiny,  
NOTE Confidence: 0.899674967857143  
00:09:02.340 --> 00:09:04.350 whether their arousals or just movements  
NOTE Confidence: 0.899674967857143  
00:09:04.350 --> 00:09:06.780 we don't know because this is actigraphy,  
NOTE Confidence: 0.899674967857143  
00:09:06.780 --> 00:09:08.964 but there's a lot of disturbed sleep and  
NOTE Confidence: 0.899674967857143  
00:09:08.964 --> 00:09:11.556 just to be said in a very unscientific way,  
NOTE Confidence: 0.899674967857143  
00:09:11.560 --> 00:09:13.800 and so this is really been a focus  
NOTE Confidence: 0.899674967857143  
00:09:13.800 --> 00:09:16.209 of our work as to to consider  
NOTE Confidence: 0.899674967857143  
00:09:16.209 --> 00:09:17.633 addressing some of that.  
NOTE Confidence: 0.899674967857143  
00:09:17.640 --> 00:09:19.453 So when we looked at the actigraphy  
NOTE Confidence: 0.899674967857143  
00:09:19.453 --> 00:09:21.238 again in this very small sample,  
NOTE Confidence: 0.899674967857143  
00:09:21.240 --> 00:09:23.416 what we saw, this is the heart failure.  
NOTE Confidence: 0.899674967857143

00:09:23.420 --> 00:09:24.948 Patients again compared to  
NOTE Confidence: 0.899674967857143

00:09:24.948 --> 00:09:26.094 the comparison group,  
NOTE Confidence: 0.899674967857143

00:09:26.100 --> 00:09:28.470 they had pretty close to the  
NOTE Confidence: 0.899674967857143

00:09:28.470 --> 00:09:29.655 same sleep duration.  
NOTE Confidence: 0.899674967857143

00:09:29.660 --> 00:09:31.816 They had more wake after sleep onset.  
NOTE Confidence: 0.834422832222222

00:09:31.820 --> 00:09:33.278 This is in the bar graph at the right,  
NOTE Confidence: 0.834422832222222

00:09:33.280 --> 00:09:35.722 with the statistics on the left  
NOTE Confidence: 0.834422832222222

00:09:35.722 --> 00:09:38.356 and they awaked awake and much  
NOTE Confidence: 0.834422832222222

00:09:38.356 --> 00:09:40.339 more frequently during the night.  
NOTE Confidence: 0.834422832222222

00:09:40.339 --> 00:09:41.751 But interestingly enough they  
NOTE Confidence: 0.834422832222222

00:09:41.751 --> 00:09:43.539 also had longer time in bed,  
NOTE Confidence: 0.834422832222222

00:09:43.540 --> 00:09:45.076 which probably explains  
NOTE Confidence: 0.834422832222222

00:09:45.076 --> 00:09:47.124 their poor sleep efficiency,  
NOTE Confidence: 0.834422832222222

00:09:47.130 --> 00:09:51.806 notably the heart failure patients also had.  
NOTE Confidence: 0.834422832222222

00:09:51.810 --> 00:09:52.860 I'm not sure what happened to  
NOTE Confidence: 0.834422832222222

00:09:52.860 --> 00:09:53.800 the alignment in this slide,

NOTE Confidence: 0.83442283222222

00:09:53.800 --> 00:09:55.870 but had longer sleep latency.

NOTE Confidence: 0.83442283222222

00:09:55.870 --> 00:09:57.625 Almost half of these patients

NOTE Confidence: 0.83442283222222

00:09:57.625 --> 00:09:59.380 had prolonged sleep latency and

NOTE Confidence: 0.83442283222222

00:09:59.445 --> 00:10:01.896 this was the median level then,

NOTE Confidence: 0.83442283222222

00:10:01.896 --> 00:10:05.286 then the the comparison group.

NOTE Confidence: 0.83442283222222

00:10:05.290 --> 00:10:07.187 So this LED us to think so.

NOTE Confidence: 0.83442283222222

00:10:07.190 --> 00:10:09.270 So this lead us to a larger study

NOTE Confidence: 0.83442283222222

00:10:09.270 --> 00:10:11.372 which we got funded from an order

NOTE Confidence: 0.83442283222222

00:10:11.372 --> 00:10:13.812 one and the question was how is sleep

NOTE Confidence: 0.83442283222222

00:10:13.812 --> 00:10:16.492 disturbance as you see in wait in the middle?

NOTE Confidence: 0.83442283222222

00:10:16.492 --> 00:10:18.879 How does sleep disturbance and we didn't

NOTE Confidence: 0.83442283222222

00:10:18.879 --> 00:10:21.758 mean this specifically as a specific sleep.

NOTE Confidence: 0.83442283222222

00:10:21.758 --> 00:10:23.612 Diagnosis but sleep

NOTE Confidence: 0.83442283222222

00:10:23.612 --> 00:10:25.466 disturbance more generically,

NOTE Confidence: 0.83442283222222

00:10:25.470 --> 00:10:28.228 how did that explain the outcome here?

NOTE Confidence: 0.83442283222222

00:10:28.230 --> 00:10:30.636 Was functional performance and how did  
NOTE Confidence: 0.83442283222222

00:10:30.636 --> 00:10:33.030 it explain daytime symptoms and in turn,  
NOTE Confidence: 0.83442283222222

00:10:33.030 --> 00:10:35.245 did these symptoms mediate the  
NOTE Confidence: 0.83442283222222

00:10:35.245 --> 00:10:37.460 relationship between complaints of poor  
NOTE Confidence: 0.83442283222222

00:10:37.527 --> 00:10:39.867 sleep and the the functional outcome?  
NOTE Confidence: 0.83442283222222

00:10:39.870 --> 00:10:40.840 And you look we did.  
NOTE Confidence: 0.83442283222222

00:10:40.840 --> 00:10:42.810 We did do we did home PSG on all of  
NOTE Confidence: 0.83442283222222

00:10:42.868 --> 00:10:45.192 these patients full PSG and we did  
NOTE Confidence: 0.83442283222222

00:10:45.192 --> 00:10:46.810 measure sleep disordered breathing.  
NOTE Confidence: 0.83442283222222

00:10:46.810 --> 00:10:48.331 We measured PLM's.  
NOTE Confidence: 0.83442283222222

00:10:48.331 --> 00:10:50.866 We measured and et cetera,  
NOTE Confidence: 0.83442283222222

00:10:50.870 --> 00:10:53.509 and so we were able to recruit  
NOTE Confidence: 0.83442283222222

00:10:53.509 --> 00:10:55.334 about 175 patients.  
NOTE Confidence: 0.83442283222222

00:10:55.334 --> 00:11:00.626 It's 175 and with a mean age of 60.  
NOTE Confidence: 0.83442283222222

00:11:00.630 --> 00:11:01.362 Ejection fraction,  
NOTE Confidence: 0.83442283222222

00:11:01.362 --> 00:11:02.094 interestingly enough,

NOTE Confidence: 0.83442283222222

00:11:02.094 --> 00:11:03.924 when we started this study,

NOTE Confidence: 0.83442283222222

00:11:03.930 --> 00:11:06.303 we were only looking at patients with

NOTE Confidence: 0.83442283222222

00:11:06.303 --> 00:11:08.428 reduced ejection fraction and then our

NOTE Confidence: 0.83442283222222

00:11:08.428 --> 00:11:10.178 cardiology colleagues got really smart,

NOTE Confidence: 0.83442283222222

00:11:10.180 --> 00:11:11.664 much smarter about sleep,

NOTE Confidence: 0.83442283222222

00:11:11.664 --> 00:11:12.406 disordered breathing.

NOTE Confidence: 0.83442283222222

00:11:12.410 --> 00:11:15.101 And so we we originally set out to take

NOTE Confidence: 0.83442283222222

00:11:15.101 --> 00:11:17.217 people that were completely naive.

NOTE Confidence: 0.83442283222222

00:11:17.220 --> 00:11:18.725 Any sleep treatment and take

NOTE Confidence: 0.83442283222222

00:11:18.725 --> 00:11:19.929 a broad cross section,

NOTE Confidence: 0.83442283222222

00:11:19.930 --> 00:11:21.546 but that got harder and harder to do,

NOTE Confidence: 0.83442283222222

00:11:21.550 --> 00:11:23.794 so we had both patients with

NOTE Confidence: 0.83442283222222

00:11:23.794 --> 00:11:25.052 reduced and preserved ejection

NOTE Confidence: 0.83442283222222

00:11:25.052 --> 00:11:26.816 fraction in this study with the

NOTE Confidence: 0.83442283222222

00:11:26.816 --> 00:11:28.613 mean New York art class of 2.5,

NOTE Confidence: 0.83442283222222

00:11:28.613 --> 00:11:31.434 the majority of the patients were obese.

NOTE Confidence: 0.834422832222222

00:11:31.440 --> 00:11:33.120 So just to give you a flavor

NOTE Confidence: 0.834422832222222

00:11:33.120 --> 00:11:35.379 this and I am going to get to

NOTE Confidence: 0.834422832222222

00:11:35.379 --> 00:11:36.854 the intervention in a minute,

NOTE Confidence: 0.834422832222222

00:11:36.860 --> 00:11:38.869 but I wanted to explain how we

NOTE Confidence: 0.834422832222222

00:11:38.869 --> 00:11:41.144 got to the intervention when we

NOTE Confidence: 0.834422832222222

00:11:41.144 --> 00:11:43.832 compared the patients on the apnea

NOTE Confidence: 0.834422832222222

00:11:43.832 --> 00:11:45.958 hypopnea index across quartiles.

NOTE Confidence: 0.834422832222222

00:11:45.960 --> 00:11:47.724 What you see here in on based

NOTE Confidence: 0.834422832222222

00:11:47.724 --> 00:11:49.240 on their symptoms and function

NOTE Confidence: 0.834422832222222

00:11:49.240 --> 00:11:50.636 'cause we were interested.

NOTE Confidence: 0.834422832222222

00:11:50.640 --> 00:11:52.962 This was the primary outcomes was

NOTE Confidence: 0.834422832222222

00:11:52.962 --> 00:11:55.379 function and symptoms as you see here

NOTE Confidence: 0.834422832222222

00:11:55.379 --> 00:11:57.620 on the left and when we compare it

NOTE Confidence: 0.834422832222222

00:11:57.620 --> 00:11:59.817 across the hi quartile with the first

NOTE Confidence: 0.834422832222222

00:11:59.817 --> 00:12:01.547 column being the overall number.

NOTE Confidence: 0.83442283222222

00:12:01.550 --> 00:12:03.749 And the the 3rd, 3rd, 2nd,

NOTE Confidence: 0.83442283222222

00:12:03.749 --> 00:12:04.028 3rd,

NOTE Confidence: 0.83442283222222

00:12:04.028 --> 00:12:06.260 4th and 5th column is being the HI

NOTE Confidence: 0.83442283222222

00:12:06.329 --> 00:12:08.863 court that there was no difference in

NOTE Confidence: 0.83442283222222

00:12:08.863 --> 00:12:11.028 self reported sleep with the piskey.

NOTE Confidence: 0.83442283222222

00:12:11.030 --> 00:12:13.098 No difference in depression,

NOTE Confidence: 0.83442283222222

00:12:13.098 --> 00:12:15.683 no difference in global fatigue,

NOTE Confidence: 0.83442283222222

00:12:15.690 --> 00:12:18.982 no difference in the Epworth and no

NOTE Confidence: 0.83442283222222

00:12:18.982 --> 00:12:20.788 difference in the six minute walk

NOTE Confidence: 0.83442283222222

00:12:20.788 --> 00:12:23.090 across apnea. Hypotony index cord piles.

NOTE Confidence: 0.83442283222222

00:12:23.090 --> 00:12:26.170 The only difference was a little bit

NOTE Confidence: 0.83442283222222

00:12:26.170 --> 00:12:28.888 less physical activity on the actigraph,

NOTE Confidence: 0.83442283222222

00:12:28.890 --> 00:12:31.778 which you see only in the 4th quartile.

NOTE Confidence: 0.83442283222222

00:12:31.780 --> 00:12:33.556 These were people with an HI

NOTE Confidence: 0.83442283222222

00:12:33.556 --> 00:12:34.740 and you see our

NOTE Confidence: 0.841736040454545

00:12:34.817 --> 00:12:37.367 court tiles here pretty much corresponded  
NOTE Confidence: 0.841736040454545

00:12:37.367 --> 00:12:40.602 to clinical levels of the HI and so it  
NOTE Confidence: 0.841736040454545

00:12:40.602 --> 00:12:43.331 was only at that level and so well.  
NOTE Confidence: 0.841736040454545

00:12:43.331 --> 00:12:46.059 So what is it about sleep if it's not the hi,  
NOTE Confidence: 0.841736040454545

00:12:46.060 --> 00:12:47.508 that's sort of contributed.  
NOTE Confidence: 0.841736040454545

00:12:47.508 --> 00:12:50.660 So what we found out was that overall,  
NOTE Confidence: 0.841736040454545

00:12:50.660 --> 00:12:53.366 about half of the patients reported  
NOTE Confidence: 0.841736040454545

00:12:53.366 --> 00:12:54.719 difficulty initiating sleep,  
NOTE Confidence: 0.841736040454545

00:12:54.720 --> 00:12:57.198 maintaining sleep or waking too early.  
NOTE Confidence: 0.841736040454545

00:12:57.200 --> 00:12:59.150 Half of them had difficulty maintaining.  
NOTE Confidence: 0.841736040454545

00:12:59.150 --> 00:13:01.654 OK, that's pretty nonspecific.  
NOTE Confidence: 0.841736040454545

00:13:01.654 --> 00:13:04.064 42% had difficulty falling asleep.  
NOTE Confidence: 0.841736040454545

00:13:04.064 --> 00:13:07.086 And 24% woke up too early in the morning.  
NOTE Confidence: 0.841736040454545

00:13:07.090 --> 00:13:08.452 Insomnia was a little bit more  
NOTE Confidence: 0.841736040454545

00:13:08.452 --> 00:13:09.969 prevalent in the women than the men,  
NOTE Confidence: 0.841736040454545

00:13:09.970 --> 00:13:12.234 although this wasn't significantly



NOTE Confidence: 0.841736040454545  
00:13:12.234 --> 00:13:14.498 significantly different and the  
NOTE Confidence: 0.841736040454545  
00:13:14.498 --> 00:13:17.447 insomnia is not associated with age.  
NOTE Confidence: 0.841736040454545  
00:13:17.450 --> 00:13:21.200 The HI or left ventricular LV.  
NOTE Confidence: 0.943323858  
00:13:23.380 --> 00:13:25.040 So this is just some,  
NOTE Confidence: 0.943323858  
00:13:25.040 --> 00:13:27.679 some of the data comparing people with  
NOTE Confidence: 0.943323858  
00:13:27.679 --> 00:13:29.888 and without insomnia with insomnia in  
NOTE Confidence: 0.943323858  
00:13:29.888 --> 00:13:32.254 blue without insomnia is in the red.  
NOTE Confidence: 0.943323858  
00:13:32.260 --> 00:13:35.145 Comparing those folks on levels  
NOTE Confidence: 0.943323858  
00:13:35.145 --> 00:13:36.868 of sleepiness, depression,  
NOTE Confidence: 0.943323858  
00:13:36.868 --> 00:13:39.140 fatigue, and physical function.  
NOTE Confidence: 0.943323858  
00:13:39.140 --> 00:13:41.480 The six minute walk to fit on this slide,  
NOTE Confidence: 0.943323858  
00:13:41.480 --> 00:13:43.916 you have to multiply this by 100.  
NOTE Confidence: 0.943323858  
00:13:43.920 --> 00:13:46.182 So there was about 100 foot  
NOTE Confidence: 0.943323858  
00:13:46.182 --> 00:13:48.678 difference in six minute walk distance  
NOTE Confidence: 0.943323858  
00:13:48.678 --> 00:13:50.963 between the patients with insomnia  
NOTE Confidence: 0.943323858

00:13:50.963 --> 00:13:53.639 and the people without insomnia.  
NOTE Confidence: 0.943323858

00:13:53.640 --> 00:13:55.184 And so you know.  
NOTE Confidence: 0.943323858

00:13:55.184 --> 00:13:57.114 So it was sort of.  
NOTE Confidence: 0.943323858

00:13:57.120 --> 00:13:59.720 One would expect that we might see some  
NOTE Confidence: 0.943323858

00:13:59.720 --> 00:14:01.716 effectivity going on here that people  
NOTE Confidence: 0.943323858

00:14:01.716 --> 00:14:03.636 with more insomnia might report more  
NOTE Confidence: 0.943323858

00:14:03.695 --> 00:14:05.810 daytime symptoms and poorer function.  
NOTE Confidence: 0.943323858

00:14:05.810 --> 00:14:07.790 But this is an objective measure  
NOTE Confidence: 0.943323858

00:14:07.790 --> 00:14:10.059 commonly used in cardio pulmonary care.  
NOTE Confidence: 0.943323858

00:14:10.060 --> 00:14:13.287 And there was 100 foot and statistically  
NOTE Confidence: 0.943323858

00:14:13.287 --> 00:14:15.059 significant clinically significant as  
NOTE Confidence: 0.943323858

00:14:15.059 --> 00:14:17.320 well difference in the six minute walk.  
NOTE Confidence: 0.943323858

00:14:17.320 --> 00:14:18.850 So we published both of these  
NOTE Confidence: 0.943323858

00:14:18.850 --> 00:14:20.220 papers in the journal SLEEP.  
NOTE Confidence: 0.943323858

00:14:20.220 --> 00:14:24.430 And again, I can't believe it's 2010 already.  
NOTE Confidence: 0.943323858

00:14:24.430 --> 00:14:26.110 And and and so this was sort

NOTE Confidence: 0.943323858

00:14:26.110 --> 00:14:27.670 of the take home message.

NOTE Confidence: 0.943323858

00:14:27.670 --> 00:14:29.600 Insomnia seems to be important

NOTE Confidence: 0.943323858

00:14:29.600 --> 00:14:31.530 to function in these patients,

NOTE Confidence: 0.943323858

00:14:31.530 --> 00:14:33.162 so the next question was, well,

NOTE Confidence: 0.943323858

00:14:33.162 --> 00:14:35.254 what are we going to do about this, right?

NOTE Confidence: 0.943323858

00:14:35.254 --> 00:14:36.830 So here's our model.

NOTE Confidence: 0.943323858

00:14:36.830 --> 00:14:38.230 Well, we could give kpap,

NOTE Confidence: 0.943323858

00:14:38.230 --> 00:14:40.852 but we were interested in daytime

NOTE Confidence: 0.943323858

00:14:40.852 --> 00:14:43.697 function and fatigue and mood and it

NOTE Confidence: 0.943323858

00:14:43.697 --> 00:14:46.070 we didn't see a difference in the

NOTE Confidence: 0.943323858

00:14:46.149 --> 00:14:48.130 hi on those variables we could give

NOTE Confidence: 0.943323858

00:14:48.130 --> 00:14:50.053 Hypnotics and I'll explain a little bit

NOTE Confidence: 0.943323858

00:14:50.053 --> 00:14:52.089 more why we didn't do that in a minute.

