

WEBVTT

NOTE duration: "00:30:44.992"

NOTE Confidence: 0.94271344

00:00:00.399 --> 00:00:00.900 Yeah.

NOTE Confidence: 0.8786177

00:00:03.520 --> 00:00:05.220 Alright. Well, welcome everybody.

NOTE Confidence: 0.9684315

00:00:06.559 --> 00:00:07.919 Thank you for coming to,

NOTE Confidence: 0.83732975

00:00:08.800 --> 00:00:10.580 noon conference, general medicine.

NOTE Confidence: 0.96878225

00:00:12.080 --> 00:00:12.580 Today's,

NOTE Confidence: 0.99038494

00:00:13.519 --> 00:00:15.745 CME CME code is five

NOTE Confidence: 0.99038494

00:00:15.745 --> 00:00:17.364 five nine zero one.

NOTE Confidence: 0.97106713

00:00:21.105 --> 00:00:22.485 Okay. So upcoming,

NOTE Confidence: 0.96610314

00:00:23.345 --> 00:00:25.185 retreats. Next one will be

NOTE Confidence: 0.96610314

00:00:25.185 --> 00:00:26.704 the education retreat on the

NOTE Confidence: 0.96610314

00:00:26.704 --> 00:00:27.445 West Campus.

NOTE Confidence: 0.9709563

00:00:28.225 --> 00:00:29.125 Stay tuned.

NOTE Confidence: 0.9942537

00:00:30.289 --> 00:00:30.789 Important

NOTE Confidence: 0.57714176

00:00:31.090 --> 00:00:31.590 but,

NOTE Confidence: 0.83846295

00:00:32.850 --> 00:00:33.350 familiar.  
NOTE Confidence: 0.8903066  
00:00:33.890 --> 00:00:35.489 F DAC reminders, please be  
NOTE Confidence: 0.8903066  
00:00:35.489 --> 00:00:36.690 on the lookout for your  
NOTE Confidence: 0.8903066  
00:00:36.690 --> 00:00:37.909 next steps, which  
NOTE Confidence: 0.9504729  
00:00:38.290 --> 00:00:40.129 most likely most likely will  
NOTE Confidence: 0.9504729  
00:00:40.129 --> 00:00:41.890 be including meeting with your  
NOTE Confidence: 0.9504729  
00:00:41.890 --> 00:00:42.390 mentors  
NOTE Confidence: 0.8187893  
00:00:42.770 --> 00:00:44.309 or your delegates.  
NOTE Confidence: 0.7913474  
00:00:47.555 --> 00:00:48.055 Research  
NOTE Confidence: 0.87956274  
00:00:48.434 --> 00:00:49.254 in progress,  
NOTE Confidence: 0.9127827  
00:00:50.675 --> 00:00:51.875 I guess the next one,  
NOTE Confidence: 0.9127827  
00:00:51.875 --> 00:00:53.475 March twenty sixth will be  
NOTE Confidence: 0.9127827  
00:00:53.475 --> 00:00:54.214 Nate Wood.  
NOTE Confidence: 0.930486  
00:00:54.515 --> 00:00:55.875 No. That's not okay. Got  
NOTE Confidence: 0.930486  
00:00:55.875 --> 00:00:56.454 it. Sorry.  
NOTE Confidence: 0.9212679  
00:00:56.835 --> 00:00:58.914 Grant Rounds, seven thirty AM

NOTE Confidence: 0.9212679  
00:00:58.914 --> 00:01:00.800 at Nate Wood. Food insecurity  
NOTE Confidence: 0.9212679  
00:01:00.860 --> 00:01:02.079 and culinary medicine,  
NOTE Confidence: 0.89726365  
00:01:03.180 --> 00:01:04.080 followed by,  
NOTE Confidence: 0.9613532  
00:01:04.459 --> 00:01:05.200 noon conference,  
NOTE Confidence: 0.8870753  
00:01:05.740 --> 00:01:07.440 next week. Ben Amba,  
NOTE Confidence: 0.9988585  
00:01:08.459 --> 00:01:09.819 speaking about the impact of  
NOTE Confidence: 0.9988585  
00:01:09.819 --> 00:01:11.040 the current landscape  
NOTE Confidence: 0.9404733  
00:01:11.660 --> 00:01:12.479 on GME  
NOTE Confidence: 0.9683138  
00:01:12.940 --> 00:01:13.440 nationwide.  
NOTE Confidence: 0.97742516  
00:01:16.354 --> 00:01:17.735 Disclosure and accreditation.  
NOTE Confidence: 0.99924505  
00:01:19.634 --> 00:01:21.975 So I'm excited to introduce,  
NOTE Confidence: 0.97886497  
00:01:22.755 --> 00:01:24.755 Joe Donrow, who is going  
NOTE Confidence: 0.97886497  
00:01:24.755 --> 00:01:25.875 to be joining us. So  
NOTE Confidence: 0.97886497  
00:01:25.875 --> 00:01:27.235 the original plan for today  
NOTE Confidence: 0.97886497  
00:01:27.235 --> 00:01:28.674 was to have two thirty  
NOTE Confidence: 0.97886497

00:01:28.674 --> 00:01:30.840 minute time slots. Our second,  
NOTE Confidence: 0.97886497  
00:01:31.159 --> 00:01:33.319 presenter is unfortunately unavailable at  
NOTE Confidence: 0.97886497  
00:01:33.319 --> 00:01:34.680 the last minute. So we  
NOTE Confidence: 0.97886497  
00:01:34.680 --> 00:01:35.880 have one thirty minute time  
NOTE Confidence: 0.97886497  
00:01:35.880 --> 00:01:37.079 slot, but we're really glad  
NOTE Confidence: 0.97886497  
00:01:37.079 --> 00:01:37.659 to have,  
NOTE Confidence: 0.966604  
00:01:38.039 --> 00:01:40.520 Joe joining us. Joe started  
NOTE Confidence: 0.966604  
00:01:40.520 --> 00:01:42.280 his training career at Tufts  
NOTE Confidence: 0.966604  
00:01:42.280 --> 00:01:43.319 where he learned his MD  
NOTE Confidence: 0.966604  
00:01:43.560 --> 00:01:45.159 earned his MD and Miles  
NOTE Confidence: 0.966604  
00:01:45.159 --> 00:01:46.755 per hour, spent two years  
NOTE Confidence: 0.966604  
00:01:46.755 --> 00:01:47.415 in Peru,  
NOTE Confidence: 0.9687883  
00:01:48.034 --> 00:01:49.875 before heading back north to  
NOTE Confidence: 0.9687883  
00:01:49.875 --> 00:01:50.534 New Haven,  
NOTE Confidence: 0.93945885  
00:01:51.075 --> 00:01:53.075 to, complete his med peds,  
NOTE Confidence: 0.93945885  
00:01:53.395 --> 00:01:55.314 residency and chief resident. And

NOTE Confidence: 0.93945885

00:01:55.314 --> 00:01:56.435 he's here now on faculty

NOTE Confidence: 0.93945885

00:01:56.435 --> 00:01:57.895 where he focuses on

NOTE Confidence: 0.9944319

00:01:58.530 --> 00:01:59.910 teaching clinical skills,

NOTE Confidence: 0.9874611

00:02:00.530 --> 00:02:03.090 clinical education overall, and also

NOTE Confidence: 0.9874611

00:02:03.090 --> 00:02:04.870 taking care of patients with,

NOTE Confidence: 0.8387255

00:02:05.410 --> 00:02:05.910 addiction.

NOTE Confidence: 0.9073667

00:02:06.450 --> 00:02:07.410 He's done a lot of

NOTE Confidence: 0.9073667

00:02:07.410 --> 00:02:07.970 work on,

NOTE Confidence: 0.94277096

00:02:08.850 --> 00:02:10.770 teaching pocus to our house

NOTE Confidence: 0.94277096

00:02:10.770 --> 00:02:12.605 staff and others. And here

NOTE Confidence: 0.94277096

00:02:12.605 --> 00:02:13.965 is, going to be speaking

NOTE Confidence: 0.94277096

00:02:13.965 --> 00:02:16.544 about, more generally competency assessment

NOTE Confidence: 0.94277096

00:02:16.605 --> 00:02:18.385 and are your measures reliable.

NOTE Confidence: 0.94277096

00:02:18.525 --> 00:02:19.425 So thank you.

NOTE Confidence: 0.947514

00:02:21.805 --> 00:02:23.185 Alright. Thanks for the opportunity

NOTE Confidence: 0.947514

00:02:23.445 --> 00:02:25.185 to come and talk.  
NOTE Confidence: 0.9248095  
00:02:26.940 --> 00:02:27.440 It's,  
NOTE Confidence: 0.98355496  
00:02:28.300 --> 00:02:30.060 it's about competency assessment, but  
NOTE Confidence: 0.98355496  
00:02:30.060 --> 00:02:31.819 it's it's gonna just closely  
NOTE Confidence: 0.98355496  
00:02:31.819 --> 00:02:33.900 parallel a study that, that  
NOTE Confidence: 0.98355496  
00:02:33.900 --> 00:02:34.400 we  
NOTE Confidence: 0.95169866  
00:02:34.700 --> 00:02:36.239 did here and and recently,  
NOTE Confidence: 0.997174  
00:02:37.340 --> 00:02:38.319 completed. So,  
NOTE Confidence: 0.98977417  
00:02:38.700 --> 00:02:39.200 actually,  
NOTE Confidence: 0.9716047  
00:02:39.525 --> 00:02:40.725 when I was approached to  
NOTE Confidence: 0.9716047  
00:02:40.725 --> 00:02:41.845 do this, it it it  
NOTE Confidence: 0.9716047  
00:02:41.845 --> 00:02:43.044 was a research in in  
NOTE Confidence: 0.9716047  
00:02:43.044 --> 00:02:43.544 progress.  
NOTE Confidence: 0.94254154  
00:02:45.044 --> 00:02:46.405 I'm happy to say now  
NOTE Confidence: 0.94254154  
00:02:46.405 --> 00:02:47.145 that it's,  
NOTE Confidence: 0.98664415  
00:02:47.764 --> 00:02:49.385 we've been published this week,

NOTE Confidence: 0.99201727  
00:02:50.485 --> 00:02:51.544 with a group of  
NOTE Confidence: 0.9709107  
00:02:52.030 --> 00:02:53.630 authors from from here and  
NOTE Confidence: 0.9709107  
00:02:53.630 --> 00:02:54.450 and elsewhere.  
NOTE Confidence: 0.9960483  
00:02:54.909 --> 00:02:56.129 And, I can  
NOTE Confidence: 0.991714  
00:02:56.510 --> 00:02:57.310 I can pause for a  
NOTE Confidence: 0.991714  
00:02:57.310 --> 00:02:58.510 second to hit that QR  
NOTE Confidence: 0.991714  
00:02:58.510 --> 00:02:59.549 code and download it and  
NOTE Confidence: 0.991714  
00:02:59.549 --> 00:03:00.590 get the metrics up a  
NOTE Confidence: 0.991714  
00:03:00.590 --> 00:03:01.889 little a little bit?  
NOTE Confidence: 0.98584366  
00:03:07.655 --> 00:03:09.254 I'll go through the the  
NOTE Confidence: 0.98584366  
00:03:09.254 --> 00:03:10.694 the background and the the  
NOTE Confidence: 0.98584366  
00:03:10.694 --> 00:03:11.194 methodology  
NOTE Confidence: 0.8877161  
00:03:11.495 --> 00:03:12.715 of of what we did,  
NOTE Confidence: 0.9816724  
00:03:13.735 --> 00:03:14.235 briefly,  
NOTE Confidence: 0.99836856  
00:03:14.775 --> 00:03:15.974 because we only have twenty  
NOTE Confidence: 0.99836856