NOTE Confidence: 0.943323858

00:14:52.090 --> 00:14:52.840 Of course,

NOTE Confidence: 0.943323858

00:14:52.840 --> 00:14:54.715 everybody could use better heart

NOTE Confidence: 0.943323858

00:14:54.715 --> 00:14:55.840 failure disease management.  
NOTE Confidence: 0.943323858

00:14:55.840 --> 00:14:58.156 We could do more physical activity  
NOTE Confidence: 0.943323858

00:14:58.156 --> 00:14:59.314 to improve function.  
NOTE Confidence: 0.943323858

00:14:59.320 --> 00:15:01.520 We obviously could improve stress.  
NOTE Confidence: 0.943323858

00:15:01.520 --> 00:15:03.305 A lot of these patients were depressed.  
NOTE Confidence: 0.943323858

00:15:03.310 --> 00:15:05.000 We could do any depressants,  
NOTE Confidence: 0.943323858

00:15:05.000 --> 00:15:07.205 but we just said let's let's look  
NOTE Confidence: 0.943323858

00:15:07.205 --> 00:15:09.982 at CBT eye and see if we can get  
NOTE Confidence: 0.943323858

00:15:09.982 --> 00:15:12.174 a better outcome on the function  
NOTE Confidence: 0.943323858

00:15:12.174 --> 00:15:14.524 and symptoms with this treatment.  
NOTE Confidence: 0.943323858

00:15:14.530 --> 00:15:16.770 So.  
NOTE Confidence: 0.943323858

00:15:16.770 --> 00:15:17.886 Just as a review,  
NOTE Confidence: 0.943323858

00:15:17.886 --> 00:15:19.890 I'm sure you're all familiar with this.  
NOTE Confidence: 0.943323858

00:15:19.890 --> 00:15:24.478 The this is the ICD 3 definition of insomnia,  
NOTE Confidence: 0.943323858

00:15:24.478 --> 00:15:27.802 which pretty much is corresponds to what  
NOTE Confidence: 0.943323858

00:15:27.802 --> 00:15:30.990 we we were observing in our patients.

NOTE Confidence: 0.943323858

00:15:30.990 --> 00:15:31.998 So we said, OK,

NOTE Confidence: 0.943323858

00:15:31.998 --> 00:15:33.950 I'm you know I'm I'm sort of

NOTE Confidence: 0.943323858

00:15:33.950 --> 00:15:35.430 a very quantitative person,

NOTE Confidence: 0.943323858

00:15:35.430 --> 00:15:36.900 but I thought it was very important.

NOTE Confidence: 0.943323858

00:15:36.900 --> 00:15:39.084 If we were going to develop an intervention

NOTE Confidence: 0.943323858

00:15:39.084 --> 00:15:41.634 to go back and see what the patients say.

NOTE Confidence: 0.943323858

00:15:41.640 --> 00:15:43.610 So we after we did this study and this we

NOTE Confidence: 0.943323858

00:15:43.665 --> 00:15:45.690 did after I came to Yale with a colleague,

NOTE Confidence: 0.943323858

00:15:45.690 --> 00:15:47.290 Doctor Laura Andrew Scheer,

NOTE Confidence: 0.943323858

00:15:47.290 --> 00:15:49.290 in our critical care program,

NOTE Confidence: 0.943323858

00:15:49.290 --> 00:15:52.895 who is an expert in qualitative research.

NOTE Confidence: 0.943323858

00:15:52.900 --> 00:15:54.433 We went back to the heart failure

NOTE Confidence: 0.943323858

00:15:54.433 --> 00:15:55.810 patients and said if we were

NOTE Confidence: 0.943323858

00:15:55.810 --> 00:15:56.935 going to build an intervention,

NOTE Confidence: 0.943323858

00:15:56.940 --> 00:15:58.410 what would you be interested in?

NOTE Confidence: 0.943323858

00:15:58.410 --> 00:16:01.056 How important is your sleep and?  
NOTE Confidence: 0.943323858

00:16:01.060 --> 00:16:02.620 If we were to build a  
NOTE Confidence: 0.943323858

00:16:02.620 --> 00:16:03.140 behavioral intervention,  
NOTE Confidence: 0.943323858

00:16:03.140 --> 00:16:04.982 would you come?  
NOTE Confidence: 0.943323858

00:16:04.982 --> 00:16:08.856 And So what they told us is insomnia was  
NOTE Confidence: 0.943323858

00:16:08.856 --> 00:16:10.973 very important to them in that quote,  
NOTE Confidence: 0.943323858

00:16:10.973 --> 00:16:12.890 and that this is the title of the paper.  
NOTE Confidence: 0.943323858

00:16:12.890 --> 00:16:13.946 I need a bucket of nails.  
NOTE Confidence: 0.943323858

00:16:13.950 --> 00:16:16.710 If I thought it would help me sleep.  
NOTE Confidence: 0.943323858

00:16:16.710 --> 00:16:18.090 I go to bed knowing that,  
NOTE Confidence: 0.804845616

00:16:18.090 --> 00:16:19.010 so we asked them well,  
NOTE Confidence: 0.804845616

00:16:19.010 --> 00:16:19.938 what happens at night.  
NOTE Confidence: 0.804845616

00:16:19.938 --> 00:16:21.833 I go to bed knowing that I'm not  
NOTE Confidence: 0.804845616

00:16:21.833 --> 00:16:23.408 going to sleep and it bothers me.  
NOTE Confidence: 0.804845616

00:16:23.410 --> 00:16:25.300 OK, so this kind of catastrophe  
NOTE Confidence: 0.804845616

00:16:25.300 --> 00:16:27.320 station is really part of insomnia.

NOTE Confidence: 0.804845616

00:16:27.320 --> 00:16:29.567 Dear God, please let me sleep tonight.

NOTE Confidence: 0.804845616

00:16:29.570 --> 00:16:31.894 They talked about all some of the

NOTE Confidence: 0.804845616

00:16:31.894 --> 00:16:33.744 typical cognitions we think about

NOTE Confidence: 0.804845616

00:16:33.744 --> 00:16:35.724 in behavioral aspects of insomnia.

NOTE Confidence: 0.804845616

00:16:35.730 --> 00:16:37.557 Notably, very few people told us that

NOTE Confidence: 0.804845616

00:16:37.557 --> 00:16:39.352 it was their heart failure symptoms

NOTE Confidence: 0.804845616

00:16:39.352 --> 00:16:41.266 that we were keeping them awake.

NOTE Confidence: 0.804845616

00:16:41.270 --> 00:16:43.394 Very few people told us it

NOTE Confidence: 0.804845616

00:16:43.394 --> 00:16:44.810 was nocturia or disneya.

NOTE Confidence: 0.804845616

00:16:44.810 --> 00:16:46.858 Most of them had these sort of obsessive.

NOTE Confidence: 0.804845616

00:16:46.860 --> 00:16:49.110 Thoughts most of the patients were

NOTE Confidence: 0.804845616

00:16:49.110 --> 00:16:51.818 in some kind of in in hypnotic,

NOTE Confidence: 0.804845616

00:16:51.820 --> 00:16:54.200 either prescribed or not prescribed,

NOTE Confidence: 0.804845616

00:16:54.200 --> 00:16:56.192 but they were all whether they

NOTE Confidence: 0.804845616

00:16:56.192 --> 00:16:58.318 were on a addicting Med or not.

NOTE Confidence: 0.804845616

00:16:58.320 --> 00:17:01.026 We're all afraid of becoming addicted,  
NOTE Confidence: 0.804845616

00:17:01.030 --> 00:17:01.514 addicted.  
NOTE Confidence: 0.804845616

00:17:01.514 --> 00:17:03.450 They had some very.  
NOTE Confidence: 0.804756806842105

00:17:05.870 --> 00:17:06.926 Very strange behaviors.  
NOTE Confidence: 0.804756806842105

00:17:06.926 --> 00:17:09.823 The one lady that we were two different  
NOTE Confidence: 0.804756806842105

00:17:09.823 --> 00:17:12.719 drugs that that she could have been on.  
NOTE Confidence: 0.804756806842105

00:17:12.720 --> 00:17:14.784 One might have been a 5 milligram dose.  
NOTE Confidence: 0.804756806842105

00:17:14.790 --> 00:17:16.386 One would have been a 10  
NOTE Confidence: 0.804756806842105

00:17:16.386 --> 00:17:17.730 milligram dose and she'd say,  
NOTE Confidence: 0.804756806842105

00:17:17.730 --> 00:17:19.953 well I want to take the 5 milligram because  
NOTE Confidence: 0.804756806842105

00:17:19.953 --> 00:17:21.909 it's less because it's less powerful.  
NOTE Confidence: 0.804756806842105

00:17:21.910 --> 00:17:23.878 I'm not going to get addicted somebody else  
NOTE Confidence: 0.804756806842105

00:17:23.878 --> 00:17:25.765 said I'll just nibble off a little bit.  
NOTE Confidence: 0.804756806842105

00:17:25.770 --> 00:17:28.010 It's not like taking the whole thing  
NOTE Confidence: 0.804756806842105

00:17:28.010 --> 00:17:30.110 but mostly what they said is doctors  
NOTE Confidence: 0.804756806842105

00:17:30.110 --> 00:17:31.869 don't ask and patients don't tell



NOTE Confidence: 0.804756806842105  
00:17:31.869 --> 00:17:34.114 we go to in most of them obviously  
NOTE Confidence: 0.804756806842105  
00:17:34.114 --> 00:17:36.424 we're not going to a sleep doctor.  
NOTE Confidence: 0.804756806842105  
00:17:36.430 --> 00:17:37.177 That we go.  
NOTE Confidence: 0.804756806842105  
00:17:37.177 --> 00:17:39.371 We go to the point to the my  
NOTE Confidence: 0.804756806842105  
00:17:39.371 --> 00:17:41.633 cardiologist or my primary care doctor  
NOTE Confidence: 0.804756806842105  
00:17:41.633 --> 00:17:43.952 or my advanced practice provider and  
NOTE Confidence: 0.804756806842105  
00:17:43.952 --> 00:17:46.549 they don't ask me about my sleep.  
NOTE Confidence: 0.804756806842105  
00:17:46.550 --> 00:17:47.929 And I know they don't have time.  
NOTE Confidence: 0.804756806842105  
00:17:47.930 --> 00:17:49.358 They want to take my blood pressure.  
NOTE Confidence: 0.804756806842105  
00:17:49.360 --> 00:17:50.984 They want to give me a pill and  
NOTE Confidence: 0.804756806842105  
00:17:50.984 --> 00:17:52.977 so I leave without telling them.  
NOTE Confidence: 0.804756806842105  
00:17:52.980 --> 00:17:53.643 So for us.  
NOTE Confidence: 0.804756806842105  
00:17:53.643 --> 00:17:55.580 And then we did ask them more about.  
NOTE Confidence: 0.804756806842105  
00:17:55.580 --> 00:17:58.184 Well, if we built an insomnia intervention,  
NOTE Confidence: 0.804756806842105  
00:17:58.190 --> 00:17:59.930 you know a behavioral intervention.  
NOTE Confidence: 0.804756806842105

00:17:59.930 --> 00:18:01.160 Would you be interested in it  
NOTE Confidence: 0.804756806842105

00:18:01.160 --> 00:18:02.443 given all the other things you  
NOTE Confidence: 0.804756806842105

00:18:02.443 --> 00:18:03.906 need to do to manage their health?  
NOTE Confidence: 0.804756806842105

00:18:03.910 --> 00:18:06.580 And they unanimously said yes.  
NOTE Confidence: 0.804756806842105

00:18:06.580 --> 00:18:08.440 So we proceeded to conduct.  
NOTE Confidence: 0.804756806842105

00:18:08.440 --> 00:18:09.930 This was another study funded  
NOTE Confidence: 0.804756806842105

00:18:09.930 --> 00:18:11.936 within or 21 from the National  
NOTE Confidence: 0.804756806842105

00:18:11.936 --> 00:18:13.760 Institute of Nursing Research.  
NOTE Confidence: 0.804756806842105

00:18:13.760 --> 00:18:15.825 A feasibility and efficacy study  
NOTE Confidence: 0.804756806842105

00:18:15.825 --> 00:18:18.409 of CBT for insomnia and this  
NOTE Confidence: 0.804756806842105

00:18:18.409 --> 00:18:21.061 was published in the Journal of  
NOTE Confidence: 0.804756806842105

00:18:21.061 --> 00:18:23.060 Clinical Sleep Medicine in 2015.  
NOTE Confidence: 0.804756806842105

00:18:23.060 --> 00:18:25.314 So basically what this was and we  
NOTE Confidence: 0.804756806842105

00:18:25.314 --> 00:18:27.308 wanted to very carefully control  
NOTE Confidence: 0.804756806842105

00:18:27.308 --> 00:18:28.700 for time and attention,  
NOTE Confidence: 0.804756806842105

00:18:28.700 --> 00:18:30.975 so we randomize people with heart failure,

NOTE Confidence: 0.804756806842105  
00:18:30.980 --> 00:18:33.250 patients with an insomnia severity  
NOTE Confidence: 0.804756806842105  
00:18:33.250 --> 00:18:35.934 index of greater than seven into  
NOTE Confidence: 0.804756806842105  
00:18:35.934 --> 00:18:37.956 groups 7 is considered the cut  
NOTE Confidence: 0.804756806842105  
00:18:37.956 --> 00:18:40.580 off for no versus some insomnia.  
NOTE Confidence: 0.804756806842105  
00:18:40.580 --> 00:18:42.278 The cutoff for on the ISI.  
NOTE Confidence: 0.804756806842105  
00:18:42.280 --> 00:18:43.936 For those of you know it is a  
NOTE Confidence: 0.804756806842105  
00:18:43.936 --> 00:18:45.459 little higher for clinical insomnia,  
NOTE Confidence: 0.804756806842105  
00:18:45.460 --> 00:18:47.128 but we didn't know what levels  
NOTE Confidence: 0.804756806842105  
00:18:47.128 --> 00:18:48.693 of insomnia would merit treatment  
NOTE Confidence: 0.804756806842105  
00:18:48.693 --> 00:18:50.297 in these particular patients.  
NOTE Confidence: 0.804756806842105  
00:18:50.300 --> 00:18:52.964 So we took anybody that had at least  
NOTE Confidence: 0.804756806842105  
00:18:52.964 --> 00:18:54.569 mild insomnia. And we randomize.  
NOTE Confidence: 0.804756806842105  
00:18:54.569 --> 00:18:56.134 This is a group interventions.  
NOTE Confidence: 0.804756806842105  
00:18:56.140 --> 00:18:58.668 So we randomized them in groups to four  
NOTE Confidence: 0.804756806842105  
00:18:58.668 --> 00:19:01.426 BI weekly sessions of pretty standard CBT.  
NOTE Confidence: 0.804756806842105

00:19:01.430 --> 00:19:03.986 I sleep hygiene and cognitive therapy,  
NOTE Confidence: 0.804756806842105

00:19:03.990 --> 00:19:04.942 sleep restriction,  
NOTE Confidence: 0.804756806842105

00:19:04.942 --> 00:19:05.894 stimulus control.  
NOTE Confidence: 0.804756806842105

00:19:05.894 --> 00:19:08.274 We also added progressive muscle  
NOTE Confidence: 0.804756806842105

00:19:08.274 --> 00:19:10.327 relaxation and the reason we did  
NOTE Confidence: 0.804756806842105

00:19:10.327 --> 00:19:12.570 that was because there's such a high  
NOTE Confidence: 0.804756806842105

00:19:12.570 --> 00:19:14.225 arousal level in these patients,  
NOTE Confidence: 0.804756806842105

00:19:14.230 --> 00:19:16.546 the control group was heart failure,  
NOTE Confidence: 0.804756806842105

00:19:16.550 --> 00:19:17.350 self management,  
NOTE Confidence: 0.804756806842105

00:19:17.350 --> 00:19:19.350 which is pretty much consistently  
NOTE Confidence: 0.804756806842105

00:19:19.350 --> 00:19:21.222 what heart failure patients should  
NOTE Confidence: 0.804756806842105

00:19:21.222 --> 00:19:23.064 know when to call the doctor  
NOTE Confidence: 0.804756806842105

00:19:23.064 --> 00:19:25.127 with how to take your medication.  
NOTE Confidence: 0.804756806842105

00:19:25.130 --> 00:19:28.554 What symptoms weren't follow up low fat?  
NOTE Confidence: 0.804756806842105

00:19:28.554 --> 00:19:30.270 Low sodium, diet, exercise, etc.  
NOTE Confidence: 0.804756806842105

00:19:30.270 --> 00:19:32.790 We did include some fleet very simple

NOTE Confidence: 0.804756806842105  
00:19:32.790 --> 00:19:34.763 basic sleep hygiene in there because  
NOTE Confidence: 0.804756806842105  
00:19:34.763 --> 00:19:37.099 we felt that it was a question  
NOTE Confidence: 0.804756806842105  
00:19:37.099 --> 00:19:38.899 of equipoise we couldn't recruit  
NOTE Confidence: 0.804756806842105  
00:19:38.899 --> 00:19:41.222 people into an insomnia trial and  
NOTE Confidence: 0.804756806842105  
00:19:41.222 --> 00:19:43.706 not do anything at all about,  
NOTE Confidence: 0.804756806842105  
00:19:43.710 --> 00:19:44.080 you know,  
NOTE Confidence: 0.804756806842105  
00:19:44.080 --> 00:19:45.900 to keep A to keep them in the trial,  
NOTE Confidence: 0.804756806842105  
00:19:45.900 --> 00:19:47.470 but be nothing at all,  
NOTE Confidence: 0.804756806842105  
00:19:47.470 --> 00:19:49.265 and so the literature suggests  
NOTE Confidence: 0.804756806842105  
00:19:49.265 --> 00:19:51.060 that sleep hygiene alone is  
NOTE Confidence: 0.893411546875  
00:19:51.128 --> 00:19:53.048 not an active component of CBT.  
NOTE Confidence: 0.893411546875  
00:19:53.050 --> 00:19:55.780 I so that was in here.  
NOTE Confidence: 0.893411546875  
00:19:55.780 --> 00:19:58.330 And and arguably,  
NOTE Confidence: 0.893411546875  
00:19:58.330 --> 00:20:00.455 improving your heart failure might  
NOTE Confidence: 0.893411546875  
00:20:00.455 --> 00:20:03.015 actually also with with self management  
NOTE Confidence: 0.893411546875

00:20:03.015 --> 00:20:05.040 might also improve your sleep.  
NOTE Confidence: 0.893411546875

00:20:05.040 --> 00:20:07.320 We had this pretty much the same outcomes  
NOTE Confidence: 0.893411546875

00:20:07.320 --> 00:20:09.408 that we had in the earlier study,  
NOTE Confidence: 0.893411546875

00:20:09.410 --> 00:20:11.580 so I'm going to skip over this,  
NOTE Confidence: 0.893411546875

00:20:11.580 --> 00:20:13.544 but we had 59.  
NOTE Confidence: 0.893411546875

00:20:13.544 --> 00:20:16.762 We had 29 people in the CBT I which we  
NOTE Confidence: 0.893411546875

00:20:16.762 --> 00:20:18.938 called healthy sleep and 19 people in  
NOTE Confidence: 0.893411546875

00:20:18.938 --> 00:20:21.280 the healthy hearts which was the control.  
NOTE Confidence: 0.893411546875

00:20:21.280 --> 00:20:22.636 It was a pretty diverse group.  
NOTE Confidence: 0.893411546875

00:20:22.640 --> 00:20:24.692 The only difference was,  
NOTE Confidence: 0.893411546875

00:20:24.692 --> 00:20:25.718 interestingly enough,  
NOTE Confidence: 0.893411546875

00:20:25.720 --> 00:20:29.064 the CBT I group had a little bit.  
NOTE Confidence: 0.893411546875

00:20:29.070 --> 00:20:30.860 A little bit more comorbidity,  
NOTE Confidence: 0.893411546875

00:20:30.860 --> 00:20:32.148 which would have argued  
NOTE Confidence: 0.893411546875

00:20:32.148 --> 00:20:33.436 against the treatment effect.  
NOTE Confidence: 0.893411546875

00:20:33.440 --> 00:20:33.800 However,

NOTE Confidence: 0.893411546875

00:20:33.800 --> 00:20:36.680 we did show that we and we were

NOTE Confidence: 0.893411546875

00:20:36.680 --> 00:20:39.140 primarily focused here on effect size,

NOTE Confidence: 0.893411546875

00:20:39.140 --> 00:20:40.460 not statistical significance,

NOTE Confidence: 0.893411546875

00:20:40.460 --> 00:20:42.872 because this was a preliminary study,

NOTE Confidence: 0.893411546875

00:20:42.872 --> 00:20:45.956 but we did see a very large improvement

NOTE Confidence: 0.893411546875

00:20:45.956 --> 00:20:49.141 in the CBT group versus the attention

NOTE Confidence: 0.893411546875

00:20:49.141 --> 00:20:51.499 control on insomnia severity.

NOTE Confidence: 0.893411546875

00:20:51.500 --> 00:20:54.236 You see the in the far right hand

NOTE Confidence: 0.893411546875

00:20:54.236 --> 00:20:56.700 corner side. Here is the effect size.

NOTE Confidence: 0.893411546875

00:20:56.700 --> 00:20:59.010 We also saw a lot.

NOTE Confidence: 0.893411546875

00:20:59.010 --> 00:21:01.866 Improvement in the PISKI as well as,

NOTE Confidence: 0.893411546875

00:21:01.870 --> 00:21:02.944 interestingly enough,

NOTE Confidence: 0.893411546875

00:21:02.944 --> 00:21:05.629 a large effect on fatigue.

NOTE Confidence: 0.893411546875

00:21:05.630 --> 00:21:07.997 Now that you know a lot of people in

NOTE Confidence: 0.893411546875

00:21:07.997 --> 00:21:09.948 cardiology aren't that focused on sleep,

NOTE Confidence: 0.893411546875

00:21:09.950 --> 00:21:11.216 but most of us know that,  
NOTE Confidence: 0.893411546875

00:21:11.220 --> 00:21:13.140 think that fatigue is pretty  
NOTE Confidence: 0.893411546875

00:21:13.140 --> 00:21:13.908 important outcome.  
NOTE Confidence: 0.893411546875

00:21:13.910 --> 00:21:16.484 And so, so this was a pretty large effect.  
NOTE Confidence: 0.893411546875

00:21:16.490 --> 00:21:18.055 We also saw some improvement  
NOTE Confidence: 0.893411546875

00:21:18.055 --> 00:21:19.307 in Actigraph measured sleep,  
NOTE Confidence: 0.893411546875

00:21:19.310 --> 00:21:21.670 latency, duration and efficiency.  
NOTE Confidence: 0.893411546875

00:21:21.670 --> 00:21:24.620 Although everybody had poor sleep  
NOTE Confidence: 0.893411546875

00:21:24.620 --> 00:21:25.960 efficiency pretty much throughout,  
NOTE Confidence: 0.893411546875

00:21:25.960 --> 00:21:28.046 and this has been in all of my  
NOTE Confidence: 0.893411546875

00:21:28.046 --> 00:21:29.436 studies in sleep efficiency of.  
NOTE Confidence: 0.893411546875

00:21:29.440 --> 00:21:33.320 High 70 to 80%.  
NOTE Confidence: 0.893411546875

00:21:33.320 --> 00:21:35.216 So this is the manova where  
NOTE Confidence: 0.893411546875

00:21:35.216 --> 00:21:36.480 we combine the outcomes.  
NOTE Confidence: 0.893411546875

00:21:36.480 --> 00:21:39.018 Not only were these large effects,  
NOTE Confidence: 0.893411546875

00:21:39.020 --> 00:21:40.836 but they were statistically



NOTE Confidence: 0.893411546875

00:21:40.836 --> 00:21:42.652 significant when we considered

NOTE Confidence: 0.893411546875

00:21:42.652 --> 00:21:44.719 insomnia and fatigue together,

NOTE Confidence: 0.893411546875

00:21:44.720 --> 00:21:47.590 so the overall effect on both insomnia

NOTE Confidence: 0.893411546875

00:21:47.590 --> 00:21:50.424 and fatigue was I was at a .02 level

NOTE Confidence: 0.893411546875

00:21:50.424 --> 00:21:53.098 and it was considered a large effect.

NOTE Confidence: 0.893411546875

00:21:53.100 --> 00:21:55.248 So this was our preliminary work

NOTE Confidence: 0.893411546875

00:21:55.248 --> 00:21:57.844 when I'm going to move to is to

NOTE Confidence: 0.893411546875

00:21:57.844 --> 00:21:59.838 talk about this is a pre load

NOTE Confidence: 0.893411546875

00:21:59.838 --> 00:22:02.126 to how did we get to the trial

NOTE Confidence: 0.893411546875

00:22:02.126 --> 00:22:04.548 that that we're just reporting?

NOTE Confidence: 0.893411546875

00:22:04.548 --> 00:22:08.196 Today So what I'm reporting today,

NOTE Confidence: 0.893411546875

00:22:08.196 --> 00:22:10.440 and I'm excited to announce it's

NOTE Confidence: 0.893411546875

00:22:10.508 --> 00:22:12.378 just been published in Sleep,

NOTE Confidence: 0.893411546875

00:22:12.380 --> 00:22:14.972 is the results of our five year clinical

NOTE Confidence: 0.893411546875

00:22:14.972 --> 00:22:17.716 trial that built on all of that other work.

NOTE Confidence: 0.893411546875

00:22:17.720 --> 00:22:21.598 Again, I can't believe how time flies.  
NOTE Confidence: 0.893411546875

00:22:21.600 --> 00:22:24.085 And so we'll, that's that's the next.  
NOTE Confidence: 0.893411546875

00:22:24.090 --> 00:22:25.418 I'll segue to that.  
NOTE Confidence: 0.893411546875

00:22:25.418 --> 00:22:27.958 So this was a model that builds  
NOTE Confidence: 0.893411546875

00:22:27.958 --> 00:22:30.288 directly on that earlier work,  
NOTE Confidence: 0.893411546875

00:22:30.290 --> 00:22:32.530 and on the right hand side you  
NOTE Confidence: 0.893411546875

00:22:32.530 --> 00:22:34.000 see the intervention is CBT.  
NOTE Confidence: 0.893411546875

00:22:34.000 --> 00:22:35.476 And as we know,  
NOTE Confidence: 0.893411546875

00:22:35.476 --> 00:22:38.328 CPT is designed to work on our  
NOTE Confidence: 0.893411546875

00:22:38.328 --> 00:22:40.832 thoughts and our behaviors, right?  
NOTE Confidence: 0.893411546875

00:22:40.832 --> 00:22:43.086 And so the focus was CBT I.  
NOTE Confidence: 0.893411546875

00:22:43.090 --> 00:22:45.418 And how can we use that to improve  
NOTE Confidence: 0.893411546875

00:22:45.418 --> 00:22:47.770 that and in turn improve insomnia?  
NOTE Confidence: 0.893411546875

00:22:47.770 --> 00:22:49.775 But we were also interested  
NOTE Confidence: 0.893411546875

00:22:49.775 --> 00:22:51.379 in these other outcomes.  
NOTE Confidence: 0.893411546875

00:22:51.380 --> 00:22:54.596 Again, very important in heart failure.

NOTE Confidence: 0.893411546875

00:22:54.600 --> 00:22:56.640 The primary outcome in this study,

NOTE Confidence: 0.893411546875

00:22:56.640 --> 00:22:58.620 again based on our preliminary work,

NOTE Confidence: 0.893411546875

00:22:58.620 --> 00:23:01.070 was fatigue.

NOTE Confidence: 0.893411546875

00:23:01.070 --> 00:23:03.590 In terms of the symptom outcomes,

NOTE Confidence: 0.908318394666667

00:23:03.590 --> 00:23:06.470 and then the other primary outcome was six

NOTE Confidence: 0.908318394666667

00:23:06.470 --> 00:23:09.680 minute walk and self report using the SF 36,

NOTE Confidence: 0.908318394666667

00:23:09.680 --> 00:23:11.930 we also measured psycho motor vigilance.

NOTE Confidence: 0.908318394666667

00:23:11.930 --> 00:23:13.822 We haven't, we haven't

NOTE Confidence: 0.908318394666667

00:23:13.822 --> 00:23:15.714 finished analyzing that yet.

NOTE Confidence: 0.908318394666667

00:23:15.720 --> 00:23:17.974 Secondary aim was also to look at

NOTE Confidence: 0.908318394666667

00:23:17.974 --> 00:23:19.811 health care resource utilization and

NOTE Confidence: 0.908318394666667

00:23:19.811 --> 00:23:22.229 my colleague Doctor Chris holiday get.

NOTE Confidence: 0.908318394666667

00:23:22.230 --> 00:23:24.750 The Penn State is a economist with

NOTE Confidence: 0.908318394666667

00:23:24.750 --> 00:23:27.358 expertise in this area and he is working

NOTE Confidence: 0.908318394666667

00:23:27.358 --> 00:23:30.343 on those data as we speak and then uh.

NOTE Confidence: 0.908318394666667

00:23:30.343 --> 00:23:32.940 Another sort of tertiary aim was to  
NOTE Confidence: 0.908318394666667

00:23:33.020 --> 00:23:35.570 consider event free survival given  
NOTE Confidence: 0.908318394666667

00:23:35.570 --> 00:23:38.120 some of the increasing evidence  
NOTE Confidence: 0.908318394666667

00:23:38.202 --> 00:23:40.598 that insomnia predicts outcome.  
NOTE Confidence: 0.908318394666667

00:23:40.600 --> 00:23:42.776 Because this is such a dirty business in  
NOTE Confidence: 0.908318394666667

00:23:42.776 --> 00:23:45.377 terms of looking at the inputs into insomnia.  
NOTE Confidence: 0.908318394666667

00:23:45.380 --> 00:23:47.914 Of course we have multiple other factors.  
NOTE Confidence: 0.908318394666667

00:23:47.920 --> 00:23:49.648 We have sleep apnea.  
NOTE Confidence: 0.908318394666667

00:23:49.648 --> 00:23:52.740 We have adherence to their self care.  
NOTE Confidence: 0.908318394666667

00:23:52.740 --> 00:23:53.404 We need,  
NOTE Confidence: 0.908318394666667

00:23:53.404 --> 00:23:55.396 we have comorbidity and other factors,  
NOTE Confidence: 0.908318394666667

00:23:55.400 --> 00:23:59.160 and they were all considered.  
NOTE Confidence: 0.908318394666667

00:23:59.160 --> 00:24:00.290 We did, by the way,  
NOTE Confidence: 0.908318394666667

00:24:00.290 --> 00:24:02.888 so so the study design included.  
NOTE Confidence: 0.908318394666667

00:24:02.890 --> 00:24:05.718 It was a randomized controlled trial with  
NOTE Confidence: 0.908318394666667

00:24:05.718 --> 00:24:08.238 a modified intent to treat approach.

NOTE Confidence: 0.908318394666667

00:24:08.240 --> 00:24:11.064 What I mean by that is everyone that

NOTE Confidence: 0.908318394666667

00:24:11.064 --> 00:24:12.901 randomized and everyone but included

NOTE Confidence: 0.908318394666667

00:24:12.901 --> 00:24:15.777 to the extent we could in the analysis

NOTE Confidence: 0.908318394666667

00:24:15.777 --> 00:24:18.101 and what we realized at the end

NOTE Confidence: 0.908318394666667

00:24:18.101 --> 00:24:20.726 is that we lot we did not include.

NOTE Confidence: 0.908318394666667

00:24:20.730 --> 00:24:22.110 There were some people at baseline

NOTE Confidence: 0.908318394666667

00:24:22.110 --> 00:24:23.030 that had missing data,

NOTE Confidence: 0.908318394666667

00:24:23.030 --> 00:24:25.998 so that's why it's a modified intent

NOTE Confidence: 0.908318394666667

00:24:25.998 --> 00:24:27.890 to treat. We did screen people.

NOTE Confidence: 0.908318394666667

00:24:27.890 --> 00:24:28.670 We used the.

NOTE Confidence: 0.908318394666667

00:24:28.670 --> 00:24:31.520 Darius device to screen for sleep

NOTE Confidence: 0.908318394666667

00:24:31.520 --> 00:24:33.343 disordered breathing and to be

NOTE Confidence: 0.908318394666667

00:24:33.343 --> 00:24:35.753 in the trial you had to either be

NOTE Confidence: 0.908318394666667

00:24:35.753 --> 00:24:38.081 adherent on PAP or you had to have

NOTE Confidence: 0.908318394666667

00:24:38.081 --> 00:24:40.568 an age that I have less than 15.

NOTE Confidence: 0.908318394666667

00:24:40.570 --> 00:24:42.145 And as you can imagine that is  
NOTE Confidence: 0.908318394666667

00:24:42.145 --> 00:24:44.022 was a huge challenge and I'll talk  
NOTE Confidence: 0.908318394666667

00:24:44.022 --> 00:24:45.452 about that in a minute.  
NOTE Confidence: 0.908318394666667

00:24:45.460 --> 00:24:46.316 So again,  
NOTE Confidence: 0.908318394666667

00:24:46.316 --> 00:24:48.028 we we're running this  
NOTE Confidence: 0.908318394666667

00:24:48.028 --> 00:24:50.370 intervention as a group format.  
NOTE Confidence: 0.908318394666667

00:24:50.370 --> 00:24:53.238 We randomizing groups after the baseline  
NOTE Confidence: 0.908318394666667

00:24:53.238 --> 00:24:55.557 the participants were blinded until  
NOTE Confidence: 0.908318394666667

00:24:55.557 --> 00:24:59.371 they showed up for the group the the CBT.  
NOTE Confidence: 0.908318394666667

00:24:59.371 --> 00:25:03.431 Why was run by a psychiatric nurse  
NOTE Confidence: 0.908318394666667

00:25:03.431 --> 00:25:05.897 practitioner who had trained in CBT?  
NOTE Confidence: 0.908318394666667

00:25:05.900 --> 00:25:09.168 I and the control condition was the  
NOTE Confidence: 0.908318394666667

00:25:09.168 --> 00:25:12.304 healthy Hearts group was run by a  
NOTE Confidence: 0.908318394666667

00:25:12.304 --> 00:25:14.274 nurse practitioner with expertise  
NOTE Confidence: 0.908318394666667

00:25:14.274 --> 00:25:16.250 in heart failure care.  
NOTE Confidence: 0.908318394666667

00:25:16.250 --> 00:25:17.944 And one of our long term goals.