00:03:15.974 --> 00:03:17.435 five minutes or so.  
NOTE Confidence: 0.9453322

00:03:17.815 --> 00:03:18.694 I really wanted to try  
NOTE Confidence: 0.9453322

00:03:18.694 --> 00:03:19.995 and focus the  
NOTE Confidence: 0.99980795

00:03:20.440 --> 00:03:21.260 the conversation  
NOTE Confidence: 0.9802357

00:03:21.800 --> 00:03:22.300 around,  
NOTE Confidence: 0.99955535

00:03:23.160 --> 00:03:24.220 a form of reliability  
NOTE Confidence: 0.98329943

00:03:24.760 --> 00:03:26.700 testing that's called generalizability  
NOTE Confidence: 0.9531227

00:03:27.400 --> 00:03:29.580 theory and, decision study,  
NOTE Confidence: 0.96542555

00:03:31.160 --> 00:03:32.780 and give a brief overview  
NOTE Confidence: 0.96542555

00:03:32.840 --> 00:03:34.355 of that and how we  
NOTE Confidence: 0.96542555

00:03:34.355 --> 00:03:35.635 interpreted it in the in  
NOTE Confidence: 0.96542555

00:03:35.635 --> 00:03:36.675 the context of our of  
NOTE Confidence: 0.96542555

00:03:36.675 --> 00:03:38.375 our study. And my disclaimer  
NOTE Confidence: 0.96542555

00:03:38.435 --> 00:03:39.795 is I am I am  
NOTE Confidence: 0.96542555

00:03:39.795 --> 00:03:41.555 not an expert in these,  
NOTE Confidence: 0.94701016

00:03:42.194 --> 00:03:42.935 this analytic,

NOTE Confidence: 0.8402165  
00:03:43.635 --> 00:03:44.135 technique.  
NOTE Confidence: 0.9971593  
00:03:44.435 --> 00:03:45.635 And it was actually really  
NOTE Confidence: 0.9971593  
00:03:45.635 --> 00:03:47.334 hard to find, expertise  
NOTE Confidence: 0.9893181  
00:03:47.635 --> 00:03:48.870 to to move our our  
NOTE Confidence: 0.9893181  
00:03:48.870 --> 00:03:50.310 project forward, but I'll I'll  
NOTE Confidence: 0.9893181  
00:03:50.310 --> 00:03:51.270 circle back to that in  
NOTE Confidence: 0.9893181  
00:03:51.270 --> 00:03:52.330 a in a moment.  
NOTE Confidence: 0.97877765  
00:03:54.630 --> 00:03:55.530 So some,  
NOTE Confidence: 0.9202547  
00:03:56.070 --> 00:03:57.210 background information.  
NOTE Confidence: 0.98746747  
00:03:57.830 --> 00:03:59.030 My interest in this stems  
NOTE Confidence: 0.98746747  
00:03:59.030 --> 00:04:00.390 from the work I do  
NOTE Confidence: 0.98746747  
00:04:00.390 --> 00:04:02.070 in, in terms of leading  
NOTE Confidence: 0.98746747  
00:04:02.070 --> 00:04:03.675 the point of care ultrasound  
NOTE Confidence: 0.98746747  
00:04:03.815 --> 00:04:05.435 programs for internal medicine,  
NOTE Confidence: 0.9988431  
00:04:06.535 --> 00:04:07.035 training  
NOTE Confidence: 0.9792803

00:04:07.415 --> 00:04:09.435 residents and and training faculty

NOTE Confidence: 0.9792803

00:04:09.575 --> 00:04:10.455 to use this as a

NOTE Confidence: 0.9792803

00:04:10.455 --> 00:04:12.135 tool in, in the clinical

NOTE Confidence: 0.9792803

00:04:12.135 --> 00:04:12.635 environment.

NOTE Confidence: 0.9825126

00:04:13.415 --> 00:04:14.475 Point of care ultrasound

NOTE Confidence: 0.9998975

00:04:14.775 --> 00:04:15.595 is the utilization

NOTE Confidence: 0.9991452

00:04:15.895 --> 00:04:17.950 of ultrasound at the point

NOTE Confidence: 0.9991452

00:04:17.950 --> 00:04:18.690 of care

NOTE Confidence: 0.97291225

00:04:19.390 --> 00:04:21.150 by the treating physician. And

NOTE Confidence: 0.97291225

00:04:21.150 --> 00:04:22.029 so we use it to

NOTE Confidence: 0.97291225

00:04:22.029 --> 00:04:23.089 help diagnose

NOTE Confidence: 0.8865011

00:04:23.390 --> 00:04:24.210 and manage,

NOTE Confidence: 0.9839721

00:04:24.750 --> 00:04:26.450 and in contrast to comprehensive

NOTE Confidence: 0.9839721

00:04:26.589 --> 00:04:27.089 ultrasound,

NOTE Confidence: 0.99926823

00:04:27.470 --> 00:04:28.750 this is used to really

NOTE Confidence: 0.99926823

00:04:28.750 --> 00:04:30.850 address very focused problems.

NOTE Confidence: 0.93464345  
00:04:35.385 --> 00:04:35.885 What's  
NOTE Confidence: 0.9987886  
00:04:36.585 --> 00:04:37.885 what's been lagging  
NOTE Confidence: 0.9468936  
00:04:38.425 --> 00:04:40.125 as Point of Georgetown becomes  
NOTE Confidence: 0.9468936  
00:04:40.345 --> 00:04:42.505 more and more popular amongst  
NOTE Confidence: 0.9468936  
00:04:42.505 --> 00:04:44.425 medical schools, amongst residents, and  
NOTE Confidence: 0.9468936  
00:04:44.425 --> 00:04:45.325 amongst faculty,  
NOTE Confidence: 0.9891572  
00:04:45.790 --> 00:04:47.410 The utilization of Pocus  
NOTE Confidence: 0.9446594  
00:04:48.190 --> 00:04:48.850 is increasing,  
NOTE Confidence: 0.96693814  
00:04:49.630 --> 00:04:51.470 at a tremendous rate. However,  
NOTE Confidence: 0.96693814  
00:04:51.470 --> 00:04:53.230 our ability to understand, are  
NOTE Confidence: 0.96693814  
00:04:53.230 --> 00:04:54.830 people actually competent to use  
NOTE Confidence: 0.96693814  
00:04:54.830 --> 00:04:55.570 this tool?  
NOTE Confidence: 0.98872447  
00:04:55.950 --> 00:04:57.730 That is lagging way behind.  
NOTE Confidence: 0.98872447  
00:04:58.029 --> 00:04:59.070 We don't have very good  
NOTE Confidence: 0.98872447  
00:04:59.070 --> 00:04:59.570 measures,  
NOTE Confidence: 0.9933101

00:05:00.315 --> 00:05:01.275 to be able to do  
NOTE Confidence: 0.9933101

00:05:01.275 --> 00:05:03.195 that, especially at that top  
NOTE Confidence: 0.9933101

00:05:03.195 --> 00:05:04.815 part of Miller's pyramid,  
NOTE Confidence: 0.977483

00:05:05.435 --> 00:05:06.415 where it's really,  
NOTE Confidence: 0.9336643

00:05:07.355 --> 00:05:08.955 competency in action. You know,  
NOTE Confidence: 0.9336643

00:05:08.955 --> 00:05:10.475 how is the learner actually  
NOTE Confidence: 0.9336643

00:05:10.475 --> 00:05:12.475 performing in the clinical, clinical  
NOTE Confidence: 0.9336643

00:05:12.475 --> 00:05:13.935 arena? And so  
NOTE Confidence: 0.8983884

00:05:16.660 --> 00:05:18.279 we formed a research question  
NOTE Confidence: 0.96015316

00:05:19.139 --> 00:05:21.700 around this this existing gap,  
NOTE Confidence: 0.96015316

00:05:21.700 --> 00:05:23.000 and the question became,  
NOTE Confidence: 0.9669743

00:05:23.620 --> 00:05:25.080 what is the validity evidence  
NOTE Confidence: 0.9669743

00:05:25.139 --> 00:05:26.419 supporting the use of an  
NOTE Confidence: 0.9669743

00:05:26.419 --> 00:05:28.279 entrustable professional activity  
NOTE Confidence: 0.9969469

00:05:28.660 --> 00:05:29.160 framework  
NOTE Confidence: 0.9981165

00:05:29.705 --> 00:05:30.825 to assess point of care

NOTE Confidence: 0.9981165  
00:05:30.825 --> 00:05:32.045 ultrasound competency  
NOTE Confidence: 0.9960893  
00:05:32.585 --> 00:05:33.885 in internal medicine  
NOTE Confidence: 0.94410217  
00:05:34.505 --> 00:05:35.005 learners.  
NOTE Confidence: 0.87740505  
00:05:36.665 --> 00:05:37.165 Yeah.  
NOTE Confidence: 0.718213  
00:05:38.585 --> 00:05:40.105 What is the state of  
NOTE Confidence: 0.718213  
00:05:40.105 --> 00:05:41.165 care at  
NOTE Confidence: 0.86613464  
00:05:41.880 --> 00:05:43.480 The level of certification of  
NOTE Confidence: 0.86613464  
00:05:43.560 --> 00:05:45.160 what's required for someone to  
NOTE Confidence: 0.86613464  
00:05:45.160 --> 00:05:46.760 roll out the focus machine  
NOTE Confidence: 0.86613464  
00:05:46.760 --> 00:05:47.960 in their own practice, I  
NOTE Confidence: 0.86613464  
00:05:47.960 --> 00:05:49.560 guess? That's the level. Yeah.  
NOTE Confidence: 0.86613464  
00:05:49.560 --> 00:05:50.120 Yeah. It's,  
NOTE Confidence: 0.95707166  
00:05:50.680 --> 00:05:52.360 it's it's a little bit  
NOTE Confidence: 0.95707166  
00:05:52.360 --> 00:05:54.140 of, of the wild west.  
NOTE Confidence: 0.9666658  
00:05:55.765 --> 00:05:56.505 Right now,  
NOTE Confidence: 0.8219887

00:05:56.885 --> 00:05:57.385 most,  
NOTE Confidence: 0.9984868  
00:05:58.725 --> 00:06:00.325 departments at Yale do not  
NOTE Confidence: 0.9984868  
00:06:00.325 --> 00:06:01.464 have a a privileging  
NOTE Confidence: 0.96736854  
00:06:01.765 --> 00:06:02.265 mechanism,  
NOTE Confidence: 0.9742809  
00:06:02.964 --> 00:06:04.325 for point of care ultrasound.  
NOTE Confidence: 0.9742809  
00:06:04.325 --> 00:06:05.045 There are a few that  
NOTE Confidence: 0.9742809  
00:06:05.045 --> 00:06:06.265 do. Emergency medicine,  
NOTE Confidence: 0.99501675  
00:06:06.805 --> 00:06:07.305 does.  
NOTE Confidence: 0.91969705  
00:06:08.325 --> 00:06:10.005 Surprisingly, you know, groups like  
NOTE Confidence: 0.91969705  
00:06:10.005 --> 00:06:11.305 Palm Crit do not.  
NOTE Confidence: 0.88459826  
00:06:11.610 --> 00:06:13.389 Internal medicine does not.  
NOTE Confidence: 0.94669276  
00:06:13.930 --> 00:06:15.449 And so as these are  
NOTE Confidence: 0.94669276  
00:06:15.449 --> 00:06:16.990 being used more and more,  
NOTE Confidence: 0.94669276  
00:06:17.130 --> 00:06:18.490 they're being used in the  
NOTE Confidence: 0.94669276  
00:06:18.490 --> 00:06:20.410 absence of a privileging process.  
NOTE Confidence: 0.94669276  
00:06:20.410 --> 00:06:21.770 In the absence of privilege

NOTE Confidence: 0.94669276

00:06:21.770 --> 00:06:23.050 process for the hospital, there's

NOTE Confidence: 0.94669276

00:06:23.050 --> 00:06:23.790 no formal

NOTE Confidence: 0.976213

00:06:24.995 --> 00:06:27.235 credentialing process either for which

NOTE Confidence: 0.976213

00:06:27.235 --> 00:06:27.895 to verify,

NOTE Confidence: 0.99362177

00:06:28.355 --> 00:06:28.855 competency.