NOTE Confidence: 0.908318394666667  
00:25:17.950 --> 00:25:20.344 Given that we know there's such  
NOTE Confidence: 0.908318394666667  
00:25:20.344 --> 00:25:22.370 a shortage of behavioral folks  
NOTE Confidence: 0.908318394666667  
00:25:22.370 --> 00:25:23.782 available to treat insomnia,  
NOTE Confidence: 0.908318394666667  
00:25:23.782 --> 00:25:27.056 one of our goals was to make this as  
NOTE Confidence: 0.908318394666667  
00:25:27.056 --> 00:25:28.856 simple and codified and procedural  
NOTE Confidence: 0.908318394666667  
00:25:28.856 --> 00:25:30.670 as we possibly could,  
NOTE Confidence: 0.908318394666667  
00:25:30.670 --> 00:25:33.094 so that long term we could get people  
NOTE Confidence: 0.908318394666667  
00:25:33.094 --> 00:25:35.582 that were not sleep specialists with  
NOTE Confidence: 0.908318394666667  
00:25:35.582 --> 00:25:37.168 short training, such as calling.  
NOTE Confidence: 0.908318394666667  
00:25:37.168 --> 00:25:39.097 SB is done in the UK to train  
NOTE Confidence: 0.908318394666667  
00:25:39.097 --> 00:25:41.113 nurses and other people to be able  
NOTE Confidence: 0.908318394666667  
00:25:41.113 --> 00:25:43.390 to deliver this with the idea of  
NOTE Confidence: 0.908318394666667  
00:25:43.390 --> 00:25:45.030 ultimately being able to disseminate  
NOTE Confidence: 0.908318394666667  
00:25:45.030 --> 00:25:46.760 it into the heart failure.  
NOTE Confidence: 0.908318394666667  
00:25:46.760 --> 00:25:51.278 Practice so we collected baseline data.  
NOTE Confidence: 0.908318394666667

00:25:51.280 --> 00:25:53.954 Our measures were at one month post  
NOTE Confidence: 0.908318394666667

00:25:53.954 --> 00:25:56.497 treatment and at 6-9 and 12 months.  
NOTE Confidence: 0.908318394666667

00:25:56.500 --> 00:25:57.874 The primary outcomes I do not  
NOTE Confidence: 0.908318394666667

00:25:57.874 --> 00:25:59.639 include that we have a large number  
NOTE Confidence: 0.908318394666667

00:25:59.639 --> 00:26:00.969 of variables with the primary  
NOTE Confidence: 0.908318394666667

00:26:00.969 --> 00:26:02.099 variables are listed here.  
NOTE Confidence: 0.908318394666667

00:26:02.100 --> 00:26:03.984 The ISI sleep.  
NOTE Confidence: 0.908318394666667

00:26:03.984 --> 00:26:05.240 Interestingly enough,  
NOTE Confidence: 0.908318394666667

00:26:05.240 --> 00:26:07.360 in one of the revisions of this grant,  
NOTE Confidence: 0.908318394666667

00:26:07.360 --> 00:26:09.450 the NINR decided that they  
NOTE Confidence: 0.908318394666667

00:26:09.450 --> 00:26:11.540 wanted everybody to use the  
NOTE Confidence: 0.877797950833333

00:26:11.621 --> 00:26:14.760 promise measures instead of the, you know,  
NOTE Confidence: 0.877797950833333

00:26:14.760 --> 00:26:16.398 other sorts of measures because they  
NOTE Confidence: 0.877797950833333

00:26:16.398 --> 00:26:18.240 wanted people to begin to standardize.  
NOTE Confidence: 0.877797950833333

00:26:18.240 --> 00:26:19.974 These measures, but all my effect  
NOTE Confidence: 0.877797950833333

00:26:19.974 --> 00:26:22.219 sizes were based on the other measures,



NOTE Confidence: 0.877797950833333  
00:26:22.220 --> 00:26:24.100 so we have some double measures in here,  
NOTE Confidence: 0.877797950833333  
00:26:24.100 --> 00:26:26.140 but that that that'll be an  
NOTE Confidence: 0.877797950833333  
00:26:26.140 --> 00:26:27.500 interesting analysis as well.  
NOTE Confidence: 0.877797950833333  
00:26:27.500 --> 00:26:28.960 So we did measure sleepiness.  
NOTE Confidence: 0.877797950833333  
00:26:28.960 --> 00:26:32.168 We measured 6 minute walk in SF 36,  
NOTE Confidence: 0.877797950833333  
00:26:32.170 --> 00:26:33.680 so again, it's the same,  
NOTE Confidence: 0.877797950833333  
00:26:33.680 --> 00:26:35.420 exactly the same intervention  
NOTE Confidence: 0.877797950833333  
00:26:35.420 --> 00:26:38.500 that we had in our earlier work.  
NOTE Confidence: 0.877797950833333  
00:26:38.500 --> 00:26:42.240 So we we screened.  
NOTE Confidence: 0.877797950833333  
00:26:42.240 --> 00:26:44.790 We invited 14161 participants.  
NOTE Confidence: 0.877797950833333  
00:26:44.790 --> 00:26:47.100 We screened many more than that.  
NOTE Confidence: 0.877797950833333  
00:26:47.100 --> 00:26:50.100 We assessed 304 for eligibility.  
NOTE Confidence: 0.877797950833333  
00:26:50.100 --> 00:26:52.032 We screened out a large number  
NOTE Confidence: 0.877797950833333  
00:26:52.032 --> 00:26:53.320 of participants for sleep,  
NOTE Confidence: 0.877797950833333  
00:26:53.320 --> 00:26:55.310 disordered breathing and many, many, many.  
NOTE Confidence: 0.877797950833333

00:26:55.310 --> 00:26:55.810 Said I.  
NOTE Confidence: 0.877797950833333  
00:26:55.810 --> 00:26:57.560 I don't want to be in your  
NOTE Confidence: 0.877797950833333  
00:26:57.624 --> 00:26:59.499 trial because I have insomnia.  
NOTE Confidence: 0.877797950833333  
00:26:59.500 --> 00:27:00.430 I have a poor sleep.  
NOTE Confidence: 0.877797950833333  
00:27:00.430 --> 00:27:01.814 I don't know if that it was insomnia.  
NOTE Confidence: 0.877797950833333  
00:27:01.820 --> 00:27:02.828 I have poor sleep,  
NOTE Confidence: 0.877797950833333  
00:27:02.828 --> 00:27:04.880 but I don't want to use my CPAP.  
NOTE Confidence: 0.877797950833333  
00:27:04.880 --> 00:27:07.155 So we ruled out a whole lot  
NOTE Confidence: 0.877797950833333  
00:27:07.155 --> 00:27:08.780 of people because of that.  
NOTE Confidence: 0.877797950833333  
00:27:08.780 --> 00:27:09.930 But anyway,  
NOTE Confidence: 0.877797950833333  
00:27:09.930 --> 00:27:12.669 we randomized in clusters 189  
NOTE Confidence: 0.877797950833333  
00:27:12.669 --> 00:27:14.864 participants and 100 were allocated  
NOTE Confidence: 0.877797950833333  
00:27:14.864 --> 00:27:18.331 to the CBT I and 89 to the  
NOTE Confidence: 0.877797950833333  
00:27:18.331 --> 00:27:20.761 attention and control we ended up.  
NOTE Confidence: 0.877797950833333  
00:27:20.770 --> 00:27:24.071 And this is where the we analyzed 91  
NOTE Confidence: 0.877797950833333  
00:27:24.071 --> 00:27:28.360 in the CPT I and 84 in the control.

NOTE Confidence: 0.877797950833333

00:27:28.360 --> 00:27:31.480 So this very busy slide shows

NOTE Confidence: 0.877797950833333

00:27:31.480 --> 00:27:33.040 the the comparison.

NOTE Confidence: 0.877797950833333

00:27:33.040 --> 00:27:35.140 The group was comparable on most measures.

NOTE Confidence: 0.877797950833333

00:27:35.140 --> 00:27:37.348 The average age was around 63,

NOTE Confidence: 0.877797950833333

00:27:37.348 --> 00:27:40.660 sample was 57 or 58% male.

NOTE Confidence: 0.877797950833333

00:27:40.660 --> 00:27:44.820 It was about 1516 for 16 percent,

NOTE Confidence: 0.877797950833333

00:27:44.820 --> 00:27:47.275 17% African American overall and they

NOTE Confidence: 0.877797950833333

00:27:47.275 --> 00:27:49.960 look very similar to our early work.

NOTE Confidence: 0.877797950833333

00:27:49.960 --> 00:27:54.793 The average BMI was in the the obese range.

NOTE Confidence: 0.877797950833333

00:27:54.800 --> 00:27:55.800 New York art class.

NOTE Confidence: 0.877797950833333

00:27:55.800 --> 00:27:57.644 They were not as as given that

NOTE Confidence: 0.877797950833333

00:27:57.644 --> 00:27:59.079 we were recruiting out of,

NOTE Confidence: 0.877797950833333

00:27:59.080 --> 00:27:59.361 yeah,

NOTE Confidence: 0.877797950833333

00:27:59.361 --> 00:28:01.328 which is an advanced heart failure program.

NOTE Confidence: 0.877797950833333

00:28:01.330 --> 00:28:03.834 A lot of them had fairly low levels

NOTE Confidence: 0.877797950833333

00:28:03.834 --> 00:28:07.251 of New York heart class at one and  
NOTE Confidence: 0.877797950833333

00:28:07.251 --> 00:28:10.260 two heart failure class about a  
NOTE Confidence: 0.877797950833333

00:28:10.260 --> 00:28:14.138 third of the patients had low EFC and  
NOTE Confidence: 0.877797950833333

00:28:14.138 --> 00:28:15.930 there was significant comorbidity.  
NOTE Confidence: 0.877797950833333

00:28:15.930 --> 00:28:17.870 We did not say that you had to be off  
NOTE Confidence: 0.877797950833333

00:28:17.926 --> 00:28:20.286 your hypnotic medications to be in the trial,  
NOTE Confidence: 0.877797950833333

00:28:20.290 --> 00:28:22.990 but we did offer tapering  
NOTE Confidence: 0.877797950833333

00:28:22.990 --> 00:28:24.610 in the intervention.  
NOTE Confidence: 0.877797950833333

00:28:24.610 --> 00:28:25.966 So All in all,  
NOTE Confidence: 0.877797950833333

00:28:25.966 --> 00:28:28.560 half of this sample had mild sleep,  
NOTE Confidence: 0.877797950833333

00:28:28.560 --> 00:28:31.680 mild insomnia and and a little more than  
NOTE Confidence: 0.877797950833333

00:28:31.680 --> 00:28:34.859 half had clinical levels and insomnia.  
NOTE Confidence: 0.877797950833333

00:28:34.860 --> 00:28:36.420 So what did we learn?  
NOTE Confidence: 0.877797950833333

00:28:36.420 --> 00:28:38.506 So this is the the 1st post  
NOTE Confidence: 0.877797950833333

00:28:38.506 --> 00:28:40.101 treatment which it which was  
NOTE Confidence: 0.877797950833333

00:28:40.101 --> 00:28:42.320 within two weeks of the follow up.

NOTE Confidence: 0.877797950833333

00:28:42.320 --> 00:28:44.960 So it was about three months after baseline.

NOTE Confidence: 0.877797950833333

00:28:44.960 --> 00:28:47.729 This is using.

NOTE Confidence: 0.877797950833333

00:28:47.730 --> 00:28:50.000 GLMM analysis and what you

NOTE Confidence: 0.877797950833333

00:28:50.000 --> 00:28:53.260 see here is that at baseline,

NOTE Confidence: 0.877797950833333

00:28:53.260 --> 00:28:55.948 most people had clinical level of insomnia,

NOTE Confidence: 0.877797950833333

00:28:55.950 --> 00:28:58.830 which is about 15 in the healthy sleep

NOTE Confidence: 0.877797950833333

00:28:58.830 --> 00:29:01.537 they dropped by by more than six points.

NOTE Confidence: 0.877797950833333

00:29:01.540 --> 00:29:03.004 They did also improve.

NOTE Confidence: 0.877797950833333

00:29:03.004 --> 00:29:03.736 Interestingly enough,

NOTE Confidence: 0.877797950833333

00:29:03.740 --> 00:29:04.691 in healthy hearts,

NOTE Confidence: 0.877797950833333

00:29:04.691 --> 00:29:06.276 but not nearly as much,

NOTE Confidence: 0.877797950833333

00:29:06.280 --> 00:29:09.094 so 6 to 7 is considered a

NOTE Confidence: 0.877797950833333

00:29:09.094 --> 00:29:10.300 clinically significant improvement

NOTE Confidence: 0.877797950833333

00:29:10.371 --> 00:29:12.446 in the insomnia severity Index,

NOTE Confidence: 0.877797950833333

00:29:12.450 --> 00:29:15.180 so we did pretty well at the first follow up.

NOTE Confidence: 0.877797950833333

00:29:15.180 --> 00:29:17.484 They also improved on sleep quality based on.

NOTE Confidence: 0.877797950833333

00:29:17.490 --> 00:29:19.644 Both of those self report measures

NOTE Confidence: 0.877797950833333

00:29:19.644 --> 00:29:21.080 they improve somewhat on

NOTE Confidence: 0.867606841538462

00:29:21.148 --> 00:29:24.560 their sleep efficiency, but only by

NOTE Confidence: 0.867606841538462

00:29:24.560 --> 00:29:27.480 about 5% and their sleep duration.

NOTE Confidence: 0.867606841538462

00:29:27.480 --> 00:29:28.980 Interestingly enough, improved a

NOTE Confidence: 0.867606841538462

00:29:28.980 --> 00:29:31.465 little bit in the Healthy Sleep group.

NOTE Confidence: 0.867606841538462

00:29:31.470 --> 00:29:34.434 What's interesting about that is that

NOTE Confidence: 0.867606841538462

00:29:34.434 --> 00:29:37.960 sleep restriction was a part of the CBT I.

NOTE Confidence: 0.867606841538462

00:29:37.960 --> 00:29:39.970 We also showed us didn't hide,

NOTE Confidence: 0.867606841538462

00:29:39.970 --> 00:29:41.866 realized I didn't highlight it here.

NOTE Confidence: 0.867606841538462

00:29:41.870 --> 00:29:44.855 We also showed some trends

NOTE Confidence: 0.867606841538462

00:29:44.855 --> 00:29:46.049 suggesting improvement,

NOTE Confidence: 0.867606841538462

00:29:46.050 --> 00:29:48.530 but it wasn't statistically insignificant.

NOTE Confidence: 0.867606841538462

00:29:48.530 --> 00:29:53.114 And fatigue and in excessive daytime

NOTE Confidence: 0.867606841538462

00:29:53.114 --> 00:29:55.000 sleepiness. Again, it wasn't in.

NOTE Confidence: 0.867606841538462

00:29:55.000 --> 00:29:57.500 And So what you see here is that

NOTE Confidence: 0.867606841538462

00:29:57.500 --> 00:29:59.586 this was the the far right corner

NOTE Confidence: 0.867606841538462

00:29:59.586 --> 00:30:01.590 is the group by time right?

NOTE Confidence: 0.867606841538462

00:30:01.590 --> 00:30:03.646 The first column we saw in within the

NOTE Confidence: 0.867606841538462

00:30:03.646 --> 00:30:05.330 healthy sleep we saw an improvement,

NOTE Confidence: 0.867606841538462

00:30:05.330 --> 00:30:07.612 but there wasn't a group by time

NOTE Confidence: 0.867606841538462

00:30:07.612 --> 00:30:11.490 difference at the at this early follow-up.

NOTE Confidence: 0.867606841538462

00:30:11.490 --> 00:30:13.970 So I'm sorry this is out of order.

NOTE Confidence: 0.867606841538462

00:30:13.970 --> 00:30:15.433 I no matter how many times you

NOTE Confidence: 0.867606841538462

00:30:15.433 --> 00:30:16.460 look at your slides,

NOTE Confidence: 0.867606841538462

00:30:16.460 --> 00:30:18.050 they're still out of order anyway,

NOTE Confidence: 0.867606841538462

00:30:18.050 --> 00:30:20.354 so we looked at the intervention

NOTE Confidence: 0.867606841538462

00:30:20.354 --> 00:30:21.890 effects at 12 months.

NOTE Confidence: 0.867606841538462

00:30:21.890 --> 00:30:24.594 So looking at change over time there was

NOTE Confidence: 0.867606841538462

00:30:24.594 --> 00:30:27.047 an early and sustained improvement in

NOTE Confidence: 0.867606841538462

00:30:27.047 --> 00:30:30.030 these variables and I'll show you this.  
NOTE Confidence: 0.867606841538462

00:30:30.030 --> 00:30:33.040 The graph in a minute.  
NOTE Confidence: 0.867606841538462

00:30:33.040 --> 00:30:36.088 But at 12 months we saw a nice,  
NOTE Confidence: 0.867606841538462

00:30:36.090 --> 00:30:38.835 robust improvement and sustained improvement  
NOTE Confidence: 0.867606841538462

00:30:38.835 --> 00:30:42.389 in insomnia severity such that the group,  
NOTE Confidence: 0.867606841538462

00:30:42.390 --> 00:30:45.075 by time interaction was significant  
NOTE Confidence: 0.867606841538462

00:30:45.075 --> 00:30:46.686 at 12 months.  
NOTE Confidence: 0.867606841538462

00:30:46.690 --> 00:30:48.298 I didn't show you all the  
NOTE Confidence: 0.867606841538462

00:30:48.298 --> 00:30:49.370 intervening data in here,  
NOTE Confidence: 0.867606841538462

00:30:49.370 --> 00:30:51.786 just for time constraints,  
NOTE Confidence: 0.867606841538462

00:30:51.786 --> 00:30:54.224 but and So what we we also controlled  
NOTE Confidence: 0.867606841538462

00:30:54.224 --> 00:30:55.857 using the false discovery rate  
NOTE Confidence: 0.867606841538462

00:30:55.857 --> 00:30:57.429 for the multiple comparisons,  
NOTE Confidence: 0.867606841538462

00:30:57.430 --> 00:30:59.730 and you see that statistically  
NOTE Confidence: 0.867606841538462

00:30:59.730 --> 00:31:01.110 significant insomnia severity,  
NOTE Confidence: 0.867606841538462

00:31:01.110 --> 00:31:02.904 sleep quality, sleep.



NOTE Confidence: 0.867606841538462  
00:31:02.904 --> 00:31:05.296 Latency as well as,  
NOTE Confidence: 0.867606841538462  
00:31:05.300 --> 00:31:06.272 interestingly enough,  
NOTE Confidence: 0.867606841538462  
00:31:06.272 --> 00:31:06.758 fatigue,  
NOTE Confidence: 0.867606841538462  
00:31:06.758 --> 00:31:08.702 excessive daytime sleepiness and  
NOTE Confidence: 0.867606841538462  
00:31:08.702 --> 00:31:11.257 six minute walk again in the  
NOTE Confidence: 0.867606841538462  
00:31:11.257 --> 00:31:12.629 heart healthy Sleep group.  
NOTE Confidence: 0.867606841538462  
00:31:12.630 --> 00:31:15.252 The first column here we saw  
NOTE Confidence: 0.867606841538462  
00:31:15.252 --> 00:31:17.706 over 100% improvement in the six  
NOTE Confidence: 0.867606841538462  
00:31:17.706 --> 00:31:19.676 minute walk with some improvement,  
NOTE Confidence: 0.867606841538462  
00:31:19.680 --> 00:31:23.264 but not nearly as much in the  
NOTE Confidence: 0.867606841538462  
00:31:23.264 --> 00:31:24.288 control condition.  
NOTE Confidence: 0.867606841538462  
00:31:24.290 --> 00:31:26.888 So this is a graphic display  
NOTE Confidence: 0.867606841538462  
00:31:26.888 --> 00:31:29.240 of on the top left,  
NOTE Confidence: 0.867606841538462  
00:31:29.240 --> 00:31:32.300 the mean and the insomnia severity  
NOTE Confidence: 0.867606841538462  
00:31:32.300 --> 00:31:35.912 on the left is the the actual and  
NOTE Confidence: 0.867606841538462

00:31:35.912 --> 00:31:38.250 on the the right is the predicted  
NOTE Confidence: 0.867606841538462

00:31:38.320 --> 00:31:40.240 based on the GLMM approach and  
NOTE Confidence: 0.867606841538462

00:31:40.240 --> 00:31:43.092 what you see is that we saw the  
NOTE Confidence: 0.867606841538462

00:31:43.092 --> 00:31:44.967 most dramatic improvement in the  
NOTE Confidence: 0.867606841538462

00:31:44.967 --> 00:31:47.435 first follow up with the the  
NOTE Confidence: 0.867606841538462

00:31:47.435 --> 00:31:50.230 continued level up to 12 months.  
NOTE Confidence: 0.867606841538462

00:31:50.230 --> 00:31:52.276 So we taught these participants something  
NOTE Confidence: 0.867606841538462

00:31:52.276 --> 00:31:55.028 and it looks like they're still using it.  
NOTE Confidence: 0.867606841538462

00:31:55.030 --> 00:31:56.522 Over the 12 months.  
NOTE Confidence: 0.867606841538462

00:31:56.522 --> 00:31:59.137 Earlier work was only a shorter term  
NOTE Confidence: 0.867606841538462

00:31:59.137 --> 00:32:01.837 follow up so we were not able to see  
NOTE Confidence: 0.867606841538462

00:32:01.912 --> 00:32:04.070 that this other slide shows the mean  
NOTE Confidence: 0.867606841538462

00:32:04.070 --> 00:32:06.120 sleep quality and it looks very similar.  
NOTE Confidence: 0.79442885

00:32:08.370 --> 00:32:11.466 So when we thought about these in a more  
NOTE Confidence: 0.79442885

00:32:11.466 --> 00:32:14.288 dichotomized way, this slide shows the  
NOTE Confidence: 0.79442885

00:32:14.288 --> 00:32:16.973 observed and estimated proportions of

NOTE Confidence: 0.79442885

00:32:16.973 --> 00:32:19.329 participants with clinical insomnia,

NOTE Confidence: 0.79442885

00:32:19.330 --> 00:32:23.270 daytime sleepiness using the typical.

NOTE Confidence: 0.79442885

00:32:23.270 --> 00:32:25.880 The X Epworth cut off and a six minute

NOTE Confidence: 0.79442885

00:32:25.880 --> 00:32:28.608 walk distance of greater than 1000 feet,

NOTE Confidence: 0.79442885

00:32:28.610 --> 00:32:32.050 which is often used as a clinical metric

NOTE Confidence: 0.79442885

00:32:32.050 --> 00:32:35.810 and in any case, So what you see here again,

NOTE Confidence: 0.79442885

00:32:35.810 --> 00:32:38.386 the healthy sleep in in the top left.

NOTE Confidence: 0.79442885

00:32:38.390 --> 00:32:40.290 This is clinical insomnia.

NOTE Confidence: 0.79442885

00:32:40.290 --> 00:32:42.190 You see the dark,

NOTE Confidence: 0.79442885

00:32:42.190 --> 00:32:45.633 the dark filled in black bar.

NOTE Confidence: 0.79442885

00:32:45.633 --> 00:32:48.448 Here is the healthy sleep.

NOTE Confidence: 0.79442885

00:32:48.450 --> 00:32:50.466 A healthy heart is in Gray.

NOTE Confidence: 0.79442885

00:32:50.470 --> 00:32:53.795 The solid line is the predicted and

NOTE Confidence: 0.79442885

00:32:53.795 --> 00:32:55.788 then the healthy hearts is the predicted.

NOTE Confidence: 0.79442885

00:32:55.790 --> 00:32:58.310 So the healthy sleep is predicted etc.

NOTE Confidence: 0.79442885

00:32:58.310 --> 00:32:59.620 And so you're seeing very  
NOTE Confidence: 0.79442885

00:32:59.620 --> 00:33:01.107 much the same thing, right?  
NOTE Confidence: 0.79442885

00:33:01.107 --> 00:33:05.378 So that 60% of the people at baseline in the  
NOTE Confidence: 0.79442885

00:33:05.378 --> 00:33:08.066 in the healthy sleep had clinical insomnia,  
NOTE Confidence: 0.79442885

00:33:08.070 --> 00:33:10.926 but it was only about 10 or 12%  
NOTE Confidence: 0.79442885

00:33:10.930 --> 00:33:13.324 at the follow at this 12 months.  
NOTE Confidence: 0.79442885

00:33:13.330 --> 00:33:16.222 Similarly for the PISKI and then  
NOTE Confidence: 0.79442885

00:33:16.222 --> 00:33:17.668 excessive daytime sleepiness.  
NOTE Confidence: 0.79442885

00:33:17.670 --> 00:33:19.405 Again, you see that dramatic  
NOTE Confidence: 0.79442885

00:33:19.405 --> 00:33:21.140 decrease you see some decrease.  
NOTE Confidence: 0.79442885

00:33:21.140 --> 00:33:22.070 History's in the control group,  
NOTE Confidence: 0.79442885

00:33:22.070 --> 00:33:24.590 but not nearly as much,  
NOTE Confidence: 0.79442885

00:33:24.590 --> 00:33:27.318 and it's not sustained.  
NOTE Confidence: 0.79442885

00:33:27.318 --> 00:33:28.000 So,  
NOTE Confidence: 0.79442885

00:33:28.000 --> 00:33:30.870 so that is in a nutshell is  
NOTE Confidence: 0.79442885

00:33:30.870 --> 00:33:32.670 our is our results.

NOTE Confidence: 0.79442885

00:33:32.670 --> 00:33:34.428 We also showed though this is

NOTE Confidence: 0.79442885

00:33:34.428 --> 00:33:36.010 a sort of interesting graphic

NOTE Confidence: 0.79442885

00:33:36.010 --> 00:33:37.390 that our statistician prepared

NOTE Confidence: 0.79442885

00:33:37.390 --> 00:33:39.853 and what you see here is looking

NOTE Confidence: 0.79442885

00:33:39.853 --> 00:33:41.538 at sleep characters over time.

NOTE Confidence: 0.79442885

00:33:41.540 --> 00:33:43.232 Looking at them all together and

NOTE Confidence: 0.79442885

00:33:43.232 --> 00:33:45.198 we also I failed to mention again

NOTE Confidence: 0.79442885

00:33:45.198 --> 00:33:47.360 for time sake did not put in that.

NOTE Confidence: 0.79442885

00:33:47.360 --> 00:33:49.574 We have the dysfunctional beliefs and

NOTE Confidence: 0.79442885

00:33:49.574 --> 00:33:51.920 attitudes about sleep and the sleep

NOTE Confidence: 0.79442885

00:33:51.920 --> 00:33:54.338 Disturbance Questionnaire which is a measure.

NOTE Confidence: 0.79442885

00:33:54.340 --> 00:33:56.722 These are measures as you know

NOTE Confidence: 0.79442885

00:33:56.722 --> 00:33:58.310 about perceptions about sleep.

NOTE Confidence: 0.79442885

00:33:58.310 --> 00:33:59.892 And what you see here on the

NOTE Confidence: 0.79442885

00:33:59.892 --> 00:34:01.770 left is the healthy sleep group.

NOTE Confidence: 0.79442885

00:34:01.770 --> 00:34:04.290 On the right is the healthy heart group.

NOTE Confidence: 0.79442885

00:34:04.290 --> 00:34:06.565 And what this is showing the the

NOTE Confidence: 0.79442885

00:34:06.565 --> 00:34:08.792 outside of this is showing baseline

NOTE Confidence: 0.79442885

00:34:08.792 --> 00:34:11.543 and then this looking at the shrinkage

NOTE Confidence: 0.79442885

00:34:11.615 --> 00:34:13.769 essentially is how it is changed

NOTE Confidence: 0.79442885

00:34:13.769 --> 00:34:16.287 overtime and you see there's a lot

NOTE Confidence: 0.79442885

00:34:16.287 --> 00:34:18.441 more sleep disturbance in the healthy

NOTE Confidence: 0.79442885

00:34:18.441 --> 00:34:20.330 heart here on the right hand side.

NOTE Confidence: 0.79442885

00:34:20.330 --> 00:34:22.535 This is trying to let us look at all

NOTE Confidence: 0.79442885

00:34:22.535 --> 00:34:24.868 of these variables taking together.

NOTE Confidence: 0.79442885

00:34:24.870 --> 00:34:28.080 So, uhm.

NOTE Confidence: 0.79442885

00:34:28.080 --> 00:34:29.094 This is conclusions,

NOTE Confidence: 0.79442885

00:34:29.094 --> 00:34:31.884 but I want to leave time for some

NOTE Confidence: 0.79442885

00:34:31.884 --> 00:34:33.996 discussion because I think there's a

NOTE Confidence: 0.79442885

00:34:33.996 --> 00:34:37.468 lot a lot of things here issues to bring up.

NOTE Confidence: 0.79442885

00:34:37.470 --> 00:34:39.174 We concluded that cognitive

NOTE Confidence: 0.79442885

00:34:39.174 --> 00:34:40.878 behavioral therapy has sustained

NOTE Confidence: 0.79442885

00:34:40.878 --> 00:34:42.870 effects on insomnia severity,

NOTE Confidence: 0.79442885

00:34:42.870 --> 00:34:45.710 sleep quality, latency, and efficiency.

NOTE Confidence: 0.79442885

00:34:45.710 --> 00:34:47.958 It also improved fatigue,

NOTE Confidence: 0.79442885

00:34:47.958 --> 00:34:49.644 excessive daytime sleepiness,

NOTE Confidence: 0.79442885

00:34:49.650 --> 00:34:51.226 and six minute walk,

NOTE Confidence: 0.79442885

00:34:51.226 --> 00:34:53.590 and these were not only clinically

NOTE Confidence: 0.79442885

00:34:53.668 --> 00:34:55.819 but statistically significant.

NOTE Confidence: 0.79442885

00:34:55.820 --> 00:34:59.376 And again, you know, in heart failure.

NOTE Confidence: 0.79442885

00:34:59.380 --> 00:35:00.132 You may say, well,

NOTE Confidence: 0.79442885

00:35:00.132 --> 00:35:01.680 who cares if we improve the insomnia,

NOTE Confidence: 0.79442885

00:35:01.680 --> 00:35:03.969 but we didn't do anything to change

NOTE Confidence: 0.79442885

00:35:03.969 --> 00:35:06.009 their standard heart failure treatment

NOTE Confidence: 0.79442885

00:35:06.010 --> 00:35:08.047 and we were able to improve their

NOTE Confidence: 0.79442885

00:35:08.047 --> 00:35:09.919 fatigue in their six minute walk.

NOTE Confidence: 0.79442885

00:35:09.920 --> 00:35:11.310 Although there was a smaller  
NOTE Confidence: 0.79442885

00:35:11.310 --> 00:35:12.700 improvements in the heart failure,  
NOTE Confidence: 0.79442885

00:35:12.700 --> 00:35:13.824 self management.  
NOTE Confidence: 0.79442885

00:35:13.824 --> 00:35:17.196 These were not mostly clinically significant.  
NOTE Confidence: 0.79442885

00:35:17.200 --> 00:35:17.770 So.  
NOTE Confidence: 0.8710135

00:35:20.830 --> 00:35:25.030 So. So in addition to this,  
NOTE Confidence: 0.8710135

00:35:25.030 --> 00:35:28.495 why is insomnia important to heart disease?  
NOTE Confidence: 0.8710135

00:35:28.500 --> 00:35:31.850 So doctor Javaherian Redline published  
NOTE Confidence: 0.8710135

00:35:31.850 --> 00:35:35.845 a very nice review and chest in 2017  
NOTE Confidence: 0.8710135

00:35:35.845 --> 00:35:39.282 about the role of insomnia in predicting  
NOTE Confidence: 0.8710135

00:35:39.282 --> 00:35:41.337 adverse cardiovascular events.  
NOTE Confidence: 0.8710135

00:35:41.340 --> 00:35:43.825 And there's some interesting data  
NOTE Confidence: 0.8710135

00:35:43.825 --> 00:35:46.685 suggesting that not only does it it  
NOTE Confidence: 0.8710135

00:35:46.685 --> 00:35:49.069 predicted incident heart failure in a  
NOTE Confidence: 0.8710135

00:35:49.069 --> 00:35:51.329 population based study in Scandinavia.  
NOTE Confidence: 0.8710135

00:35:51.330 --> 00:35:52.718 On the other hand,



NOTE Confidence: 0.8710135

00:35:52.718 --> 00:35:54.453 it did not predict echocardiography

NOTE Confidence: 0.8710135

00:35:54.453 --> 00:35:56.366 back cardio, graphic indices.

NOTE Confidence: 0.8710135

00:35:56.366 --> 00:35:59.624 There's some evidence that it that,

NOTE Confidence: 0.8710135

00:35:59.630 --> 00:36:01.576 of course we know that dementia and

NOTE Confidence: 0.8710135

00:36:01.576 --> 00:36:03.229 alter cognition are more important.

NOTE Confidence: 0.8710135

00:36:03.230 --> 00:36:07.134 In in are very important in heart failure,

NOTE Confidence: 0.8710135

00:36:07.140 --> 00:36:08.792 some evidence about cognition,

NOTE Confidence: 0.8710135

00:36:08.792 --> 00:36:10.444 our data showing symptoms

NOTE Confidence: 0.8710135

00:36:10.444 --> 00:36:12.030 and functional performance,

NOTE Confidence: 0.8710135

00:36:12.030 --> 00:36:14.484 and so it feels like insomnia

NOTE Confidence: 0.8710135

00:36:14.484 --> 00:36:16.770 is a really important target.

NOTE Confidence: 0.8710135

00:36:16.770 --> 00:36:17.458 The treatment,

NOTE Confidence: 0.8710135

00:36:17.458 --> 00:36:20.210 though you know a lot of our patients,

NOTE Confidence: 0.8710135

00:36:20.210 --> 00:36:21.044 were on medication.

NOTE Confidence: 0.8710135

00:36:21.044 --> 00:36:22.990 Heart failure patients might be on an

NOTE Confidence: 0.8710135

00:36:23.048 --> 00:36:25.246 average of eight to 10 different medications,  
NOTE Confidence: 0.8710135

00:36:25.250 --> 00:36:27.402 so we really want to add to that  
NOTE Confidence: 0.8710135

00:36:27.402 --> 00:36:28.618 polypharmacy and there's some  
NOTE Confidence: 0.8710135

00:36:28.618 --> 00:36:30.466 evidence that benzos and we don't  
NOTE Confidence: 0.8710135

00:36:30.466 --> 00:36:31.910 use those a lot anymore,  
NOTE Confidence: 0.8710135

00:36:31.910 --> 00:36:34.395 but they also have adverse  
NOTE Confidence: 0.8710135

00:36:34.395 --> 00:36:35.389 cardiovascular effects.  
NOTE Confidence: 0.8710135

00:36:35.390 --> 00:36:38.085 So in some I would conclude that  
NOTE Confidence: 0.8710135

00:36:38.085 --> 00:36:40.030 insomnia treatment is important.  
NOTE Confidence: 0.8710135

00:36:40.030 --> 00:36:43.770 This is and this is one example of the  
NOTE Confidence: 0.8710135

00:36:43.770 --> 00:36:46.500 Kaplan Meier curve from the log log  
NOTE Confidence: 0.8710135

00:36:46.500 --> 00:36:49.404 stand study in Scandinavia showing the  
NOTE Confidence: 0.8710135

00:36:49.404 --> 00:36:52.476 number of insomnia symptoms and showing.  
NOTE Confidence: 0.8710135

00:36:52.480 --> 00:36:53.600 Event free survival now.  
NOTE Confidence: 0.8710135

00:36:53.600 --> 00:36:55.713 I don't believe that this study was  
NOTE Confidence: 0.8710135

00:36:55.713 --> 00:36:57.628 controlled for sleep disordered breathing,

NOTE Confidence: 0.8710135

00:36:57.630 --> 00:37:01.392 but we see a really strong

NOTE Confidence: 0.8710135

00:37:01.392 --> 00:37:03.273 predictive potential here.

NOTE Confidence: 0.8710135

00:37:03.280 --> 00:37:05.248 So the other thing to bring

NOTE Confidence: 0.8710135

00:37:05.248 --> 00:37:07.760 up as a point of discussion,

NOTE Confidence: 0.8710135

00:37:07.760 --> 00:37:09.888 and this is a nice slide from

NOTE Confidence: 0.8710135

00:37:09.888 --> 00:37:11.399 Tarek Ahmad here at Yale,

NOTE Confidence: 0.8710135

00:37:11.400 --> 00:37:16.040 in which he reviewed the biomarkers of.

NOTE Confidence: 0.8710135

00:37:16.040 --> 00:37:17.740 You know heart, heart,

NOTE Confidence: 0.8710135

00:37:17.740 --> 00:37:19.015 heart failure biomarkers,

NOTE Confidence: 0.8710135

00:37:19.020 --> 00:37:20.838 write novel biomarkers of heart failure,

NOTE Confidence: 0.8710135

00:37:20.840 --> 00:37:22.316 but if we go through these,

NOTE Confidence: 0.8710135

00:37:22.320 --> 00:37:24.544 a lot of these are linked with insomnia

NOTE Confidence: 0.8710135

00:37:24.544 --> 00:37:26.938 as well as some other sleep disorders.

NOTE Confidence: 0.8710135

00:37:26.940 --> 00:37:28.820 C reactive protein, for example,

NOTE Confidence: 0.8710135

00:37:28.820 --> 00:37:32.768 inflammatory processes, cytokines.

NOTE Confidence: 0.8710135

00:37:32.770 --> 00:37:33.364 Troponins,  
NOTE Confidence: 0.8710135  
00:37:33.364 --> 00:37:35.740 neurohormonal aspects and so  
NOTE Confidence: 0.8710135  
00:37:35.740 --> 00:37:38.710 a question might be asked.  
NOTE Confidence: 0.8710135  
00:37:38.710 --> 00:37:41.769 We did we improve the behavioral aspects.  
NOTE Confidence: 0.8710135  
00:37:41.770 --> 00:37:42.976 We improved insomnia,  
NOTE Confidence: 0.8710135  
00:37:42.976 --> 00:37:44.584 but to what extent?  
NOTE Confidence: 0.8710135  
00:37:44.590 --> 00:37:46.260 Might this treatment also improve  
NOTE Confidence: 0.8710135  
00:37:46.260 --> 00:37:47.930 some of this pathophysiology and  
NOTE Confidence: 0.8710135  
00:37:47.986 --> 00:37:49.708 I think we're we're not there yet,  
NOTE Confidence: 0.8710135  
00:37:49.710 --> 00:37:51.708 but I think it's important question.  
NOTE Confidence: 0.8710135  
00:37:51.710 --> 00:37:54.279 So we did actually write a supplement  
NOTE Confidence: 0.8710135  
00:37:54.279 --> 00:37:57.077 to our study and this is the same  
NOTE Confidence: 0.8710135  
00:37:57.077 --> 00:38:00.254 model you saw before in which we added  
NOTE Confidence: 0.8710135  
00:38:00.254 --> 00:38:02.230 some biomarkers of inflammation,  
NOTE Confidence: 0.8710135  
00:38:02.230 --> 00:38:02.978 neurohormonal.  
NOTE Confidence: 0.8710135  
00:38:02.978 --> 00:38:05.222 Activation heart failure,

NOTE Confidence: 0.8710135

00:38:05.222 --> 00:38:07.785 disease progression as well as

NOTE Confidence: 0.8710135

00:38:07.785 --> 00:38:09.205 some sleep regulatory variables.

NOTE Confidence: 0.8710135

00:38:09.210 --> 00:38:12.200 Things like BD and F41.

NOTE Confidence: 0.8710135

00:38:12.200 --> 00:38:14.847 And we we haven't yet. We have the.

NOTE Confidence: 0.8710135

00:38:14.847 --> 00:38:16.192 We've collected the samples but

NOTE Confidence: 0.8710135

00:38:16.192 --> 00:38:17.658 we haven't yet analyzed that,

NOTE Confidence: 0.8710135

00:38:17.660 --> 00:38:19.200 so that's to be determined.