NOTE Confidence: 0.99755204

00:06:29.475 --> 00:06:30.435 And so it's a lot

NOTE Confidence: 0.99755204

00:06:30.435 --> 00:06:31.794 of, sort of up to

NOTE Confidence: 0.99755204

00:06:31.794 --> 00:06:33.075 the professional to make a

NOTE Confidence: 0.99755204

00:06:33.075 --> 00:06:34.275 decision on whether or not

NOTE Confidence: 0.99755204

00:06:34.275 --> 00:06:36.514 they feel comfortable using that

NOTE Confidence: 0.99755204

00:06:36.514 --> 00:06:37.475 in the in the clinical

NOTE Confidence: 0.99755204

00:06:37.475 --> 00:06:37.975 arena.

NOTE Confidence: 0.9988466

00:06:38.400 --> 00:06:39.520 And as we as we

NOTE Confidence: 0.9988466

00:06:39.520 --> 00:06:41.120 know, clinicians are not always

NOTE Confidence: 0.9988466

00:06:41.120 --> 00:06:42.419 the best self assessors,

NOTE Confidence: 0.9970563

00:06:43.120 --> 00:06:43.620 which,  
NOTE Confidence: 0.9844354  
00:06:44.160 --> 00:06:45.680 you know, invites a problem,  
NOTE Confidence: 0.9844354  
00:06:45.680 --> 00:06:47.039 I think. But we're moving  
NOTE Confidence: 0.9844354  
00:06:47.039 --> 00:06:48.400 in that direction. So, actually,  
NOTE Confidence: 0.9844354  
00:06:48.400 --> 00:06:49.699 I I chair the committee  
NOTE Confidence: 0.9844354  
00:06:49.839 --> 00:06:52.035 for establishing a standard, process  
NOTE Confidence: 0.9844354  
00:06:52.195 --> 00:06:54.115 for privileging across the hospital  
NOTE Confidence: 0.9844354  
00:06:54.115 --> 00:06:55.575 and the delivery networks.  
NOTE Confidence: 0.9812669  
00:06:58.035 --> 00:06:59.635 That that committee has been  
NOTE Confidence: 0.9812669  
00:06:59.635 --> 00:07:01.315 in, together for about five  
NOTE Confidence: 0.9812669  
00:07:01.315 --> 00:07:02.135 years now,  
NOTE Confidence: 0.9835763  
00:07:03.075 --> 00:07:03.955 but I think we are  
NOTE Confidence: 0.9835763  
00:07:03.955 --> 00:07:05.154 close. I I I would  
NOTE Confidence: 0.9835763  
00:07:05.154 --> 00:07:06.595 expect that we there's probably  
NOTE Confidence: 0.9835763  
00:07:06.595 --> 00:07:08.130 privileging that that's gonna happen  
NOTE Confidence: 0.9835763  
00:07:08.130 --> 00:07:09.650 within the next six months

NOTE Confidence: 0.9835763  
00:07:09.650 --> 00:07:10.930 or so. Now that I've  
NOTE Confidence: 0.9835763  
00:07:10.930 --> 00:07:12.050 said that, I've cursed it,  
NOTE Confidence: 0.9835763  
00:07:12.050 --> 00:07:13.250 but I think we are  
NOTE Confidence: 0.9835763  
00:07:13.250 --> 00:07:14.690 closer than than we ever  
NOTE Confidence: 0.9835763  
00:07:14.690 --> 00:07:15.890 have been. So there there  
NOTE Confidence: 0.9835763  
00:07:15.890 --> 00:07:17.270 should be a credentialing privileging  
NOTE Confidence: 0.9835763  
00:07:17.410 --> 00:07:18.710 process soon.  
NOTE Confidence: 0.9992675  
00:07:23.395 --> 00:07:24.294 The methodology  
NOTE Confidence: 0.97404146  
00:07:24.755 --> 00:07:25.255 for,  
NOTE Confidence: 0.97439253  
00:07:26.035 --> 00:07:27.395 the study that we that  
NOTE Confidence: 0.97439253  
00:07:27.395 --> 00:07:28.215 we did. So,  
NOTE Confidence: 0.9426719  
00:07:29.634 --> 00:07:31.715 we developed an EPA or  
NOTE Confidence: 0.9426719  
00:07:31.715 --> 00:07:33.175 intractable professional activity  
NOTE Confidence: 0.9508995  
00:07:33.555 --> 00:07:34.055 framework  
NOTE Confidence: 0.99587125  
00:07:34.435 --> 00:07:36.380 and instrument to use. That  
NOTE Confidence: 0.99587125

00:07:36.380 --> 00:07:38.139 process was guided by a  
NOTE Confidence: 0.99587125

00:07:38.139 --> 00:07:40.139 panel of experts in point  
NOTE Confidence: 0.99587125

00:07:40.139 --> 00:07:40.880 of care ultrasound  
NOTE Confidence: 0.90693426

00:07:41.260 --> 00:07:42.960 and, medical education,  
NOTE Confidence: 0.97706956

00:07:43.500 --> 00:07:44.380 and it followed a very  
NOTE Confidence: 0.97706956

00:07:44.380 --> 00:07:46.320 standardized way to create,  
NOTE Confidence: 0.99556184

00:07:46.860 --> 00:07:47.760 create an EPA.  
NOTE Confidence: 0.94193584

00:07:48.485 --> 00:07:49.445 The tool we created, the  
NOTE Confidence: 0.94193584

00:07:49.445 --> 00:07:51.605 instrument we created is online  
NOTE Confidence: 0.94193584

00:07:51.605 --> 00:07:53.205 so learners access it on  
NOTE Confidence: 0.94193584

00:07:53.205 --> 00:07:54.005 their phones,  
NOTE Confidence: 0.99529713

00:07:54.325 --> 00:07:55.205 so it can be used  
NOTE Confidence: 0.99529713

00:07:55.205 --> 00:07:56.405 in in real time in  
NOTE Confidence: 0.99529713

00:07:56.405 --> 00:07:56.985 the workplace.  
NOTE Confidence: 0.9922829

00:07:57.365 --> 00:07:58.805 Then we trained a group  
NOTE Confidence: 0.9922829

00:07:58.805 --> 00:07:59.305 of,

NOTE Confidence: 0.98919624  
00:07:59.685 --> 00:08:01.865 ultrasound experts to become assessors  
NOTE Confidence: 0.98919624  
00:08:02.005 --> 00:08:02.485 for us,  
NOTE Confidence: 0.97245735  
00:08:03.389 --> 00:08:04.270 so that they can do  
NOTE Confidence: 0.97245735  
00:08:04.270 --> 00:08:06.110 the assessments with our, with  
NOTE Confidence: 0.97245735  
00:08:06.110 --> 00:08:06.770 our learners  
NOTE Confidence: 0.9913466  
00:08:07.070 --> 00:08:07.889 at the bedside.  
NOTE Confidence: 0.9774335  
00:08:08.590 --> 00:08:10.430 And then we evaluated the  
NOTE Confidence: 0.9774335  
00:08:10.430 --> 00:08:11.550 framework and the and the  
NOTE Confidence: 0.9774335  
00:08:11.550 --> 00:08:12.910 instrument that we're using for  
NOTE Confidence: 0.9774335  
00:08:12.910 --> 00:08:15.250 sources of, evidence of validity,  
NOTE Confidence: 0.9774335  
00:08:15.470 --> 00:08:17.169 reliability, and and feasibility.  
NOTE Confidence: 0.98191553  
00:08:20.555 --> 00:08:22.155 The EPA that we that  
NOTE Confidence: 0.98191553  
00:08:22.155 --> 00:08:23.515 we came up with is  
NOTE Confidence: 0.98191553  
00:08:23.515 --> 00:08:25.595 this, assessing the acutely ill  
NOTE Confidence: 0.98191553  
00:08:25.595 --> 00:08:27.115 patient using point of care  
NOTE Confidence: 0.98191553

00:08:27.115 --> 00:08:27.615 ultrasound,  
NOTE Confidence: 0.9867485

00:08:28.315 --> 00:08:30.315 and the scale that we  
NOTE Confidence: 0.9867485

00:08:30.315 --> 00:08:31.355 use as our,  
NOTE Confidence: 0.86239123

00:08:31.835 --> 00:08:32.334 assessment  
NOTE Confidence: 0.9962458

00:08:33.850 --> 00:08:36.010 assessment assessment scale is up  
NOTE Confidence: 0.9962458

00:08:36.010 --> 00:08:36.750 there. So  
NOTE Confidence: 0.9231853

00:08:37.450 --> 00:08:39.230 with entrustable professional activities,  
NOTE Confidence: 0.9753925

00:08:39.929 --> 00:08:41.630 the the key cutoff is  
NOTE Confidence: 0.9753925

00:08:41.690 --> 00:08:42.750 where is somebody  
NOTE Confidence: 0.9445849

00:08:43.210 --> 00:08:44.250 the level at which somebody  
NOTE Confidence: 0.9445849

00:08:44.250 --> 00:08:45.770 can be entrusted to perform  
NOTE Confidence: 0.9445849

00:08:45.770 --> 00:08:46.429 the activity  
NOTE Confidence: 0.9481402

00:08:46.809 --> 00:08:48.830 by themselves in an unsupervised  
NOTE Confidence: 0.9481402

00:08:49.130 --> 00:08:50.545 way. In our on our  
NOTE Confidence: 0.9481402

00:08:50.545 --> 00:08:52.225 scale, that is level four,  
NOTE Confidence: 0.9481402

00:08:52.225 --> 00:08:53.684 allowed to practice the EPA

NOTE Confidence: 0.9481402  
00:08:53.824 --> 00:08:54.324 unsupervised.  
NOTE Confidence: 0.98929113  
00:08:55.345 --> 00:08:57.425 And between level one to  
NOTE Confidence: 0.98929113  
00:08:57.425 --> 00:08:58.785 four, there's there's there's a  
NOTE Confidence: 0.98929113  
00:08:58.785 --> 00:08:59.285 gradation.  
NOTE Confidence: 0.9952308  
00:09:00.065 --> 00:09:01.745 What's nice about this tool  
NOTE Confidence: 0.9952308  
00:09:01.745 --> 00:09:03.024 is that at each level,  
NOTE Confidence: 0.9952308  
00:09:03.024 --> 00:09:04.884 it really directs the feedback  
NOTE Confidence: 0.9664108  
00:09:05.440 --> 00:09:06.800 that the learner needs to  
NOTE Confidence: 0.9664108  
00:09:06.800 --> 00:09:08.480 advance to the next step.  
NOTE Confidence: 0.9664108  
00:09:08.480 --> 00:09:09.760 So it it becomes an  
NOTE Confidence: 0.9664108  
00:09:09.760 --> 00:09:11.280 important way to to to  
NOTE Confidence: 0.9664108  
00:09:11.280 --> 00:09:12.740 track competency, but also  
NOTE Confidence: 0.9819592  
00:09:13.120 --> 00:09:13.620 to,  
NOTE Confidence: 0.9978003  
00:09:14.800 --> 00:09:15.600 to make sure that the  
NOTE Confidence: 0.9978003  
00:09:15.600 --> 00:09:17.600 feedback that's given is, is  
NOTE Confidence: 0.9978003