NOTE Confidence: 0.8710135

00:38:19.200 --> 00:38:21.072 But I just wanted to put that in

NOTE Confidence: 0.8710135

00:38:21.072 --> 00:38:22.437 there that we improved behavior,

NOTE Confidence: 0.8710135

00:38:22.437 --> 00:38:24.530 but the and and we improved functional

NOTE Confidence: 0.8710135

00:38:24.581 --> 00:38:26.840 outcome. But the question is what?

NOTE Confidence: 0.8710135

00:38:26.840 --> 00:38:28.192 How did that happen?

NOTE Confidence: 0.8710135

00:38:28.192 --> 00:38:30.739 Was it just behavior or was there

NOTE Confidence: 0.8710135

00:38:30.739 --> 00:38:32.969 some biology associated with it?

NOTE Confidence: 0.8710135

00:38:32.970 --> 00:38:34.040 Soum

NOTE Confidence: 0.868381124

00:38:36.630 --> 00:38:38.510 what we can conclude here.  
NOTE Confidence: 0.868381124

00:38:38.510 --> 00:38:40.910 So here's the challenge we about.  
NOTE Confidence: 0.868381124

00:38:40.910 --> 00:38:43.446 We know that a large percentage of people  
NOTE Confidence: 0.868381124

00:38:43.446 --> 00:38:46.242 with heart failure have also have moderate  
NOTE Confidence: 0.868381124

00:38:46.242 --> 00:38:48.342 to severe sleep disordered breathing,  
NOTE Confidence: 0.868381124

00:38:48.350 --> 00:38:50.870 and we know that they probably,  
NOTE Confidence: 0.868381124

00:38:50.870 --> 00:38:51.815 although there's the,  
NOTE Confidence: 0.868381124

00:38:51.815 --> 00:38:54.020 there's a lot of null trials and  
NOTE Confidence: 0.868381124

00:38:54.080 --> 00:38:55.890 heart failure with PAP therapy.  
NOTE Confidence: 0.868381124

00:38:55.890 --> 00:38:57.000 They have both.  
NOTE Confidence: 0.868381124

00:38:57.000 --> 00:38:58.110 They have insomnia,  
NOTE Confidence: 0.868381124

00:38:58.110 --> 00:38:59.808 and they have sleep disordered breathing,  
NOTE Confidence: 0.868381124

00:38:59.810 --> 00:39:01.800 and so which should we?  
NOTE Confidence: 0.868381124

00:39:01.800 --> 00:39:03.680 What should we read first?  
NOTE Confidence: 0.868381124

00:39:03.680 --> 00:39:04.855 What level of sleep apnea  
NOTE Confidence: 0.868381124

00:39:04.855 --> 00:39:06.030 do we need to treat?

NOTE Confidence: 0.868381124

00:39:06.030 --> 00:39:08.700 Should we be treating them together?

NOTE Confidence: 0.868381124

00:39:08.700 --> 00:39:09.345 Because we will,

NOTE Confidence: 0.868381124

00:39:09.345 --> 00:39:10.850 we screened out an awful lot of

NOTE Confidence: 0.868381124

00:39:10.898 --> 00:39:12.308 people because they had sleep

NOTE Confidence: 0.868381124

00:39:12.308 --> 00:39:13.436 disordered breathing and maybe

NOTE Confidence: 0.868381124

00:39:13.436 --> 00:39:14.800 we could have helped them.

NOTE Confidence: 0.868381124

00:39:14.800 --> 00:39:16.738 But the comment the current practices

NOTE Confidence: 0.868381124

00:39:16.738 --> 00:39:18.914 to treat the sleep apnea so so

NOTE Confidence: 0.868381124

00:39:18.914 --> 00:39:20.564 how should we think about that?

NOTE Confidence: 0.868381124

00:39:20.570 --> 00:39:23.650 And what should a new trial look like?

NOTE Confidence: 0.868381124

00:39:23.650 --> 00:39:24.844 We screened a lot of people

NOTE Confidence: 0.868381124

00:39:24.844 --> 00:39:26.363 and sent them for CPAP and even

NOTE Confidence: 0.868381124

00:39:26.363 --> 00:39:27.713 after we screen them they didn't

NOTE Confidence: 0.868381124

00:39:27.713 --> 00:39:29.006 want to use their seat path.

NOTE Confidence: 0.868381124

00:39:29.010 --> 00:39:30.418 So this adherence question

NOTE Confidence: 0.868381124

00:39:30.418 --> 00:39:31.826 is an important one.  
NOTE Confidence: 0.868381124

00:39:31.830 --> 00:39:33.270 We ran our intervention  
NOTE Confidence: 0.868381124

00:39:33.270 --> 00:39:35.430 as a face to face group,  
NOTE Confidence: 0.868381124

00:39:35.430 --> 00:39:37.194 which again I'm glad we were  
NOTE Confidence: 0.868381124

00:39:37.194 --> 00:39:38.950 really done before the pandemic.  
NOTE Confidence: 0.868381124

00:39:38.950 --> 00:39:42.740 But that was very hard to do and may  
NOTE Confidence: 0.868381124

00:39:42.740 --> 00:39:45.330 not be practical in the real world situation.  
NOTE Confidence: 0.868381124

00:39:45.330 --> 00:39:48.041 So could we go to an app based approach,  
NOTE Confidence: 0.868381124

00:39:48.041 --> 00:39:50.027 although we or their patients in  
NOTE Confidence: 0.868381124

00:39:50.027 --> 00:39:51.826 our study also really appreciated  
NOTE Confidence: 0.868381124

00:39:51.826 --> 00:39:54.058 the group the group approach they  
NOTE Confidence: 0.868381124

00:39:54.058 --> 00:39:55.790 they bonded with each other.  
NOTE Confidence: 0.868381124

00:39:55.790 --> 00:39:58.028 There was some social support there.  
NOTE Confidence: 0.868381124

00:39:58.030 --> 00:40:00.126 Could we be doing this as online telehealth?  
NOTE Confidence: 0.868381124

00:40:00.130 --> 00:40:00.772 Interestingly enough,  
NOTE Confidence: 0.868381124

00:40:00.772 --> 00:40:02.698 a lot of the older participants



NOTE Confidence: 0.868381124  
00:40:02.698 --> 00:40:04.188 in this study early on,  
NOTE Confidence: 0.868381124  
00:40:04.190 --> 00:40:07.013 we actually gave them an inexpensive  
NOTE Confidence: 0.868381124  
00:40:07.013 --> 00:40:10.602 tablet computer and ask them, you know,  
NOTE Confidence: 0.868381124  
00:40:10.602 --> 00:40:12.254 they told them they could log on  
NOTE Confidence: 0.868381124  
00:40:12.254 --> 00:40:14.554 like that if they couldn't come to the group,  
NOTE Confidence: 0.868381124  
00:40:14.560 --> 00:40:15.515 and most of them didn't  
NOTE Confidence: 0.868381124  
00:40:15.515 --> 00:40:16.470 want to use the tablet.  
NOTE Confidence: 0.868381124  
00:40:16.470 --> 00:40:18.336 They gave them to their grandchildren.  
NOTE Confidence: 0.868381124  
00:40:18.340 --> 00:40:20.000 So I think that's changed  
NOTE Confidence: 0.868381124  
00:40:20.000 --> 00:40:21.660 with Tele Health and so,  
NOTE Confidence: 0.868381124  
00:40:21.660 --> 00:40:23.150 how could we incorporate this  
NOTE Confidence: 0.868381124  
00:40:23.150 --> 00:40:24.044 into heart failure,  
NOTE Confidence: 0.868381124  
00:40:24.050 --> 00:40:24.796 disease management,  
NOTE Confidence: 0.868381124  
00:40:24.796 --> 00:40:26.288 perhaps with Tele health,  
NOTE Confidence: 0.868381124  
00:40:26.290 --> 00:40:26.656 perhaps?  
NOTE Confidence: 0.868381124

00:40:26.656 --> 00:40:28.852 Would have been act because the  
NOTE Confidence: 0.868381124

00:40:28.852 --> 00:40:31.128 face to face is probably not.  
NOTE Confidence: 0.868381124

00:40:31.130 --> 00:40:32.378 Reasonable or feasible,  
NOTE Confidence: 0.868381124

00:40:32.378 --> 00:40:34.458 and then the final question,  
NOTE Confidence: 0.868381124

00:40:34.460 --> 00:40:36.024 which I mentioned briefly,  
NOTE Confidence: 0.868381124

00:40:36.024 --> 00:40:38.370 is what are the biological mechanisms  
NOTE Confidence: 0.868381124

00:40:38.433 --> 00:40:40.449 by through which this might work?  
NOTE Confidence: 0.573328

00:40:42.500 --> 00:40:44.860 So I did want to.  
NOTE Confidence: 0.573328

00:40:44.860 --> 00:40:46.995 This has been I've sort of was asked  
NOTE Confidence: 0.573328

00:40:46.995 --> 00:40:48.975 to talk about this particular trial,  
NOTE Confidence: 0.573328

00:40:48.980 --> 00:40:51.268 but I did want to give you some  
NOTE Confidence: 0.573328

00:40:51.268 --> 00:40:53.450 context and for me this has been a,  
NOTE Confidence: 0.573328

00:40:53.450 --> 00:40:57.125 you know, a 21 year effort in  
NOTE Confidence: 0.573328

00:40:57.125 --> 00:40:58.700 three different institutions,  
NOTE Confidence: 0.573328

00:40:58.700 --> 00:41:01.969 and so I wanted to thank or  
NOTE Confidence: 0.573328

00:41:01.969 --> 00:41:04.080 collaborators and staff that that

NOTE Confidence: 0.573328  
00:41:04.080 --> 00:41:06.540 were instrumental earlier in the day.  
NOTE Confidence: 0.573328  
00:41:06.540 --> 00:41:08.416 Some of us were having a conversation  
NOTE Confidence: 0.573328  
00:41:08.416 --> 00:41:10.052 about how to follow up people  
NOTE Confidence: 0.573328  
00:41:10.052 --> 00:41:11.851 and keep them in the study and.  
NOTE Confidence: 0.573328  
00:41:11.860 --> 00:41:13.504 You know, we we often give  
NOTE Confidence: 0.573328  
00:41:13.504 --> 00:41:14.600 credit to our collaborators,  
NOTE Confidence: 0.573328  
00:41:14.600 --> 00:41:17.368 but we don't often enough give credit to  
NOTE Confidence: 0.573328  
00:41:17.368 --> 00:41:20.160 those people that may have us be successful,  
NOTE Confidence: 0.573328  
00:41:20.160 --> 00:41:21.336 especially with studies of  
NOTE Confidence: 0.573328  
00:41:21.336 --> 00:41:23.580 such a sick group of of people.  
NOTE Confidence: 0.573328  
00:41:23.580 --> 00:41:26.625 So I wanted to thank our many  
NOTE Confidence: 0.573328  
00:41:26.625 --> 00:41:28.640 collaborators and also to the  
NOTE Confidence: 0.573328  
00:41:28.640 --> 00:41:30.615 many students and trainees that  
NOTE Confidence: 0.573328  
00:41:30.615 --> 00:41:32.443 worked with us along the way.  
NOTE Confidence: 0.573328  
00:41:32.443 --> 00:41:34.410 And some of these early on were  
NOTE Confidence: 0.573328

00:41:34.480 --> 00:41:36.380 back Glory students and nursing  
NOTE Confidence: 0.573328

00:41:36.380 --> 00:41:38.280 at master students in nursing.  
NOTE Confidence: 0.573328

00:41:38.280 --> 00:41:39.560 I had PhD students.  
NOTE Confidence: 0.573328

00:41:39.560 --> 00:41:41.880 I have a few psychologists in here.  
NOTE Confidence: 0.573328

00:41:41.880 --> 00:41:44.700 And so this has been really,  
NOTE Confidence: 0.573328

00:41:44.700 --> 00:41:48.074 klar likes to talk about sleeping in  
NOTE Confidence: 0.573328

00:41:48.074 --> 00:41:49.520 inherently interdisciplinary field,  
NOTE Confidence: 0.573328

00:41:49.520 --> 00:41:52.516 but I think that's certainly I'd like  
NOTE Confidence: 0.573328

00:41:52.516 --> 00:41:55.258 to underscore that here in this talk.  
NOTE Confidence: 0.573328

00:41:55.260 --> 00:41:55.611 Anyway,  
NOTE Confidence: 0.573328

00:41:55.611 --> 00:41:58.770 I hope we have some time for some questions,  
NOTE Confidence: 0.573328

00:41:58.770 --> 00:41:59.410 thank you.  
NOTE Confidence: 0.68664175

00:42:04.170 --> 00:42:07.416 Hi Nancy, thank you very much for for  
NOTE Confidence: 0.68664175

00:42:07.416 --> 00:42:09.516 this interesting journey into treatment  
NOTE Confidence: 0.68664175

00:42:09.516 --> 00:42:12.330 of insomnia and people with heart failure.  
NOTE Confidence: 0.68664175

00:42:12.330 --> 00:42:14.927 And we as we all know, in practice medicine.

NOTE Confidence: 0.68664175

00:42:14.927 --> 00:42:17.160 We know that patients with heart failure

NOTE Confidence: 0.68664175

00:42:17.220 --> 00:42:19.263 have a lot of suffering to go through and

NOTE Confidence: 0.68664175

00:42:19.263 --> 00:42:21.845 so alleviating even a little bit might be a

NOTE Confidence: 0.68664175

00:42:21.845 --> 00:42:24.350 very meaningful contribution to their life.

NOTE Confidence: 0.68664175

00:42:24.350 --> 00:42:26.638 And so I think I please.

NOTE Confidence: 0.68664175

00:42:26.638 --> 00:42:28.350 Those in the audience.

NOTE Confidence: 0.68664175

00:42:28.350 --> 00:42:31.526 Please post your questions to the chat or.

NOTE Confidence: 0.68664175

00:42:31.530 --> 00:42:32.867 You can simply ask to be unmuted.

NOTE Confidence: 0.68664175

00:42:32.870 --> 00:42:34.086 I'd be happy to help you with that,

NOTE Confidence: 0.68664175

00:42:34.090 --> 00:42:35.394 and I do have a question I was

NOTE Confidence: 0.68664175

00:42:35.394 --> 00:42:37.635 hoping to ask you, Nancy, and so,

NOTE Confidence: 0.68664175

00:42:37.635 --> 00:42:39.180 as you mentioned.

NOTE Confidence: 0.68664175

00:42:39.180 --> 00:42:40.602 You know that that heart failure

NOTE Confidence: 0.68664175

00:42:40.602 --> 00:42:41.871 and heart failure, individuals,

NOTE Confidence: 0.68664175

00:42:41.871 --> 00:42:44.075 insomnia and sleep disordered

NOTE Confidence: 0.68664175

00:42:44.075 --> 00:42:46.008 breathing coexist, and in fact,

NOTE Confidence: 0.68664175

00:42:46.008 --> 00:42:48.330 we know that even in the non heart

NOTE Confidence: 0.68664175

00:42:48.330 --> 00:42:49.820 failure populations up to 1/3

NOTE Confidence: 0.68664175

00:42:49.879 --> 00:42:51.924 of individuals with sleep apnea

NOTE Confidence: 0.68664175

00:42:51.924 --> 00:42:53.560 present with insomnia symptoms,

NOTE Confidence: 0.68664175

00:42:53.560 --> 00:42:55.322 whether they're middle or early

NOTE Confidence: 0.68664175

00:42:55.322 --> 00:42:58.650 or late type of insomnia.

NOTE Confidence: 0.68664175

00:42:58.650 --> 00:43:00.958 We also know that it's some recent

NOTE Confidence: 0.68664175

00:43:00.958 --> 00:43:02.778 clinical trials using CBT in

NOTE Confidence: 0.68664175

00:43:02.778 --> 00:43:04.556 individuals with sleep apnea Co

NOTE Confidence: 0.68664175

00:43:04.556 --> 00:43:06.428 currently or before C PAP therapy

NOTE Confidence: 0.68664175

00:43:06.428 --> 00:43:08.758 improves in here ends and quality of

NOTE Confidence: 0.68664175

00:43:08.758 --> 00:43:12.460 life and functional outcomes and so.

NOTE Confidence: 0.68664175

00:43:12.460 --> 00:43:13.368 You know, just wondering,

NOTE Confidence: 0.68664175

00:43:13.368 --> 00:43:14.980 what are your thoughts on you know,

NOTE Confidence: 0.68664175

00:43:14.980 --> 00:43:16.378 as you think to the future,

NOTE Confidence: 0.68664175

00:43:16.380 --> 00:43:20.510 what would be your thoughts on including.

NOTE Confidence: 0.68664175

00:43:20.510 --> 00:43:21.630 People with sleep disordered

NOTE Confidence: 0.68664175

00:43:21.630 --> 00:43:23.656 breathing in these trials and and

NOTE Confidence: 0.68664175

00:43:23.656 --> 00:43:25.336 what what you consider being

NOTE Confidence: 0.9513767

00:43:25.350 --> 00:43:26.720 the intervention in this case.

NOTE Confidence: 0.870859318333333

00:43:27.950 --> 00:43:30.085 Yeah, I mean so. We've and we've

NOTE Confidence: 0.870859318333333

00:43:30.085 --> 00:43:31.666 talked about this a lot, right?

NOTE Confidence: 0.870859318333333

00:43:31.666 --> 00:43:33.554 So I had to screen out people because

NOTE Confidence: 0.870859318333333

00:43:33.554 --> 00:43:35.580 the standard practice is to treat people

NOTE Confidence: 0.870859318333333

00:43:35.580 --> 00:43:37.530 with moderate right at least moderate,

NOTE Confidence: 0.870859318333333

00:43:37.530 --> 00:43:39.560 mild to moderate sleep apnea.

NOTE Confidence: 0.870859318333333

00:43:39.560 --> 00:43:41.378 I think they should have both.

NOTE Confidence: 0.870859318333333

00:43:41.380 --> 00:43:42.997 I can't answer the question of which

NOTE Confidence: 0.870859318333333

00:43:42.997 --> 00:43:44.647 we do first, second, and third.

NOTE Confidence: 0.870859318333333

00:43:44.647 --> 00:43:47.700 I think that at least one of the trials.

NOTE Confidence: 0.870859318333333

00:43:47.700 --> 00:43:48.556 I forget which one,  
NOTE Confidence: 0.870859318333333  
00:43:48.556 --> 00:43:50.436 but at least one of the other trials  
NOTE Confidence: 0.870859318333333  
00:43:50.436 --> 00:43:52.074 treated one and then the other.  
NOTE Confidence: 0.870859318333333  
00:43:52.080 --> 00:43:54.136 I mean, maybe maybe if you treat insomnia,  
NOTE Confidence: 0.870859318333333  
00:43:54.140 --> 00:43:57.507 you're going to get better CPAP adherence.  
NOTE Confidence: 0.870859318333333  
00:43:57.510 --> 00:43:58.822 Although you know I,  
NOTE Confidence: 0.870859318333333  
00:43:58.822 --> 00:44:01.380 I think that's that remains to be seen.  
NOTE Confidence: 0.870859318333333  
00:44:01.380 --> 00:44:02.556 I don't know which comes first,  
NOTE Confidence: 0.870859318333333  
00:44:02.560 --> 00:44:04.675 but I definitely think we need to treat both.  
NOTE Confidence: 0.92529035  
00:44:06.450 --> 00:44:07.590 Yeah, I know it's it's a.  
NOTE Confidence: 0.92950963  
00:44:07.590 --> 00:44:08.370 It's a good point I.  
NOTE Confidence: 0.92950963  
00:44:08.370 --> 00:44:10.394 I think in in the in the general  
NOTE Confidence: 0.92950963  
00:44:10.394 --> 00:44:11.942 literature it's if you treat  
NOTE Confidence: 0.92950963  
00:44:11.942 --> 00:44:13.250 them simultaneously or they  
NOTE Confidence: 0.92950963  
00:44:13.250 --> 00:44:14.834 treat insomnia before or let's  
NOTE Confidence: 0.92950963  
00:44:14.834 --> 00:44:16.460 say the outcomes are better than



NOTE Confidence: 0.838861302222222

00:44:16.530 --> 00:44:18.095 yeah. I mean that would

NOTE Confidence: 0.838861302222222

00:44:18.095 --> 00:44:19.347 be my suggestion again.

NOTE Confidence: 0.838861302222222

00:44:19.350 --> 00:44:21.258 I mean again I you know I had to

NOTE Confidence: 0.838861302222222

00:44:21.258 --> 00:44:22.798 convince NIH reviewers and clinicians of

NOTE Confidence: 0.838861302222222

00:44:22.798 --> 00:44:25.322 this and it was a while back where we

NOTE Confidence: 0.838861302222222

00:44:25.322 --> 00:44:27.122 were just treating everybody you know.

NOTE Confidence: 0.838861302222222

00:44:27.130 --> 00:44:30.066 And so there's a you know question of

NOTE Confidence: 0.838861302222222

00:44:30.066 --> 00:44:32.608 what's good medical practice right?

NOTE Confidence: 0.838861302222222

00:44:32.610 --> 00:44:34.948 And I guess if somebody is really

NOTE Confidence: 0.838861302222222

00:44:34.948 --> 00:44:36.998 severe with their apnea, you got it.

NOTE Confidence: 0.838861302222222

00:44:36.998 --> 00:44:37.978 You better treat them 'cause

NOTE Confidence: 0.838861302222222

00:44:37.978 --> 00:44:39.225 it's the safety question, right?

NOTE Confidence: 0.838861302222222

00:44:39.225 --> 00:44:40.100 It's bad for their heart

NOTE Confidence: 0.838861302222222

00:44:40.100 --> 00:44:41.020 if you don't treat them.

NOTE Confidence: 0.838861302222222

00:44:41.020 --> 00:44:43.120 So I think that where the fuzzy

NOTE Confidence: 0.838861302222222

00:44:43.120 --> 00:44:45.702 line is and even in our study we  
NOTE Confidence: 0.838861302222222

00:44:45.702 --> 00:44:47.690 originally set out with a lower  
NOTE Confidence: 0.838861302222222

00:44:47.690 --> 00:44:50.146 ahi of around 10 and we ended up  
NOTE Confidence: 0.838861302222222

00:44:50.146 --> 00:44:52.020 going up to 15 because we couldn't.  
NOTE Confidence: 0.838861302222222

00:44:52.020 --> 00:44:54.153 We didn't have anybody to be in the trial,  
NOTE Confidence: 0.838861302222222

00:44:54.160 --> 00:44:56.686 and so where's the line between  
NOTE Confidence: 0.838861302222222

00:44:56.686 --> 00:44:57.949 being not safe?  
NOTE Confidence: 0.838861302222222

00:44:57.950 --> 00:44:59.942 Although a lot of these people are work  
NOTE Confidence: 0.838861302222222

00:44:59.942 --> 00:45:01.353 walking around with sleep apnea for  
NOTE Confidence: 0.838861302222222

00:45:01.353 --> 00:45:03.119 a long time before we even see them.  
NOTE Confidence: 0.838861302222222

00:45:03.120 --> 00:45:05.172 So I guess to me it's like the safety  
NOTE Confidence: 0.838861302222222

00:45:05.172 --> 00:45:06.970 issue of which do you treat first?  
NOTE Confidence: 0.723950887142857

00:45:07.830 --> 00:45:09.234 Yeah or simultaneous right?  
NOTE Confidence: 0.723950887142857

00:45:09.234 --> 00:45:11.954 And so yeah, a message from a  
NOTE Confidence: 0.723950887142857

00:45:11.954 --> 00:45:14.034 comment from Doctor Gary is.  
NOTE Confidence: 0.723950887142857

00:45:14.040 --> 00:45:15.366 Thank you for the great talk.

NOTE Confidence: 0.723950887142857  
00:45:15.370 --> 00:45:16.648 I like the idea of concurrently  
NOTE Confidence: 0.723950887142857  
00:45:16.650 --> 00:45:18.023 treating insomnia and OSA,  
NOTE Confidence: 0.723950887142857  
00:45:18.023 --> 00:45:19.835 particularly if the sleep  
NOTE Confidence: 0.723950887142857  
00:45:19.835 --> 00:45:21.647 psychologists conducting the CBT.  
NOTE Confidence: 0.723950887142857  
00:45:21.650 --> 00:45:23.435 I can help with habituation  
NOTE Confidence: 0.723950887142857  
00:45:23.435 --> 00:45:24.863 and coaching around Pampus  
NOTE Confidence: 0.723950887142857  
00:45:24.870 --> 00:45:27.020 even group coaching for I  
NOTE Confidence: 0.771010902380952  
00:45:27.030 --> 00:45:27.846 think that's great.  
NOTE Confidence: 0.771010902380952  
00:45:27.846 --> 00:45:29.750 I think the other point is that  
NOTE Confidence: 0.771010902380952  
00:45:29.811 --> 00:45:31.715 you know we had a control group  
NOTE Confidence: 0.771010902380952  
00:45:31.715 --> 00:45:33.020 that included heart failure,  
NOTE Confidence: 0.771010902380952  
00:45:33.020 --> 00:45:35.474 disease management and we showed some  
NOTE Confidence: 0.771010902380952  
00:45:35.474 --> 00:45:37.770 improvement in that group and it's.  
NOTE Confidence: 0.771010902380952  
00:45:37.770 --> 00:45:39.895 Possible that for people with  
NOTE Confidence: 0.771010902380952  
00:45:39.895 --> 00:45:42.907 low levels of poor sleep or or  
NOTE Confidence: 0.771010902380952

00:45:42.907 --> 00:45:45.325 insomnia that that might be enough,  
NOTE Confidence: 0.771010902380952

00:45:45.330 --> 00:45:47.346 you know, sort of in a stepped  
NOTE Confidence: 0.771010902380952

00:45:47.346 --> 00:45:48.830 care approach to insomnia,  
NOTE Confidence: 0.771010902380952

00:45:48.830 --> 00:45:50.912 but the other point that was  
NOTE Confidence: 0.771010902380952

00:45:50.912 --> 00:45:53.043 interesting and this is not to  
NOTE Confidence: 0.771010902380952

00:45:53.043 --> 00:45:55.047 be negative about any any system,  
NOTE Confidence: 0.771010902380952

00:45:55.050 --> 00:45:56.198 but all the patient.  
NOTE Confidence: 0.771010902380952

00:45:56.198 --> 00:45:57.920 Most of the patients we were  
NOTE Confidence: 0.771010902380952

00:45:57.984 --> 00:45:59.930 recruited were coming from really  
NOTE Confidence: 0.771010902380952

00:45:59.930 --> 00:46:01.610 well established heart failure  
NOTE Confidence: 0.771010902380952

00:46:01.610 --> 00:46:03.290 disease management programs and  
NOTE Confidence: 0.771010902380952

00:46:03.290 --> 00:46:05.258 we were very surprised at how  
NOTE Confidence: 0.771010902380952

00:46:05.258 --> 00:46:07.241 much they felt like they benefited  
NOTE Confidence: 0.771010902380952

00:46:07.241 --> 00:46:08.969 from our control condition.  
NOTE Confidence: 0.771010902380952

00:46:08.970 --> 00:46:10.476 So I would argue that not  
NOTE Confidence: 0.771010902380952

00:46:10.476 --> 00:46:11.830 only do they need this,

NOTE Confidence: 0.771010902380952  
00:46:11.830 --> 00:46:13.525 not only the disease management  
NOTE Confidence: 0.771010902380952  
00:46:13.525 --> 00:46:15.590 in terms of the medical part,  
NOTE Confidence: 0.771010902380952  
00:46:15.590 --> 00:46:17.774 but the self care part that the  
NOTE Confidence: 0.771010902380952  
00:46:17.774 --> 00:46:19.468 patients need to do that also  
NOTE Confidence: 0.771010902380952  
00:46:19.468 --> 00:46:21.142 needs to be combined with the  
NOTE Confidence: 0.771010902380952  
00:46:21.142 --> 00:46:22.805 insomnia and the PAP treatment.  
NOTE Confidence: 0.771010902380952  
00:46:22.805 --> 00:46:23.480 Right,  
NOTE Confidence: 0.771010902380952  
00:46:23.480 --> 00:46:25.496 because we saw some improvements there,  
NOTE Confidence: 0.771010902380952  
00:46:25.500 --> 00:46:25.812 right?  
NOTE Confidence: 0.771010902380952  
00:46:25.812 --> 00:46:27.372 If you're fluid overloaded because  
NOTE Confidence: 0.771010902380952  
00:46:27.372 --> 00:46:28.978 you're not taking your diuretics  
NOTE Confidence: 0.771010902380952  
00:46:28.978 --> 00:46:30.778 or you're eating too much sodium,  
NOTE Confidence: 0.771010902380952  
00:46:30.780 --> 00:46:31.880 you're going to have both.  
NOTE Confidence: 0.771010902380952  
00:46:31.880 --> 00:46:33.218 You know you're going to have  
NOTE Confidence: 0.771010902380952  
00:46:33.218 --> 00:46:34.638 more sleep to sort of reading  
NOTE Confidence: 0.771010902380952

00:46:34.638 --> 00:46:35.598 as well as insomnia.  
NOTE Confidence: 0.771010902380952

00:46:35.600 --> 00:46:36.100 So.  
NOTE Confidence: 0.833147

00:46:37.460 --> 00:46:40.270 You know, thank you. Let's see.  
NOTE Confidence: 0.833147

00:46:40.270 --> 00:46:43.180 There's a question from Doctor Yagi.  
NOTE Confidence: 0.871910871818182

00:46:43.180 --> 00:46:44.506 First of all, great talk and  
NOTE Confidence: 0.871910871818182

00:46:44.506 --> 00:46:46.366 can you speak to any evidence of  
NOTE Confidence: 0.871910871818182

00:46:46.366 --> 00:46:47.602 circadian rhythms being impaired  
NOTE Confidence: 0.871910871818182

00:46:47.602 --> 00:46:49.270 in people with heart failure?  
NOTE Confidence: 0.915821436923077

00:46:49.780 --> 00:46:50.672 So we did, not.  
NOTE Confidence: 0.915821436923077

00:46:50.672 --> 00:46:52.800 That was not a primary part of this study.  
NOTE Confidence: 0.915821436923077

00:46:52.800 --> 00:46:54.927 However, we have many, many, many,  
NOTE Confidence: 0.915821436923077

00:46:54.927 --> 00:46:57.916 many actigraph files in these patients now.  
NOTE Confidence: 0.915821436923077

00:46:57.920 --> 00:47:00.188 Actigraphy is not a clean measure  
NOTE Confidence: 0.915821436923077

00:47:00.188 --> 00:47:02.098 of circadian rhythm because we  
NOTE Confidence: 0.915821436923077

00:47:02.098 --> 00:47:03.855 have external you know external,  
NOTE Confidence: 0.915821436923077

00:47:03.855 --> 00:47:06.045 but we will be analyzing that.

NOTE Confidence: 0.915821436923077  
00:47:06.050 --> 00:47:07.568 And we do have a paper.  
NOTE Confidence: 0.915821436923077  
00:47:07.570 --> 00:47:10.738 Yeah, which published from our earlier  
NOTE Confidence: 0.915821436923077  
00:47:10.738 --> 00:47:13.330 cross sectional data showing that.  
NOTE Confidence: 0.915821436923077  
00:47:13.330 --> 00:47:16.864 Disrupted rhythms based on the actigraphy  
NOTE Confidence: 0.915821436923077  
00:47:16.864 --> 00:47:20.396 data rest activity rhythms were closely  
NOTE Confidence: 0.915821436923077  
00:47:20.396 --> 00:47:23.620 aligned with depression and fatigue right.  
NOTE Confidence: 0.915821436923077  
00:47:23.620 --> 00:47:26.295 Whether this is cross sectional.  
NOTE Confidence: 0.915821436923077  
00:47:26.300 --> 00:47:28.433 So in this new study and we also have,  
NOTE Confidence: 0.915821436923077  
00:47:28.440 --> 00:47:30.505 we did get another supplement for this.  
NOTE Confidence: 0.915821436923077  
00:47:30.510 --> 00:47:33.303 Looking at the extent to which those  
NOTE Confidence: 0.915821436923077  
00:47:33.303 --> 00:47:35.433 rest activity rhythms predict outcomes.  
NOTE Confidence: 0.915821436923077  
00:47:35.433 --> 00:47:38.417 So we we haven't finished analyzing that yet,  
NOTE Confidence: 0.915821436923077  
00:47:38.420 --> 00:47:40.900 but and that's not a pure circadian measure.  
NOTE Confidence: 0.915821436923077  
00:47:40.900 --> 00:47:42.988 We also know melatonin is often.  
NOTE Confidence: 0.915821436923077  
00:47:42.990 --> 00:47:45.195 Abnormal and and and low melatonin is  
NOTE Confidence: 0.915821436923077

00:47:45.195 --> 00:47:47.690 as a negative effect in heart failure,  
NOTE Confidence: 0.915821436923077

00:47:47.690 --> 00:47:48.890 so I think that's another important  
NOTE Confidence: 0.915821436923077

00:47:48.890 --> 00:47:49.490 way to go.  
NOTE Confidence: 0.915821436923077

00:47:49.490 --> 00:47:49.856 But Claire,  
NOTE Confidence: 0.915821436923077

00:47:49.856 --> 00:47:51.320 I don't have the answer on that yet,  
NOTE Confidence: 0.623635

00:47:51.870 --> 00:47:54.110 great thank you. Another question.  
NOTE Confidence: 0.623635

00:47:54.110 --> 00:47:55.650 Slash comment in great work  
NOTE Confidence: 0.623635

00:47:55.650 --> 00:47:58.107 and is there a way to get CBT?  
NOTE Confidence: 0.623635

00:47:58.110 --> 00:47:59.996 I covered by insurance and  
NOTE Confidence: 0.623635

00:47:59.996 --> 00:48:01.578 what are the best ways to get  
NOTE Confidence: 0.623635

00:48:01.578 --> 00:48:02.840 this treatment to our patients?  
NOTE Confidence: 0.623635

00:48:02.840 --> 00:48:03.890 So the question from Ian,  
NOTE Confidence: 0.623635

00:48:03.890 --> 00:48:06.058 we're from Norwalk. Well,  
NOTE Confidence: 0.91627155

00:48:06.070 --> 00:48:07.070 that's a good question.  
NOTE Confidence: 0.91627155

00:48:07.070 --> 00:48:09.050 I thought that we it was covered.  
NOTE Confidence: 0.91627155

00:48:09.050 --> 00:48:10.800 I don't think it's covered very well.



NOTE Confidence: 0.91627155

00:48:10.800 --> 00:48:12.060 I mean for these pay I mean

NOTE Confidence: 0.91627155

00:48:12.060 --> 00:48:13.010 for anybody with insomnia,

NOTE Confidence: 0.91627155

00:48:13.010 --> 00:48:14.216 I thought we could get coverage.

NOTE Confidence: 0.91627155

00:48:14.220 --> 00:48:15.564 I mean, I don't do the billing,

NOTE Confidence: 0.91627155

00:48:15.570 --> 00:48:16.758 I just do research,

NOTE Confidence: 0.641589784

00:48:17.090 --> 00:48:18.370 right? Yeah, and so I,

NOTE Confidence: 0.641589784

00:48:18.370 --> 00:48:19.986 I think maybe I can address that a

NOTE Confidence: 0.641589784

00:48:19.986 --> 00:48:21.528 little bit and I think there are

NOTE Confidence: 0.641589784

00:48:21.528 --> 00:48:25.090 certain insurances that do coverage and.

NOTE Confidence: 0.641589784

00:48:25.090 --> 00:48:27.554 In private and also I believe in Medicare,

NOTE Confidence: 0.641589784

00:48:27.560 --> 00:48:29.035 but I can have somebody

NOTE Confidence: 0.641589784

00:48:29.035 --> 00:48:30.860 colleagues coming in this as well.

NOTE Confidence: 0.641589784

00:48:30.860 --> 00:48:32.946 But yes, it's a certainly is not

NOTE Confidence: 0.641589784

00:48:32.946 --> 00:48:34.719 covered as well as it can be.

NOTE Confidence: 0.641589784

00:48:34.720 --> 00:48:36.980 Let's see, Doctor Robert Thomas

NOTE Confidence: 0.641589784

00:48:36.980 --> 00:48:38.558 has a question in a statement.  
NOTE Confidence: 0.641589784

00:48:38.560 --> 00:48:40.144 So C Pap alone does not cut it for  
NOTE Confidence: 0.641589784

00:48:40.144 --> 00:48:41.847 the majority of these patients who  
NOTE Confidence: 0.641589784

00:48:41.847 --> 00:48:43.327 have some combination of fragment  
NOTE Confidence: 0.641589784

00:48:43.378 --> 00:48:45.030 and sleep and high loop gain which  
NOTE Confidence: 0.641589784

00:48:45.030 --> 00:48:46.736 can amplify each other and so  
NOTE Confidence: 0.641589784

00:48:46.736 --> 00:48:48.728 sensible CBT needs to be combined  
NOTE Confidence: 0.641589784

00:48:48.728 --> 00:48:50.759 with multimodal apnea therapy.  
NOTE Confidence: 0.641589784

00:48:50.760 --> 00:48:52.812 And so this is going back to this  
NOTE Confidence: 0.641589784

00:48:52.812 --> 00:48:55.000 comment that really multimodal?  
NOTE Confidence: 0.641589784

00:48:55.000 --> 00:48:57.048 Directly similar to the way we  
NOTE Confidence: 0.641589784

00:48:57.048 --> 00:48:59.452 treat diabetes and and medically  
NOTE Confidence: 0.641589784

00:48:59.452 --> 00:49:01.468 treat heart failure.  
NOTE Confidence: 0.641589784

00:49:01.470 --> 00:49:02.706 Might be helpful here,  
NOTE Confidence: 0.641589784

00:49:02.706 --> 00:49:04.830 and then another comment from Doctor Dre.  
NOTE Confidence: 0.641589784

00:49:04.830 --> 00:49:06.650 Harry is do you think ISI should

NOTE Confidence: 0.641589784

00:49:06.650 --> 00:49:08.340 be administered in the cardiology

NOTE Confidence: 0.641589784

00:49:08.340 --> 00:49:10.370 clinic for all our failure patients?