00:09:17.600 --> 00:09:18.880 the right feedback for where  
NOTE Confidence: 0.9978003

00:09:18.880 --> 00:09:20.125 the learner is on their  
NOTE Confidence: 0.9978003

00:09:20.125 --> 00:09:21.264 competency pathway.  
NOTE Confidence: 0.9757783

00:09:24.524 --> 00:09:25.024 So  
NOTE Confidence: 0.973012

00:09:25.644 --> 00:09:27.005 skipping some steps because I  
NOTE Confidence: 0.973012

00:09:27.005 --> 00:09:27.964 I just wanted to get  
NOTE Confidence: 0.973012

00:09:27.964 --> 00:09:29.485 to to really what's the  
NOTE Confidence: 0.973012

00:09:29.485 --> 00:09:31.084 focus of of today, which  
NOTE Confidence: 0.973012

00:09:31.084 --> 00:09:33.690 is reliability testing. So one  
NOTE Confidence: 0.973012

00:09:33.929 --> 00:09:35.850 source of validity evidence when  
NOTE Confidence: 0.973012

00:09:35.850 --> 00:09:36.830 we're thinking about,  
NOTE Confidence: 0.9864514

00:09:37.690 --> 00:09:39.150 developing a tool is,  
NOTE Confidence: 0.9724421

00:09:39.929 --> 00:09:41.450 is reliability. And when we  
NOTE Confidence: 0.9724421

00:09:41.450 --> 00:09:43.370 think about reliability, what we're  
NOTE Confidence: 0.9724421

00:09:43.370 --> 00:09:44.570 we're asking is are the  
NOTE Confidence: 0.9724421

00:09:44.570 --> 00:09:46.270 measures consistent across,

NOTE Confidence: 0.97729385

00:09:46.915 --> 00:09:49.075 different workplace conditions and across

NOTE Confidence: 0.97729385

00:09:49.075 --> 00:09:51.095 different assessors and learners?

NOTE Confidence: 0.943868

00:09:53.635 --> 00:09:54.755 Another way to think about

NOTE Confidence: 0.943868

00:09:54.755 --> 00:09:56.755 re reliability testing is how

NOTE Confidence: 0.943868

00:09:56.755 --> 00:09:58.535 close is the observed score

NOTE Confidence: 0.9580473

00:09:59.300 --> 00:10:00.819 to the true score. Right?

NOTE Confidence: 0.9580473

00:10:00.819 --> 00:10:01.559 How close

NOTE Confidence: 0.9961252

00:10:02.019 --> 00:10:02.920 is my observations

NOTE Confidence: 0.88944155

00:10:03.379 --> 00:10:04.199 of competence?

NOTE Confidence: 0.988725

00:10:04.740 --> 00:10:06.100 How close is that to

NOTE Confidence: 0.988725

00:10:06.100 --> 00:10:07.639 the learner's true competence?

NOTE Confidence: 0.96903366

00:10:09.220 --> 00:10:10.660 If you're prefer to think

NOTE Confidence: 0.96903366

00:10:10.660 --> 00:10:11.779 about in terms of formula,

NOTE Confidence: 0.96903366

00:10:11.779 --> 00:10:12.740 you see the formula on

NOTE Confidence: 0.96903366

00:10:12.740 --> 00:10:13.934 the on the screen there,

NOTE Confidence: 0.96903366

00:10:14.175 --> 00:10:15.855 observed score equals true score  
NOTE Confidence: 0.96903366

00:10:15.855 --> 00:10:17.455 plus some some error in  
NOTE Confidence: 0.96903366

00:10:17.455 --> 00:10:18.735 our measurement. Right? We can  
NOTE Confidence: 0.96903366

00:10:18.735 --> 00:10:20.175 never really get to the  
NOTE Confidence: 0.96903366

00:10:20.175 --> 00:10:21.855 true, the true score. There's  
NOTE Confidence: 0.96903366

00:10:21.855 --> 00:10:23.135 always some error that we  
NOTE Confidence: 0.96903366

00:10:23.135 --> 00:10:24.675 wanna try and understand  
NOTE Confidence: 0.9971097

00:10:25.295 --> 00:10:25.955 and minimize.  
NOTE Confidence: 0.90774375

00:10:29.420 --> 00:10:31.679 The classical approach to reliability  
NOTE Confidence: 0.7534884

00:10:32.139 --> 00:10:32.639 testing,  
NOTE Confidence: 0.97553366

00:10:34.700 --> 00:10:36.000 really looks at,  
NOTE Confidence: 0.9541825

00:10:36.380 --> 00:10:38.059 or focuses on one source  
NOTE Confidence: 0.9541825

00:10:38.059 --> 00:10:39.260 of errors. So studies are  
NOTE Confidence: 0.9541825

00:10:39.260 --> 00:10:40.300 designed to look at things  
NOTE Confidence: 0.9541825

00:10:40.300 --> 00:10:42.800 like interrater reliability or intercase  
NOTE Confidence: 0.92974436

00:10:43.184 --> 00:10:45.265 reliability or internal consistency alpha

NOTE Confidence: 0.92974436

00:10:45.265 --> 00:10:47.184 sicknesses, the Cronbach alpha that

NOTE Confidence: 0.92974436

00:10:47.184 --> 00:10:48.965 you're probably familiar with.

NOTE Confidence: 0.990891

00:10:51.585 --> 00:10:52.945 The challenge with that, though,

NOTE Confidence: 0.990891

00:10:52.945 --> 00:10:54.965 is that in medical education

NOTE Confidence: 0.990891

00:10:55.025 --> 00:10:56.304 and the assessments that we

NOTE Confidence: 0.990891

00:10:56.304 --> 00:10:58.240 do, there's there's more than

NOTE Confidence: 0.990891

00:10:58.240 --> 00:11:00.080 just one source of error

NOTE Confidence: 0.990891

00:11:00.080 --> 00:11:01.360 that we have to worry

NOTE Confidence: 0.990891

00:11:01.360 --> 00:11:01.860 about.

NOTE Confidence: 0.968942

00:11:02.640 --> 00:11:04.400 There's multiple potential sources of

NOTE Confidence: 0.968942

00:11:04.400 --> 00:11:06.500 error. And so in reality,

NOTE Confidence: 0.968942

00:11:06.559 --> 00:11:08.179 we have to move from

NOTE Confidence: 0.9917855

00:11:08.559 --> 00:11:09.059 that,

NOTE Confidence: 0.9990184

00:11:09.760 --> 00:11:10.580 that classical

NOTE Confidence: 0.77234626

00:11:11.714 --> 00:11:12.214 formula.

NOTE Confidence: 0.9943158

00:11:12.755 --> 00:11:13.975 And we have to consider,  
NOTE Confidence: 0.9986032

00:11:14.675 --> 00:11:15.554 you know, what is the  
NOTE Confidence: 0.9986032

00:11:15.554 --> 00:11:16.855 error that we can attribute  
NOTE Confidence: 0.9986032

00:11:17.074 --> 00:11:17.574 to  
NOTE Confidence: 0.9735494

00:11:17.875 --> 00:11:18.615 the learner?  
NOTE Confidence: 0.9805341

00:11:19.074 --> 00:11:19.954 What is the error that  
NOTE Confidence: 0.9805341

00:11:19.954 --> 00:11:20.915 we can attribute to the  
NOTE Confidence: 0.9805341

00:11:20.915 --> 00:11:22.194 raters? Some raters are more  
NOTE Confidence: 0.9805341

00:11:22.194 --> 00:11:23.795 lenient. Some are more strict.  
NOTE Confidence: 0.9805341

00:11:23.795 --> 00:11:24.774 Some know the,  
NOTE Confidence: 0.89510113

00:11:25.634 --> 00:11:26.595 some know the learner and  
NOTE Confidence: 0.89510113

00:11:26.595 --> 00:11:27.809 that influence the scores.  
NOTE Confidence: 0.9954844

00:11:28.110 --> 00:11:28.930 We have to,  
NOTE Confidence: 0.97462124

00:11:29.390 --> 00:11:31.809 think about error attributed to  
NOTE Confidence: 0.97462124

00:11:31.870 --> 00:11:33.790 the clinical case. Are there  
NOTE Confidence: 0.97462124

00:11:33.790 --> 00:11:35.550 differences in difficulty between the

NOTE Confidence: 0.97462124

00:11:35.550 --> 00:11:36.590 cases that the that the

NOTE Confidence: 0.97462124

00:11:36.590 --> 00:11:38.030 learners are being assessed on?

NOTE Confidence: 0.97462124

00:11:38.030 --> 00:11:39.550 And all of those factor

NOTE Confidence: 0.97462124

00:11:39.550 --> 00:11:40.050 into

NOTE Confidence: 0.9956171

00:11:40.430 --> 00:11:41.890 that error value.

NOTE Confidence: 0.96580917

00:11:42.404 --> 00:11:43.845 And so in reality, what

NOTE Confidence: 0.96580917

00:11:43.845 --> 00:11:46.005 we really need our formula

NOTE Confidence: 0.96580917

00:11:46.005 --> 00:11:47.285 to look like is this.

NOTE Confidence: 0.96580917

00:11:47.285 --> 00:11:49.125 So our observed score equals

NOTE Confidence: 0.96580917

00:11:49.125 --> 00:11:50.804 the true score plus multiple

NOTE Confidence: 0.96580917

00:11:50.804 --> 00:11:52.165 sources of error. How do

NOTE Confidence: 0.96580917

00:11:52.165 --> 00:11:54.404 we get to evaluating what

NOTE Confidence: 0.96580917

00:11:54.404 --> 00:11:55.845 those sources of of error

NOTE Confidence: 0.96580917

00:11:55.845 --> 00:11:57.410 are and what the relative

NOTE Confidence: 0.96580917

00:11:57.550 --> 00:11:59.410 contributions are to the overall

NOTE Confidence: 0.995162

00:11:59.870 --> 00:12:00.770 error number.  
NOTE Confidence: 0.96597403

00:12:04.350 --> 00:12:05.630 And that's and we I  
NOTE Confidence: 0.96597403

00:12:05.630 --> 00:12:06.910 was stuck there for a  
NOTE Confidence: 0.96597403

00:12:06.910 --> 00:12:08.830 long time. We had collected  
NOTE Confidence: 0.96597403

00:12:08.830 --> 00:12:09.490 our data,  
NOTE Confidence: 0.9465235

00:12:10.774 --> 00:12:12.214 and I was, you know,  
NOTE Confidence: 0.9465235

00:12:12.214 --> 00:12:13.434 really trying to move forward.  
NOTE Confidence: 0.95065904

00:12:14.295 --> 00:12:15.575 And the problem was there  
NOTE Confidence: 0.95065904

00:12:15.575 --> 00:12:17.255 just wasn't the expertise to  
NOTE Confidence: 0.95065904

00:12:17.255 --> 00:12:18.454 to run the studies that  
NOTE Confidence: 0.95065904

00:12:18.454 --> 00:12:19.654 we needed to run, at  
NOTE Confidence: 0.95065904

00:12:19.654 --> 00:12:20.695 least that that I could  
NOTE Confidence: 0.95065904

00:12:20.695 --> 00:12:21.675 find after,  
NOTE Confidence: 0.97145087

00:12:22.454 --> 00:12:23.459 a lot of a lot  
NOTE Confidence: 0.97145087

00:12:23.459 --> 00:12:25.139 of emails and communications around  
NOTE Confidence: 0.97145087

00:12:25.139 --> 00:12:26.980 this, trying to find somebody

NOTE Confidence: 0.97145087  
00:12:26.980 --> 00:12:28.339 to to run the studies  
NOTE Confidence: 0.97145087  
00:12:28.339 --> 00:12:29.300 that we needed to do  
NOTE Confidence: 0.97145087  
00:12:29.300 --> 00:12:30.819 to to get to this  
NOTE Confidence: 0.97145087  
00:12:30.819 --> 00:12:32.819 multiple sources of of error.  
NOTE Confidence: 0.97145087  
00:12:32.819 --> 00:12:33.860 And it's a type of  
NOTE Confidence: 0.97145087  
00:12:33.860 --> 00:12:35.139 of analysis that's called the  
NOTE Confidence: 0.97145087  
00:12:35.139 --> 00:12:35.639 generalizability  
NOTE Confidence: 0.99921125  
00:12:36.420 --> 00:12:36.920 theory.  
NOTE Confidence: 0.9138435  
00:12:39.135 --> 00:12:39.635 Fortunately,  
NOTE Confidence: 0.91928244  
00:12:40.415 --> 00:12:41.455 two things happen.  
NOTE Confidence: 0.99169934  
00:12:41.934 --> 00:12:42.434 One,  
NOTE Confidence: 0.84691924  
00:12:43.215 --> 00:12:44.675 Donna Windisch in the department  
NOTE Confidence: 0.84691924  
00:12:44.735 --> 00:12:45.235 started,  
NOTE Confidence: 0.89886314  
00:12:46.495 --> 00:12:48.495 started the Department of Medicine  
NOTE Confidence: 0.89886314  
00:12:48.495 --> 00:12:48.995 educational  
NOTE Confidence: 0.8824873

00:12:49.295 --> 00:12:49.795 grant.  
NOTE Confidence: 0.9725535

00:12:50.175 --> 00:12:51.135 That came out about the  
NOTE Confidence: 0.9725535

00:12:51.135 --> 00:12:52.195 same time as,  
NOTE Confidence: 0.9908964

00:12:52.559 --> 00:12:53.360 as I was in the  
NOTE Confidence: 0.9908964

00:12:53.360 --> 00:12:54.480 the struggle to to do  
NOTE Confidence: 0.9908964

00:12:54.480 --> 00:12:55.220 this analysis.  
NOTE Confidence: 0.9471426

00:12:56.080 --> 00:12:57.440 And I was introduced to  
NOTE Confidence: 0.9471426

00:12:57.440 --> 00:12:59.380 Haidong Lu, who's who's here  
NOTE Confidence: 0.9471426

00:12:59.520 --> 00:13:00.580 today as well. And,  
NOTE Confidence: 0.95820194

00:13:01.840 --> 00:13:03.280 with the the funding support,  
NOTE Confidence: 0.95820194

00:13:03.280 --> 00:13:04.720 I was able to connect  
NOTE Confidence: 0.95820194

00:13:04.720 --> 00:13:06.320 with Haidong, and, and we  
NOTE Confidence: 0.95820194

00:13:06.320 --> 00:13:07.845 were able to to plan  
NOTE Confidence: 0.95820194

00:13:07.845 --> 00:13:09.045 together and and,  
NOTE Confidence: 0.977452

00:13:09.925 --> 00:13:11.845 he he became my my  
NOTE Confidence: 0.977452

00:13:11.845 --> 00:13:13.205 expert for for getting this

NOTE Confidence: 0.977452  
00:13:13.205 --> 00:13:15.045 done and was really the,  
NOTE Confidence: 0.977452  
00:13:15.365 --> 00:13:15.865 the  
NOTE Confidence: 0.951639  
00:13:16.245 --> 00:13:17.605 the the key piece to  
NOTE Confidence: 0.951639  
00:13:17.605 --> 00:13:18.485 to be able to move  
NOTE Confidence: 0.951639  
00:13:18.485 --> 00:13:20.425 this, this forward. So I'm  
NOTE Confidence: 0.95440173  
00:13:20.829 --> 00:13:23.149 extremely, extremely grateful, both for  
NOTE Confidence: 0.95440173  
00:13:23.149 --> 00:13:24.829 the educational research grant and  
NOTE Confidence: 0.95440173  
00:13:24.829 --> 00:13:25.649 for, for.  
NOTE Confidence: 0.9918075  
00:13:27.709 --> 00:13:28.670 And so what what he  
NOTE Confidence: 0.9918075  
00:13:28.670 --> 00:13:30.370 was able to do is  
NOTE Confidence: 0.9918075  
00:13:30.429 --> 00:13:32.690 this analysis called, generalizability  
NOTE Confidence: 0.92634356  
00:13:33.630 --> 00:13:34.130 theory.  
NOTE Confidence: 0.9994751  
00:13:34.510 --> 00:13:36.745 And what this does is  
NOTE Confidence: 0.9402848  
00:13:37.205 --> 00:13:37.705 it,  
NOTE Confidence: 0.9803813  
00:13:39.205 --> 00:13:40.505 it tries to,  
NOTE Confidence: 0.995324

00:13:41.205 --> 00:13:42.885 to distill down the various  
NOTE Confidence: 0.995324

00:13:42.885 --> 00:13:44.645 sources of error that could  
NOTE Confidence: 0.995324

00:13:44.645 --> 00:13:46.345 be contributing to our overall  
NOTE Confidence: 0.995324

00:13:46.485 --> 00:13:46.985 reliability  
NOTE Confidence: 0.95513123

00:13:48.040 --> 00:13:48.540 and,  
NOTE Confidence: 0.9974548

00:13:48.920 --> 00:13:50.540 figure out the the relative  
NOTE Confidence: 0.9974548

00:13:50.600 --> 00:13:52.600 contributions of each. So within  
NOTE Confidence: 0.9974548

00:13:52.600 --> 00:13:53.100 this,  
NOTE Confidence: 0.9923277

00:13:53.480 --> 00:13:55.420 this framework of this analysis,  
NOTE Confidence: 0.9974685

00:13:56.120 --> 00:13:57.240 we see that there are  
NOTE Confidence: 0.9974685

00:13:57.240 --> 00:13:57.740 effects,  
NOTE Confidence: 0.990593

00:13:58.360 --> 00:14:00.120 otherwise known as as facets.  
NOTE Confidence: 0.990593

00:14:00.120 --> 00:14:01.880 These are the potential sources  
NOTE Confidence: 0.990593

00:14:01.880 --> 00:14:03.340 of error as we're,  
NOTE Confidence: 0.9529996

00:14:03.934 --> 00:14:05.455 as we're performing our assessment.  
NOTE Confidence: 0.9529996

00:14:05.455 --> 00:14:06.415 So we see things on

NOTE Confidence: 0.9529996  
00:14:06.415 --> 00:14:07.554 there like the learner,  
NOTE Confidence: 0.9828634  
00:14:08.175 --> 00:14:08.835 the rater.  
NOTE Confidence: 0.9830297  
00:14:09.455 --> 00:14:11.075 The syndrome refers to,  
NOTE Confidence: 0.96094936  
00:14:11.934 --> 00:14:14.015 within our EPA, students are  
NOTE Confidence: 0.96094936  
00:14:14.175 --> 00:14:15.550 or learners are evaluating the  
NOTE Confidence: 0.96094936  
00:14:15.550 --> 00:14:17.070 dyspnic patient, the patient with  
NOTE Confidence: 0.96094936  
00:14:17.070 --> 00:14:18.590 abdominal distension, the patient with  
NOTE Confidence: 0.96094936  
00:14:18.590 --> 00:14:20.750 hypotension. So various syndromes that  
NOTE Confidence: 0.96094936  
00:14:20.750 --> 00:14:22.210 they're, they're evaluating.  
NOTE Confidence: 0.9990294  
00:14:22.590 --> 00:14:23.490 And there are  
NOTE Confidence: 0.96434605  
00:14:23.950 --> 00:14:26.030 interactions between these things as  
NOTE Confidence: 0.96434605  
00:14:26.030 --> 00:14:27.250 well. So there are interactions  
NOTE Confidence: 0.96434605  
00:14:27.470 --> 00:14:28.510 between the learner and the  
NOTE Confidence: 0.96434605  
00:14:28.510 --> 00:14:29.470 rater, the learner and the  
NOTE Confidence: 0.96434605  
00:14:29.470 --> 00:14:31.195 syndrome, the rater and and  
NOTE Confidence: 0.96434605

00:14:31.195 --> 00:14:32.334 on and on and  
NOTE Confidence: 0.98999155

00:14:32.635 --> 00:14:33.755 on. And the idea is  
NOTE Confidence: 0.98999155

00:14:33.755 --> 00:14:35.035 to try and get to  
NOTE Confidence: 0.98999155

00:14:35.035 --> 00:14:36.075 how much are each of  
NOTE Confidence: 0.98999155

00:14:36.075 --> 00:14:38.334 these contributing to the overall  
NOTE Confidence: 0.827011

00:14:38.954 --> 00:14:39.935 error. And,  
NOTE Confidence: 0.9961664

00:14:40.954 --> 00:14:42.235 we call that the percent  
NOTE Confidence: 0.9961664

00:14:42.235 --> 00:14:43.595 variance. So if we think  
NOTE Confidence: 0.9961664

00:14:43.595 --> 00:14:44.095 about,  
NOTE Confidence: 0.9972857

00:14:44.475 --> 00:14:45.214 there is  
NOTE Confidence: 0.979295

00:14:46.130 --> 00:14:47.970 an absolute number that is  
NOTE Confidence: 0.979295

00:14:47.970 --> 00:14:49.330 that error, and within that  
NOTE Confidence: 0.979295

00:14:49.330 --> 00:14:50.710 absolute number, there are contributions  
NOTE Confidence: 0.979295

00:14:50.850 --> 00:14:51.650 from each one of these  
NOTE Confidence: 0.979295

00:14:51.650 --> 00:14:52.930 things. How much does each  
NOTE Confidence: 0.979295

00:14:52.930 --> 00:14:54.210 of these contribute to that

NOTE Confidence: 0.979295  
00:14:54.210 --> 00:14:55.970 error number? And it also  
NOTE Confidence: 0.979295  
00:14:55.970 --> 00:14:58.450 gives us a measure of  
NOTE Confidence: 0.979295  
00:14:58.450 --> 00:15:00.050 reliability, and we're gonna circle  
NOTE Confidence: 0.979295  
00:15:00.050 --> 00:15:00.825 back to this,  
NOTE Confidence: 0.9990296  
00:15:01.225 --> 00:15:02.205 because one of  
NOTE Confidence: 0.98067665  
00:15:02.665 --> 00:15:04.125 the the powers of this,  
NOTE Confidence: 0.98404336  
00:15:04.585 --> 00:15:06.425 assessment technique is it allows  
NOTE Confidence: 0.98404336  
00:15:06.425 --> 00:15:07.225 us to do what's called  
NOTE Confidence: 0.98404336  
00:15:07.225 --> 00:15:08.365 the decision study  
NOTE Confidence: 0.8624358  
00:15:08.745 --> 00:15:10.205 where we can estimate,  
NOTE Confidence: 0.9952276  
00:15:11.225 --> 00:15:12.745 how many observations or how  
NOTE Confidence: 0.9952276  
00:15:12.745 --> 00:15:14.025 many raters do we need  
NOTE Confidence: 0.9952276  
00:15:14.025 --> 00:15:15.305 to achieve a certain level  
NOTE Confidence: 0.9952276  
00:15:15.305 --> 00:15:15.965 of reliability,  
NOTE Confidence: 0.99851644  
00:15:16.540 --> 00:15:17.580 which really helps us to  
NOTE Confidence: 0.99851644