NOTE Confidence: 0.641589784

00:49:10.370 --> 00:49:11.820 Absolutely,

NOTE Confidence: 0.831125675454545

00:49:11.850 --> 00:49:12.946 I I absolutely do.

NOTE Confidence: 0.831125675454545

00:49:12.946 --> 00:49:15.279 And at one point one of the clinicians

NOTE Confidence: 0.831125675454545

00:49:15.279 --> 00:49:18.330 left but I was trying to even if not ISI,

NOTE Confidence: 0.831125675454545

00:49:18.330 --> 00:49:20.328 at least some sleep quality measure.

NOTE Confidence: 0.831125675454545

00:49:20.330 --> 00:49:21.668 I don't know. We were working

NOTE Confidence: 0.831125675454545

00:49:21.668 --> 00:49:22.830 on getting that into Epic.

NOTE Confidence: 0.831125675454545

00:49:22.830 --> 00:49:24.310 I'm not sure where it stands over here,

NOTE Confidence: 0.831125675454545

00:49:24.310 --> 00:49:26.170 but yeah, yes, absolutely

NOTE Confidence: 0.839466612222222

00:49:26.530 --> 00:49:27.958 yeah, right and so then we have

NOTE Confidence: 0.839466612222222

00:49:27.958 --> 00:49:29.035 to figure out what are we going

NOTE Confidence: 0.839466612222222

00:49:29.035 --> 00:49:30.001 to do with that information and

NOTE Confidence: 0.839466612222222

00:49:30.001 --> 00:49:31.550 how do we help these individuals.

NOTE Confidence: 0.839466612222222

00:49:31.550 --> 00:49:33.570 So that goes back to Doctor.  
NOTE Confidence: 0.742703205555556

00:49:33.580 --> 00:49:35.458 I think it also goes to  
NOTE Confidence: 0.742703205555556

00:49:35.458 --> 00:49:36.397 educating the cardial.  
NOTE Confidence: 0.742703205555556

00:49:36.400 --> 00:49:38.122 I mean, I we've done come along  
NOTE Confidence: 0.742703205555556

00:49:38.122 --> 00:49:40.148 way right in terms of educating  
NOTE Confidence: 0.742703205555556

00:49:40.148 --> 00:49:41.378 the cardiology community,  
NOTE Confidence: 0.742703205555556

00:49:41.380 --> 00:49:43.500 but I do have to say I've been  
NOTE Confidence: 0.742703205555556

00:49:43.500 --> 00:49:45.019 working with some folks who.  
NOTE Confidence: 0.742703205555556

00:49:45.020 --> 00:49:45.992 We'll talk again.  
NOTE Confidence: 0.742703205555556

00:49:45.992 --> 00:49:47.936 See Reticker study of sleep apnea.  
NOTE Confidence: 0.742703205555556

00:49:47.940 --> 00:49:50.978 And it's not only Nancy Rediker study,  
NOTE Confidence: 0.742703205555556

00:49:50.980 --> 00:49:53.272 but but my study was really  
NOTE Confidence: 0.742703205555556

00:49:53.272 --> 00:49:54.296 about insomnia, right?  
NOTE Confidence: 0.742703205555556

00:49:54.296 --> 00:49:56.344 So I think there's still a lot of  
NOTE Confidence: 0.742703205555556

00:49:56.344 --> 00:49:58.861 a lot of lack of knowledge among  
NOTE Confidence: 0.742703205555556

00:49:58.861 --> 00:50:00.795 the broader medical community about

NOTE Confidence: 0.742703205555556

00:50:00.795 --> 00:50:02.830 one sleep disorder versus another.

NOTE Confidence: 0.822596631428572

00:50:05.620 --> 00:50:07.825 Let's see and and so there is

NOTE Confidence: 0.822596631428572

00:50:07.825 --> 00:50:09.792 another question from Brendan Buck

NOTE Confidence: 0.822596631428572

00:50:09.792 --> 00:50:11.686 Crawford following up to the previous

NOTE Confidence: 0.822596631428572

00:50:11.686 --> 00:50:14.425 questions can CBT I also improve

NOTE Confidence: 0.822596631428572

00:50:14.425 --> 00:50:17.325 HI in heart failure patients if

NOTE Confidence: 0.822596631428572

00:50:17.325 --> 00:50:19.695 we consolidate sleep there will be

NOTE Confidence: 0.822596631428572

00:50:19.695 --> 00:50:22.040 less unstable non REM sleep less.

NOTE Confidence: 0.822596631428572

00:50:22.040 --> 00:50:23.235 App and transitional states which

NOTE Confidence: 0.822596631428572

00:50:23.235 --> 00:50:24.758 can lead to less periodic breathing

NOTE Confidence: 0.822596631428572

00:50:24.758 --> 00:50:26.178 and central events in heart

NOTE Confidence: 0.822596631428572

00:50:26.178 --> 00:50:27.030 failure patients question

NOTE Confidence: 0.86281749

00:50:27.040 --> 00:50:29.476 mark. So I actually think so.

NOTE Confidence: 0.86281749

00:50:29.480 --> 00:50:31.566 And some of you may know David

NOTE Confidence: 0.86281749

00:50:31.566 --> 00:50:33.560 Rappaport and he was my mentor for

NOTE Confidence: 0.86281749

00:50:33.560 --> 00:50:35.757 my K award and this was many many

NOTE Confidence: 0.86281749

00:50:35.757 --> 00:50:38.037 years ago and I brought that up and

NOTE Confidence: 0.86281749

00:50:38.040 --> 00:50:39.516 I thought he was going to look at me

NOTE Confidence: 0.86281749

00:50:39.516 --> 00:50:41.000 like I had two heads and he said yes.

NOTE Confidence: 0.86281749

00:50:41.000 --> 00:50:43.744 Of course if we get people into more

NOTE Confidence: 0.86281749

00:50:43.744 --> 00:50:45.940 stable sleep we might improve their.

NOTE Confidence: 0.86281749

00:50:45.940 --> 00:50:49.465 Hi I. We we we need to try it

NOTE Confidence: 0.7550981762

00:50:50.190 --> 00:50:52.526 right now and there is a there's a

NOTE Confidence: 0.7550981762

00:50:52.526 --> 00:50:54.930 little bit of data from one of those

NOTE Confidence: 0.7550981762

00:50:54.930 --> 00:50:56.881 CBT and sleep apnea individuals where

NOTE Confidence: 0.7550981762

00:50:56.881 --> 00:50:59.023 they hi declined by about seven

NOTE Confidence: 0.7550981762

00:50:59.023 --> 00:51:01.583 and a half and in small groups.

NOTE Confidence: 0.7550981762

00:51:01.583 --> 00:51:04.601 So there's certainly a signal for

NOTE Confidence: 0.7550981762

00:51:04.601 --> 00:51:07.960 that in prior work as well so.

NOTE Confidence: 0.7550981762

00:51:07.960 --> 00:51:09.364 And so Nancy could just speculate

NOTE Confidence: 0.7550981762

00:51:09.364 --> 00:51:11.192 a little bit about the potential

NOTE Confidence: 0.7550981762

00:51:11.192 --> 00:51:13.830 mechanisms by which.

NOTE Confidence: 0.7550981762

00:51:13.830 --> 00:51:15.318 CBT I can improve

NOTE Confidence: 0.804950383

00:51:15.330 --> 00:51:17.226 so we have some additional data

NOTE Confidence: 0.804950383

00:51:17.226 --> 00:51:19.466 which I didn't present here so one

NOTE Confidence: 0.804950383

00:51:19.466 --> 00:51:21.290 there is a behavioral mechanism right

NOTE Confidence: 0.804950383

00:51:21.290 --> 00:51:23.591 we we looked at these perpetuating

NOTE Confidence: 0.804950383

00:51:23.591 --> 00:51:25.521 thoughts and thoughts about sleep.

NOTE Confidence: 0.804950383

00:51:25.530 --> 00:51:27.595 We measured those thoughts which

NOTE Confidence: 0.804950383

00:51:27.595 --> 00:51:29.247 but but they're psychological.

NOTE Confidence: 0.804950383

00:51:29.250 --> 00:51:30.105 Their perceptions, right?

NOTE Confidence: 0.804950383

00:51:30.105 --> 00:51:32.750 But they also can be related to physiologic,

NOTE Confidence: 0.804950383

00:51:32.750 --> 00:51:34.886 you know psychological and

NOTE Confidence: 0.804950383

00:51:34.886 --> 00:51:37.556 physiological arousal or not separate

NOTE Confidence: 0.804950383

00:51:37.556 --> 00:51:39.764 necessarily phenomena. And we did.

NOTE Confidence: 0.804950383

00:51:39.764 --> 00:51:41.850 We published a paper from our feasibility

NOTE Confidence: 0.804950383

00:51:41.911 --> 00:51:43.765 or early study which showed that.  
NOTE Confidence: 0.804950383

00:51:43.770 --> 00:51:46.130 That that the treatment effect,  
NOTE Confidence: 0.804950383

00:51:46.130 --> 00:51:47.726 at least on insomnia and fatigue,  
NOTE Confidence: 0.804950383

00:51:47.730 --> 00:51:49.405 was mediated by some of  
NOTE Confidence: 0.804950383

00:51:49.405 --> 00:51:50.745 those thoughts and ideas.  
NOTE Confidence: 0.804950383

00:51:50.750 --> 00:51:53.998 You know, this catastrophizing and so forth.  
NOTE Confidence: 0.804950383

00:51:54.000 --> 00:51:56.440 We have similar data which I do present  
NOTE Confidence: 0.804950383

00:51:56.440 --> 00:51:58.946 here today from this and and or the paper  
NOTE Confidence: 0.804950383

00:51:58.946 --> 00:52:01.385 that we just got accepted talks about that.  
NOTE Confidence: 0.804950383

00:52:01.385 --> 00:52:04.531 But I do think there's an error out that the  
NOTE Confidence: 0.804950383

00:52:04.531 --> 00:52:06.703 Physiology you know that it's inflammatory.  
NOTE Confidence: 0.804950383

00:52:06.710 --> 00:52:08.006 We've got a route.  
NOTE Confidence: 0.804950383

00:52:08.006 --> 00:52:09.302 We've got sympathetic arousal  
NOTE Confidence: 0.804950383

00:52:09.302 --> 00:52:10.429 and insomnia as well,  
NOTE Confidence: 0.804950383

00:52:10.430 --> 00:52:12.645 known to be a sympathetic process,  
NOTE Confidence: 0.804950383

00:52:12.645 --> 00:52:14.020 and so I think that's.



NOTE Confidence: 0.804950383

00:52:14.020 --> 00:52:15.080 A large part of it,

NOTE Confidence: 0.804950383

00:52:15.080 --> 00:52:16.388 as well as inflammation,

NOTE Confidence: 0.928350676666667

00:52:16.860 --> 00:52:20.162 and so just just thinking about the

NOTE Confidence: 0.928350676666667

00:52:20.162 --> 00:52:21.210 intervention they have provided.

NOTE Confidence: 0.795060712

00:52:21.220 --> 00:52:22.500 Could you perhaps, you know,

NOTE Confidence: 0.795060712

00:52:22.500 --> 00:52:24.520 summarize the resources needed to

NOTE Confidence: 0.795060712

00:52:24.520 --> 00:52:26.540 intervene on the individual patient?

NOTE Confidence: 0.795060712

00:52:26.540 --> 00:52:28.159 For example, what would it?

NOTE Confidence: 0.795060712

00:52:28.160 --> 00:52:31.158 What would it cost to the practice to bear?

NOTE Confidence: 0.795060712

00:52:31.158 --> 00:52:32.948 Bring this to clinical side.

NOTE Confidence: 0.67813213375

00:52:32.960 --> 00:52:35.088 Well, I think this would be no different.

NOTE Confidence: 0.67813213375

00:52:35.090 --> 00:52:37.578 I mean, I mean you have we have

NOTE Confidence: 0.67813213375

00:52:37.578 --> 00:52:39.263 behavioral Sleep Medicine here at

NOTE Confidence: 0.67813213375

00:52:39.263 --> 00:52:41.580 Yale and other centers do as well.

NOTE Confidence: 0.67813213375

00:52:41.580 --> 00:52:44.490 It's exactly the same treatment.

NOTE Confidence: 0.67813213375

00:52:44.490 --> 00:52:47.010 Ray, all we did was deliver it in a  
NOTE Confidence: 0.67813213375

00:52:47.010 --> 00:52:49.033 specialized in a in a special setting  
NOTE Confidence: 0.67813213375

00:52:49.033 --> 00:52:50.811 only to heart failure patients and  
NOTE Confidence: 0.67813213375

00:52:50.811 --> 00:52:52.820 so and we did it in a group format so  
NOTE Confidence: 0.67813213375

00:52:52.820 --> 00:52:54.577 other people have done a group format.  
NOTE Confidence: 0.67813213375

00:52:54.580 --> 00:52:55.985 Other people have done individual  
NOTE Confidence: 0.67813213375

00:52:55.985 --> 00:52:56.828 face to face.  
NOTE Confidence: 0.67813213375

00:52:56.830 --> 00:52:58.230 I mean increasingly we're seeing  
NOTE Confidence: 0.67813213375

00:52:58.230 --> 00:52:59.350 Tele health and apps.  
NOTE Confidence: 0.67813213375

00:52:59.350 --> 00:53:02.416 The question is whether these very  
NOTE Confidence: 0.67813213375

00:53:02.416 --> 00:53:04.470 sick patients would be interested  
NOTE Confidence: 0.67813213375

00:53:04.470 --> 00:53:07.170 or able to do it that way.  
NOTE Confidence: 0.67813213375

00:53:07.170 --> 00:53:09.130 I mean our challenge is getting them  
NOTE Confidence: 0.67813213375

00:53:09.130 --> 00:53:11.267 all out and scheduling a group that  
NOTE Confidence: 0.67813213375

00:53:11.267 --> 00:53:13.710 would be the part that's less feasible.  
NOTE Confidence: 0.67813213375

00:53:13.710 --> 00:53:15.240 And then that's a question.

NOTE Confidence: 0.67813213375

00:53:15.240 --> 00:53:16.680 Is do we you know,

NOTE Confidence: 0.67813213375

00:53:16.680 --> 00:53:19.179 would they equally benefit from these other,

NOTE Confidence: 0.67813213375

00:53:19.180 --> 00:53:22.116 you know, individual or app bait you know?

NOTE Confidence: 0.67813213375

00:53:22.120 --> 00:53:25.158 And that's a that's a scientific question.

NOTE Confidence: 0.67813213375

00:53:25.160 --> 00:53:26.904 We kind of knew that what we were

NOTE Confidence: 0.67813213375

00:53:26.904 --> 00:53:28.408 doing was a little cumbersome,

NOTE Confidence: 0.67813213375

00:53:28.410 --> 00:53:30.321 but all our preliminary data was based

NOTE Confidence: 0.67813213375

00:53:30.321 --> 00:53:32.398 on that and the patients liked it.

NOTE Confidence: 0.67813213375

00:53:32.400 --> 00:53:33.363 So we did.

NOTE Confidence: 0.67813213375

00:53:33.363 --> 00:53:35.289 But now we're left with OK,

NOTE Confidence: 0.67813213375

00:53:35.290 --> 00:53:37.252 how do we actually go out and implement this?

NOTE Confidence: 0.67813213375

00:53:37.260 --> 00:53:39.604 How do we make it more streamlined for

NOTE Confidence: 0.67813213375

00:53:39.604 --> 00:53:41.750 the particularly the heart failure setting?

NOTE Confidence: 0.67813213375

00:53:41.750 --> 00:53:42.598 We are doing some,

NOTE Confidence: 0.67813213375

00:53:42.598 --> 00:53:43.234 by the way,

NOTE Confidence: 0.67813213375

00:53:43.240 --> 00:53:45.810 we're doing some additional qualitative.

NOTE Confidence: 0.67813213375

00:53:45.810 --> 00:53:48.006 Focus group work with providers in

NOTE Confidence: 0.67813213375

00:53:48.006 --> 00:53:49.859 heart failure programs of various

NOTE Confidence: 0.67813213375

00:53:49.859 --> 00:53:51.797 sorts to to ask their opinions

NOTE Confidence: 0.67813213375

00:53:51.797 --> 00:53:53.690 about how they might do this.

NOTE Confidence: 0.67813213375

00:53:53.690 --> 00:53:54.920 To get that to happen.

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00:53:56.360 --> 00:53:59.168 Well, wonderful wonderful body of work.

NOTE Confidence: 0.833309856666667

00:53:59.170 --> 00:54:02.034 Well, thank you so much Nancy for this

NOTE Confidence: 0.833309856666667

00:54:02.034 --> 00:54:04.578 wonderful talk and the lively discussion.

NOTE Confidence: 0.833309856666667

00:54:04.580 --> 00:54:06.635 And thank you everyone for

NOTE Confidence: 0.833309856666667

00:54:06.635 --> 00:54:08.279 participating in today's session.

NOTE Confidence: 0.833309856666667

00:54:08.280 --> 00:54:11.653 And this was our last session for 2021,

NOTE Confidence: 0.833309856666667

00:54:11.653 --> 00:54:13.318 so thanks everyone for making

NOTE Confidence: 0.833309856666667

00:54:13.318 --> 00:54:15.476 this a success and we will be back

NOTE Confidence: 0.833309856666667

00:54:15.476 --> 00:54:17.656 in January with another session

NOTE Confidence: 0.833309856666667

00:54:17.656 --> 00:54:19.835 sponsored by Boston Medical Center

NOTE Confidence: 0.833309856666667

00:54:19.835 --> 00:54:21.995 and so have a great afternoon.

NOTE Confidence: 0.833309856666667

00:54:22.000 --> 00:54:23.540 Have great holidays and we'll

NOTE Confidence: 0.833309856666667

00:54:23.540 --> 00:54:25.650 talk next month. Thank you.