00:15:17.580 --> 00:15:19.040 optimize our processes  
NOTE Confidence: 0.9851699

00:15:19.660 --> 00:15:21.200 of assessment moving forward.  
NOTE Confidence: 0.9842734

00:15:21.740 --> 00:15:22.460 So we're just gonna take  
NOTE Confidence: 0.9842734

00:15:22.460 --> 00:15:23.260 a quick peek at,  
NOTE Confidence: 0.9479974

00:15:23.900 --> 00:15:24.860 at each of these and  
NOTE Confidence: 0.9479974

00:15:24.860 --> 00:15:26.460 talk briefly about, some of  
NOTE Confidence: 0.9479974

00:15:26.460 --> 00:15:28.000 the the the main effects.  
NOTE Confidence: 0.97033405

00:15:28.755 --> 00:15:30.195 So we looked at learner  
NOTE Confidence: 0.97033405

00:15:30.195 --> 00:15:32.375 variance. And for medical education  
NOTE Confidence: 0.9977177

00:15:32.915 --> 00:15:34.275 studies, what you really wanna  
NOTE Confidence: 0.9977177

00:15:34.275 --> 00:15:35.475 see is that the learner  
NOTE Confidence: 0.9977177

00:15:35.475 --> 00:15:37.815 variance is high. You want  
NOTE Confidence: 0.9977177

00:15:38.035 --> 00:15:40.375 the error attributable to differences  
NOTE Confidence: 0.9914527

00:15:40.930 --> 00:15:41.830 in the learner,  
NOTE Confidence: 0.9787536

00:15:42.370 --> 00:15:44.770 different skill sets, different, degrees  
NOTE Confidence: 0.9787536

00:15:44.770 --> 00:15:45.510 of competence.

NOTE Confidence: 0.99662143  
00:15:46.930 --> 00:15:47.750 A high  
NOTE Confidence: 0.9986881  
00:15:48.210 --> 00:15:50.450 learner variance is tells you  
NOTE Confidence: 0.9986881  
00:15:50.450 --> 00:15:51.490 that you are able to  
NOTE Confidence: 0.9986881  
00:15:51.490 --> 00:15:51.990 accurately  
NOTE Confidence: 0.9956361  
00:15:52.450 --> 00:15:54.715 discriminate between differences in competency  
NOTE Confidence: 0.9316802  
00:15:55.095 --> 00:15:56.795 between your your your learners.  
NOTE Confidence: 0.9921511  
00:15:57.175 --> 00:15:57.895 And one of the things  
NOTE Confidence: 0.9921511  
00:15:57.895 --> 00:15:58.695 I had to kind of  
NOTE Confidence: 0.9921511  
00:15:58.695 --> 00:15:59.815 wrap my head around was,  
NOTE Confidence: 0.9921511  
00:15:59.815 --> 00:16:00.935 well, what is what is  
NOTE Confidence: 0.9921511  
00:16:00.935 --> 00:16:01.435 high?  
NOTE Confidence: 0.89645004  
00:16:03.095 --> 00:16:04.375 You know, this number, twenty  
NOTE Confidence: 0.89645004  
00:16:04.375 --> 00:16:05.435 seven point seven,  
NOTE Confidence: 0.97065717  
00:16:05.895 --> 00:16:06.775 felt low when it came  
NOTE Confidence: 0.97065717  
00:16:06.775 --> 00:16:07.575 out. As it turns out,  
NOTE Confidence: 0.97065717

00:16:07.575 --> 00:16:08.320 that's actually,  
NOTE Confidence: 0.99198294

00:16:08.779 --> 00:16:10.300 quite a robust number for  
NOTE Confidence: 0.99198294

00:16:10.300 --> 00:16:11.820 this type of study. And  
NOTE Confidence: 0.99198294

00:16:11.820 --> 00:16:13.339 so when we're looking at  
NOTE Confidence: 0.99198294

00:16:13.339 --> 00:16:15.279 numbers above twenty five percent,  
NOTE Confidence: 0.99198294

00:16:15.500 --> 00:16:16.640 that's actually considered,  
NOTE Confidence: 0.9972995

00:16:17.100 --> 00:16:18.320 quite good for,  
NOTE Confidence: 0.99667245

00:16:19.260 --> 00:16:21.279 for a medical education reliability  
NOTE Confidence: 0.99667245

00:16:21.500 --> 00:16:23.185 study. So we're we're quite  
NOTE Confidence: 0.99667245

00:16:23.185 --> 00:16:25.765 pleased with our learner variance.  
NOTE Confidence: 0.96467847

00:16:28.865 --> 00:16:30.625 We looked at rater variance.  
NOTE Confidence: 0.96467847

00:16:30.625 --> 00:16:31.745 So this is the idea  
NOTE Confidence: 0.96467847

00:16:31.745 --> 00:16:33.505 of, can some of that  
NOTE Confidence: 0.96467847

00:16:33.505 --> 00:16:34.760 error term or or how  
NOTE Confidence: 0.96467847

00:16:34.760 --> 00:16:35.560 much of that error term  
NOTE Confidence: 0.96467847

00:16:35.560 --> 00:16:37.080 is attributed to just difference

NOTE Confidence: 0.96467847  
00:16:37.080 --> 00:16:38.200 in how the raters are  
NOTE Confidence: 0.96467847  
00:16:38.200 --> 00:16:38.700 scoring.  
NOTE Confidence: 0.98665845  
00:16:39.160 --> 00:16:40.600 And that could be, as  
NOTE Confidence: 0.98665845  
00:16:40.600 --> 00:16:41.800 we know, some some of  
NOTE Confidence: 0.98665845  
00:16:41.800 --> 00:16:43.240 us are very strict when  
NOTE Confidence: 0.98665845  
00:16:43.240 --> 00:16:44.920 we evaluate our learners. Some  
NOTE Confidence: 0.98665845  
00:16:44.920 --> 00:16:46.220 of us are very lenient  
NOTE Confidence: 0.98665845  
00:16:46.520 --> 00:16:47.900 when we evaluate our learners.  
NOTE Confidence: 0.98470324  
00:16:49.005 --> 00:16:50.365 There's also the element of  
NOTE Confidence: 0.98470324  
00:16:50.365 --> 00:16:52.125 we're using EPAs, and and  
NOTE Confidence: 0.98470324  
00:16:52.125 --> 00:16:53.965 that's that's a newer way  
NOTE Confidence: 0.98470324  
00:16:53.965 --> 00:16:55.425 of assessment. And so,  
NOTE Confidence: 0.9819364  
00:16:55.805 --> 00:16:57.085 you know, how well did  
NOTE Confidence: 0.9819364  
00:16:57.085 --> 00:16:59.085 our raters understand this tool  
NOTE Confidence: 0.9819364  
00:16:59.085 --> 00:17:00.545 that we're that we're using?  
NOTE Confidence: 0.9819364

00:17:00.605 --> 00:17:01.645 We train them. We we  
NOTE Confidence: 0.9819364

00:17:01.645 --> 00:17:02.445 would hope that they would  
NOTE Confidence: 0.9819364

00:17:02.445 --> 00:17:03.665 understand it well, but,  
NOTE Confidence: 0.9952774

00:17:04.050 --> 00:17:04.950 but did they?  
NOTE Confidence: 0.99498355

00:17:05.250 --> 00:17:07.090 Ideally, we want this portion  
NOTE Confidence: 0.99498355

00:17:07.090 --> 00:17:08.130 of the variance to be  
NOTE Confidence: 0.99498355

00:17:08.130 --> 00:17:09.670 quite small. We don't want,  
NOTE Confidence: 0.979188

00:17:10.130 --> 00:17:12.210 the the, a large portion  
NOTE Confidence: 0.979188

00:17:12.210 --> 00:17:13.750 of the error being attributed  
NOTE Confidence: 0.979188

00:17:13.810 --> 00:17:15.250 to the raters. And for  
NOTE Confidence: 0.979188

00:17:15.250 --> 00:17:16.950 us, the number was sixteen  
NOTE Confidence: 0.979188

00:17:17.010 --> 00:17:18.230 point five percent.  
NOTE Confidence: 0.9934132

00:17:19.234 --> 00:17:19.734 And,  
NOTE Confidence: 0.96895283

00:17:20.195 --> 00:17:21.155 boy, I was happy because  
NOTE Confidence: 0.96895283

00:17:21.155 --> 00:17:22.615 that seemed really low. But  
NOTE Confidence: 0.956446

00:17:23.234 --> 00:17:24.835 as it turns out, sixteen

NOTE Confidence: 0.956446  
00:17:24.835 --> 00:17:26.275 point five is it's not  
NOTE Confidence: 0.956446  
00:17:26.275 --> 00:17:26.994 high or low. It's right  
NOTE Confidence: 0.956446  
00:17:26.994 --> 00:17:27.715 in the middle. I would  
NOTE Confidence: 0.956446  
00:17:27.715 --> 00:17:29.335 call it a modest contribution  
NOTE Confidence: 0.956446  
00:17:29.555 --> 00:17:30.055 to,  
NOTE Confidence: 0.99598587  
00:17:30.994 --> 00:17:32.455 to the error value.  
NOTE Confidence: 0.9910234  
00:17:32.929 --> 00:17:33.970 And what's nice about this  
NOTE Confidence: 0.9910234  
00:17:33.970 --> 00:17:35.010 is it really points us  
NOTE Confidence: 0.9910234  
00:17:35.010 --> 00:17:36.530 in a direction to say,  
NOTE Confidence: 0.9910234  
00:17:36.530 --> 00:17:37.730 you know, where can we  
NOTE Confidence: 0.9910234  
00:17:37.730 --> 00:17:39.750 improve in our assessment methodology  
NOTE Confidence: 0.9476473  
00:17:40.450 --> 00:17:41.570 and gives us a target  
NOTE Confidence: 0.9476473  
00:17:41.570 --> 00:17:43.490 for that, perhaps more training  
NOTE Confidence: 0.9476473  
00:17:43.490 --> 00:17:44.690 of our of our raters.  
NOTE Confidence: 0.9476473  
00:17:44.690 --> 00:17:45.330 Carrie, did you have a  
NOTE Confidence: 0.9476473

00:17:45.330 --> 00:17:45.830 question?  
NOTE Confidence: 0.81461716

00:17:46.369 --> 00:17:48.230 In this data set Yeah.  
NOTE Confidence: 0.8154179

00:17:48.765 --> 00:17:49.505 How many  
NOTE Confidence: 0.6515957

00:17:50.205 --> 00:17:50.705 rate  
NOTE Confidence: 0.9589608

00:17:51.085 --> 00:17:52.765 learner have? Yeah. It's a  
NOTE Confidence: 0.9589608

00:17:52.765 --> 00:17:53.885 good question. There was a  
NOTE Confidence: 0.9589608

00:17:53.885 --> 00:17:55.725 range. There was, six hundred  
NOTE Confidence: 0.9589608

00:17:55.725 --> 00:17:57.645 and four assessments that were  
NOTE Confidence: 0.9589608

00:17:57.645 --> 00:17:58.705 done by  
NOTE Confidence: 0.9984059

00:17:59.244 --> 00:18:00.445 I think our final number  
NOTE Confidence: 0.9984059

00:18:00.445 --> 00:18:01.509 was fifteen  
NOTE Confidence: 0.99764746

00:18:01.889 --> 00:18:02.389 different  
NOTE Confidence: 0.86652756

00:18:02.690 --> 00:18:03.190 raters.  
NOTE Confidence: 0.99817073

00:18:03.970 --> 00:18:05.570 And there was variability in  
NOTE Confidence: 0.99817073

00:18:05.570 --> 00:18:06.309 terms of  
NOTE Confidence: 0.9849972

00:18:06.769 --> 00:18:07.350 how many,

NOTE Confidence: 0.9722629  
00:18:08.129 --> 00:18:09.570 how many assessments were done  
NOTE Confidence: 0.9722629  
00:18:09.570 --> 00:18:10.609 by each rater. I don't  
NOTE Confidence: 0.9722629  
00:18:10.609 --> 00:18:11.409 have off the top of  
NOTE Confidence: 0.9722629  
00:18:11.409 --> 00:18:12.450 my head what the average  
NOTE Confidence: 0.9722629  
00:18:12.450 --> 00:18:13.269 number of  
NOTE Confidence: 0.9433279  
00:18:13.765 --> 00:18:15.385 assessments per rater was.  
NOTE Confidence: 0.93885624  
00:18:16.405 --> 00:18:17.865 But the the analysis,  
NOTE Confidence: 0.99718046  
00:18:19.445 --> 00:18:19.945 factors  
NOTE Confidence: 0.8769272  
00:18:20.244 --> 00:18:22.244 factors that in. How? I  
NOTE Confidence: 0.8769272  
00:18:22.244 --> 00:18:23.365 don't I'd have to ask.  
NOTE Confidence: 0.8769272  
00:18:23.365 --> 00:18:24.405 I don't agree with her  
NOTE Confidence: 0.8769272  
00:18:24.405 --> 00:18:25.365 to to get into go  
NOTE Confidence: 0.8769272  
00:18:25.365 --> 00:18:26.585 into the depths with them.  
NOTE Confidence: 0.8769272  
00:18:26.869 --> 00:18:28.650 Like, if I No. No.  
NOTE Confidence: 0.8769272  
00:18:28.710 --> 00:18:29.830 Each learner has,  
NOTE Confidence: 0.97829497

00:18:30.550 --> 00:18:32.810 has encounters with multiple raters.

NOTE Confidence: 0.97829497

00:18:32.950 --> 00:18:34.170 Yeah. Yeah.

NOTE Confidence: 0.9725269

00:18:38.710 --> 00:18:40.310 And then the last, the

NOTE Confidence: 0.9725269

00:18:40.310 --> 00:18:41.350 last of the effects that

NOTE Confidence: 0.9725269

00:18:41.350 --> 00:18:43.135 I'll I'll highlight is, is

NOTE Confidence: 0.9725269

00:18:43.135 --> 00:18:43.875 case variance.

NOTE Confidence: 0.99845725

00:18:44.335 --> 00:18:45.295 And this is really looking

NOTE Confidence: 0.99845725

00:18:45.295 --> 00:18:46.095 at how much of the

NOTE Confidence: 0.99845725

00:18:46.095 --> 00:18:47.635 variance is due to difficulties

NOTE Confidence: 0.99845725

00:18:47.695 --> 00:18:49.155 in in case

NOTE Confidence: 0.9911496

00:18:49.615 --> 00:18:51.715 variability or case, case difficulty.

NOTE Confidence: 0.9875519

00:18:52.095 --> 00:18:53.375 And, ideally, you want this

NOTE Confidence: 0.9875519

00:18:53.375 --> 00:18:54.575 to be to be quite

NOTE Confidence: 0.9875519

00:18:54.575 --> 00:18:55.075 low.

NOTE Confidence: 0.76620823

00:18:57.050 --> 00:18:58.190 That number,

NOTE Confidence: 0.9513291

00:18:58.570 --> 00:18:59.930 of one percent looks low

NOTE Confidence: 0.9513291  
00:18:59.930 --> 00:19:00.810 and and is low, so  
NOTE Confidence: 0.9513291  
00:19:00.810 --> 00:19:01.930 we were actually quite happy  
NOTE Confidence: 0.9513291  
00:19:01.930 --> 00:19:02.330 with,  
NOTE Confidence: 0.9807584  
00:19:02.890 --> 00:19:04.430 with our our case variance.  
NOTE Confidence: 0.9807584  
00:19:04.570 --> 00:19:05.450 To be honest, I was  
NOTE Confidence: 0.9807584  
00:19:05.450 --> 00:19:06.670 I was a bit surprised  
NOTE Confidence: 0.9807584  
00:19:06.890 --> 00:19:08.490 because there's such a range  
NOTE Confidence: 0.9807584  
00:19:08.490 --> 00:19:10.170 of different clinical syndromes that  
NOTE Confidence: 0.9807584  
00:19:10.170 --> 00:19:10.330 the,  
NOTE Confidence: 0.9622162  
00:19:11.674 --> 00:19:12.875 that the the residents were  
NOTE Confidence: 0.9622162  
00:19:12.875 --> 00:19:14.155 were seeing. I have some  
NOTE Confidence: 0.9622162  
00:19:14.155 --> 00:19:15.595 theories around why it might  
NOTE Confidence: 0.9622162  
00:19:15.595 --> 00:19:16.335 be low,  
NOTE Confidence: 0.97547746  
00:19:16.715 --> 00:19:17.455 such as,  
NOTE Confidence: 0.9644032  
00:19:18.395 --> 00:19:19.674 it's really the the the  
NOTE Confidence: 0.9644032

00:19:19.674 --> 00:19:21.034 difficulty is in the the  
NOTE Confidence: 0.9644032

00:19:21.034 --> 00:19:22.554 use of the ultrasound, not  
NOTE Confidence: 0.9644032

00:19:22.554 --> 00:19:23.515 in the approach to the  
NOTE Confidence: 0.9644032

00:19:23.515 --> 00:19:24.635 to the patient. The the  
NOTE Confidence: 0.9644032

00:19:24.635 --> 00:19:25.835 residents have a certain skill  
NOTE Confidence: 0.9644032

00:19:25.835 --> 00:19:27.054 level with the the patients.  
NOTE Confidence: 0.9645035

00:19:27.570 --> 00:19:28.609 The new skill is the  
NOTE Confidence: 0.9645035

00:19:28.609 --> 00:19:30.450 ultrasound, and so residents of  
NOTE Confidence: 0.9645035

00:19:30.450 --> 00:19:32.070 a certain level of competence  
NOTE Confidence: 0.99582034

00:19:32.369 --> 00:19:33.889 with ultrasound are gonna score  
NOTE Confidence: 0.99582034

00:19:33.889 --> 00:19:35.509 the same regardless of,  
NOTE Confidence: 0.9649825

00:19:35.809 --> 00:19:36.929 of the patient that that's  
NOTE Confidence: 0.9649825

00:19:36.929 --> 00:19:38.289 in front of them. And  
NOTE Confidence: 0.9649825

00:19:38.289 --> 00:19:39.109 that's that's,  
NOTE Confidence: 0.9994549

00:19:39.809 --> 00:19:41.009 my assessment of why that  
NOTE Confidence: 0.9994549

00:19:41.009 --> 00:19:42.149 number is so low.

NOTE Confidence: 0.9819397  
00:19:45.215 --> 00:19:46.335 As I mentioned before, one  
NOTE Confidence: 0.9819397  
00:19:46.335 --> 00:19:47.615 of the the powerful parts  
NOTE Confidence: 0.9819397  
00:19:47.615 --> 00:19:48.835 of the generalizable  
NOTE Confidence: 0.99001247  
00:19:49.615 --> 00:19:51.695 theory analysis is that it  
NOTE Confidence: 0.99001247  
00:19:51.695 --> 00:19:52.195 can,  
NOTE Confidence: 0.96485263  
00:19:52.655 --> 00:19:53.775 lead to what's called a  
NOTE Confidence: 0.96485263  
00:19:53.775 --> 00:19:56.355 decision study. And decision study  
NOTE Confidence: 0.96485263  
00:19:56.494 --> 00:19:58.400 allows us to predict  
NOTE Confidence: 0.9997619  
00:19:58.859 --> 00:19:59.359 the  
NOTE Confidence: 0.8988179  
00:19:59.660 --> 00:20:00.240 the reliability  
NOTE Confidence: 0.9984533  
00:20:00.619 --> 00:20:01.440 of the assessments  
NOTE Confidence: 0.9566113  
00:20:01.900 --> 00:20:03.820 for varying levels of effect  
NOTE Confidence: 0.9566113  
00:20:03.820 --> 00:20:05.420 or or facets. And so  
NOTE Confidence: 0.9566113  
00:20:05.420 --> 00:20:06.400 in this hypothetical,  
NOTE Confidence: 0.781525  
00:20:07.980 --> 00:20:09.119 dataset here,  
NOTE Confidence: 0.95885456

00:20:10.220 --> 00:20:12.065 we can say, how much  
NOTE Confidence: 0.99987286

00:20:12.445 --> 00:20:13.424 does the reliability  
NOTE Confidence: 0.9819082

00:20:14.764 --> 00:20:16.205 estimate change if we keep  
NOTE Confidence: 0.9819082

00:20:16.205 --> 00:20:17.725 the number of raters the  
NOTE Confidence: 0.9819082

00:20:17.725 --> 00:20:18.225 same,  
NOTE Confidence: 0.9911292

00:20:19.325 --> 00:20:21.164 but we increase this is  
NOTE Confidence: 0.9911292

00:20:21.164 --> 00:20:22.284 an OSCE, but we increase  
NOTE Confidence: 0.9911292

00:20:22.284 --> 00:20:24.044 the number of stations within  
NOTE Confidence: 0.9911292

00:20:24.044 --> 00:20:25.484 the OSCE. And we see  
NOTE Confidence: 0.9911292

00:20:25.484 --> 00:20:26.789 that by increasing the number  
NOTE Confidence: 0.9911292

00:20:26.789 --> 00:20:28.169 of stations, you actually get  
NOTE Confidence: 0.91210693

00:20:28.470 --> 00:20:29.750 a a nice jump in  
NOTE Confidence: 0.91210693

00:20:29.750 --> 00:20:31.510 your reliability. And our thresholds  
NOTE Confidence: 0.91210693

00:20:31.510 --> 00:20:32.250 for reliability  
NOTE Confidence: 0.9742321

00:20:33.190 --> 00:20:33.690 here,  
NOTE Confidence: 0.9962855

00:20:34.230 --> 00:20:36.010 for most most clinical

NOTE Confidence: 0.93458253  
00:20:36.549 --> 00:20:38.010 items, you want a reliability  
NOTE Confidence: 0.93458253  
00:20:38.070 --> 00:20:39.190 of point seven or point  
NOTE Confidence: 0.93458253  
00:20:39.190 --> 00:20:40.184 eight. And And so by  
NOTE Confidence: 0.93458253  
00:20:40.184 --> 00:20:41.304 increasing the number of stations,  
NOTE Confidence: 0.93458253  
00:20:41.304 --> 00:20:42.664 we're able to get the  
NOTE Confidence: 0.93458253  
00:20:42.664 --> 00:20:44.024 the these authors were able  
NOTE Confidence: 0.93458253  
00:20:44.024 --> 00:20:45.304 to get the reliability up  
NOTE Confidence: 0.93458253  
00:20:45.304 --> 00:20:47.404 to over, over point eight.  
NOTE Confidence: 0.9731909  
00:20:47.865 --> 00:20:48.744 You might ask the questions,  
NOTE Confidence: 0.9731909  
00:20:48.744 --> 00:20:49.625 well, what happens if we  
NOTE Confidence: 0.9731909  
00:20:49.625 --> 00:20:50.744 increase the number of raters  
NOTE Confidence: 0.9731909  
00:20:50.744 --> 00:20:51.784 instead of increasing the number  
NOTE Confidence: 0.9731909  
00:20:51.784 --> 00:20:52.825 of stations? Can we improve  
NOTE Confidence: 0.9731909  
00:20:52.825 --> 00:20:54.605 our our reliability that way?  
NOTE Confidence: 0.9731909  
00:20:54.900 --> 00:20:56.660 And going from two raters  
NOTE Confidence: 0.9731909

00:20:56.660 --> 00:20:57.940 to eight raters really didn't  
NOTE Confidence: 0.9731909

00:20:57.940 --> 00:20:59.540 make a meaningful impact in  
NOTE Confidence: 0.9731909

00:20:59.540 --> 00:21:00.980 reliability. And and so you  
NOTE Confidence: 0.9731909

00:21:00.980 --> 00:21:01.700 can take this and you  
NOTE Confidence: 0.9731909

00:21:01.700 --> 00:21:02.580 can say, alright. Well, if  
NOTE Confidence: 0.9731909

00:21:02.580 --> 00:21:04.040 we're designing an assessment  
NOTE Confidence: 0.9593603

00:21:04.340 --> 00:21:06.260 tool and assessment process, really,  
NOTE Confidence: 0.9593603

00:21:06.260 --> 00:21:07.700 we wanna put our focus  
NOTE Confidence: 0.9593603

00:21:07.700 --> 00:21:08.200 on,  
NOTE Confidence: 0.97458035

00:21:08.825 --> 00:21:10.025 the number of observations or  
NOTE Confidence: 0.97458035

00:21:10.025 --> 00:21:11.145 the number of stations. And  
NOTE Confidence: 0.97458035

00:21:11.145 --> 00:21:12.105 and so that's just an  
NOTE Confidence: 0.97458035

00:21:12.105 --> 00:21:13.545 example of sort of how  
NOTE Confidence: 0.97458035

00:21:13.545 --> 00:21:14.984 decision study can be can  
NOTE Confidence: 0.97458035

00:21:14.984 --> 00:21:16.285 be utilized. Yeah.  
NOTE Confidence: 0.84106284

00:21:16.825 --> 00:21:17.465 About that.

NOTE Confidence: 0.9944118  
00:21:18.105 --> 00:21:19.225 That would suggest to me  
NOTE Confidence: 0.9944118  
00:21:19.225 --> 00:21:20.845 that the variability is largely  
NOTE Confidence: 0.9726439  
00:21:21.225 --> 00:21:22.984 in a rater than across  
NOTE Confidence: 0.9726439  
00:21:22.984 --> 00:21:23.484 raters.  
NOTE Confidence: 0.9185665  
00:21:24.359 --> 00:21:26.300 Is that correct on you?  
NOTE Confidence: 0.90875286  
00:21:29.080 --> 00:21:30.520 In fact, it doesn't I  
NOTE Confidence: 0.90875286  
00:21:30.520 --> 00:21:31.960 mean, you would think it  
NOTE Confidence: 0.90875286  
00:21:31.960 --> 00:21:32.840 it there's a lot of  
NOTE Confidence: 0.90875286  
00:21:32.840 --> 00:21:34.619 variability among rater. Yeah.  
NOTE Confidence: 0.899364  
00:21:34.920 --> 00:21:36.700 Some are really conservatives. Right.  
NOTE Confidence: 0.90892833  
00:21:37.595 --> 00:21:38.494 Then you expect  
NOTE Confidence: 0.9468691  
00:21:39.035 --> 00:21:40.555 increasing the number of raters  
NOTE Confidence: 0.9468691  
00:21:40.555 --> 00:21:41.675 would have a substantial effect  
NOTE Confidence: 0.9468691  
00:21:41.915 --> 00:21:43.135 would have an impact. Averaging  
NOTE Confidence: 0.9468691  
00:21:43.355 --> 00:21:44.635 of that. Yeah. So I  
NOTE Confidence: 0.9468691

00:21:44.635 --> 00:21:45.435 would agree with you. I  
NOTE Confidence: 0.9468691

00:21:45.435 --> 00:21:46.715 would say that this in  
NOTE Confidence: 0.9468691

00:21:46.715 --> 00:21:47.915 this particular this isn't my  
NOTE Confidence: 0.9468691

00:21:47.915 --> 00:21:48.895 data. This is a hypothetical  
NOTE Confidence: 0.9468691

00:21:48.955 --> 00:21:49.455 dataset  
NOTE Confidence: 0.96075296

00:21:49.835 --> 00:21:50.075 that,  
NOTE Confidence: 0.9615816

00:21:50.875 --> 00:21:51.375 there  
NOTE Confidence: 0.981293

00:21:51.710 --> 00:21:52.590 probably wasn't a lot of  
NOTE Confidence: 0.981293

00:21:52.590 --> 00:21:54.430 variability amongst the raters, and  
NOTE Confidence: 0.981293

00:21:54.430 --> 00:21:55.869 so adding more raters didn't  
NOTE Confidence: 0.981293

00:21:55.869 --> 00:21:56.750 make a didn't make a  
NOTE Confidence: 0.981293

00:21:56.750 --> 00:21:58.210 difference in terms of reliability.  
NOTE Confidence: 0.666512

00:21:58.510 --> 00:21:59.330 Well, but and  
NOTE Confidence: 0.9530847

00:21:59.630 --> 00:22:00.670 is this consistent with the  
NOTE Confidence: 0.9530847

00:22:00.670 --> 00:22:01.710 numbers you showed us before  
NOTE Confidence: 0.9530847

00:22:01.710 --> 00:22:03.170 for the percentage of variability

NOTE Confidence: 0.9530847  
00:22:03.310 --> 00:22:05.155 was attributable to the raters?  
NOTE Confidence: 0.9530847  
00:22:05.455 --> 00:22:06.415 No. And so I'll I'll  
NOTE Confidence: 0.9530847  
00:22:06.415 --> 00:22:07.294 show you what it looked  
NOTE Confidence: 0.9530847  
00:22:07.294 --> 00:22:08.575 like for our data. I've  
NOTE Confidence: 0.9530847  
00:22:08.575 --> 00:22:09.455 just this was just this  
NOTE Confidence: 0.9530847  
00:22:09.455 --> 00:22:11.135 is just a hypothetical just  
NOTE Confidence: 0.9530847  
00:22:11.135 --> 00:22:11.934 to make the point of  
NOTE Confidence: 0.9530847  
00:22:11.934 --> 00:22:13.215 what sort of what decision  
NOTE Confidence: 0.9530847  
00:22:13.215 --> 00:22:14.415 studies can do if we  
NOTE Confidence: 0.9530847  
00:22:14.415 --> 00:22:15.775 if we if we change  
NOTE Confidence: 0.9530847  
00:22:15.775 --> 00:22:16.915 the different elements.  
NOTE Confidence: 0.8616079  
00:22:20.399 --> 00:22:21.440 I just got a text.  
NOTE Confidence: 0.8616079  
00:22:21.440 --> 00:22:23.039 Please repeat the question. In  
NOTE Confidence: 0.8616079  
00:22:23.039 --> 00:22:23.359 general  
NOTE Confidence: 0.9391084  
00:22:24.000 --> 00:22:24.820 Oh, okay.  
NOTE Confidence: 0.94462734

00:22:25.200 --> 00:22:26.399 I think the microphone's not  
NOTE Confidence: 0.94462734

00:22:26.399 --> 00:22:27.600 working. Just when you get  
NOTE Confidence: 0.94462734

00:22:27.600 --> 00:22:29.059 a question, just repeat it  
NOTE Confidence: 0.9340372

00:22:29.760 --> 00:22:31.119 so online people can hear  
NOTE Confidence: 0.9340372

00:22:31.119 --> 00:22:32.559 it. Okay. We'll we'll we'll  
NOTE Confidence: 0.9340372

00:22:32.559 --> 00:22:33.859 do that moving forward.  
NOTE Confidence: 0.98470575

00:22:35.515 --> 00:22:36.415 So this is,  
NOTE Confidence: 0.9667824

00:22:37.035 --> 00:22:38.875 this is this is our  
NOTE Confidence: 0.9667824

00:22:38.875 --> 00:22:39.615 our data.  
NOTE Confidence: 0.99891657

00:22:40.875 --> 00:22:42.475 And this is the final  
NOTE Confidence: 0.99891657

00:22:42.475 --> 00:22:42.975 product  
NOTE Confidence: 0.9151793

00:22:43.275 --> 00:22:44.875 of our data, meaning this  
NOTE Confidence: 0.9151793

00:22:44.875 --> 00:22:45.615 was the,  
NOTE Confidence: 0.999461

00:22:46.315 --> 00:22:47.775 this is the data that  
NOTE Confidence: 0.89121145

00:22:48.090 --> 00:22:49.390 seemed to improve,  
NOTE Confidence: 0.9999522

00:22:50.169 --> 00:22:50.669 reliability

NOTE Confidence: 0.8886648  
00:22:51.929 --> 00:22:52.429 best.  
NOTE Confidence: 0.99924195  
00:22:52.809 --> 00:22:53.309 And  
NOTE Confidence: 0.9292345  
00:22:53.850 --> 00:22:55.369 what it what it came  
NOTE Confidence: 0.9292345  
00:22:55.369 --> 00:22:56.510 out with, it is really  
NOTE Confidence: 0.9292345  
00:22:56.730 --> 00:22:57.869 the number of observations  
NOTE Confidence: 0.99846035  
00:22:58.490 --> 00:23:00.970 made the biggest impact on  
NOTE Confidence: 0.99846035  
00:23:00.970 --> 00:23:02.109 moving our  
NOTE Confidence: 0.96424186  
00:23:02.905 --> 00:23:03.405 reliability,  
NOTE Confidence: 0.996017  
00:23:04.585 --> 00:23:05.484 curve towards,  
NOTE Confidence: 0.99161845  
00:23:05.945 --> 00:23:07.065 towards that point eight. We  
NOTE Confidence: 0.99161845  
00:23:07.065 --> 00:23:08.825 chose the higher value point  
NOTE Confidence: 0.99161845  
00:23:08.825 --> 00:23:09.945 eight rather than point seven  
NOTE Confidence: 0.99161845  
00:23:09.945 --> 00:23:11.165 as our as our cutoff.  
NOTE Confidence: 0.9565051  
00:23:12.265 --> 00:23:13.385 And what it looked like  
NOTE Confidence: 0.9565051  
00:23:13.385 --> 00:23:14.505 is to get our you  
NOTE Confidence: 0.9565051

00:23:14.505 --> 00:23:16.310 know, given the parameters, keeping  
NOTE Confidence: 0.9565051

00:23:16.310 --> 00:23:17.430 everything else stable, and just  
NOTE Confidence: 0.9565051

00:23:17.430 --> 00:23:18.730 changing the number of observations,  
NOTE Confidence: 0.99642384

00:23:20.550 --> 00:23:21.990 getting our observations up to  
NOTE Confidence: 0.99642384

00:23:21.990 --> 00:23:24.250 about ten gives us a  
NOTE Confidence: 0.99917966

00:23:24.869 --> 00:23:25.369 reliability  
NOTE Confidence: 0.9571595

00:23:25.670 --> 00:23:26.869 to a level point eight  
NOTE Confidence: 0.9571595

00:23:26.869 --> 00:23:27.609 to understanding  
NOTE Confidence: 0.97389466

00:23:28.150 --> 00:23:30.215 where our learners are with  
NOTE Confidence: 0.97389466

00:23:30.215 --> 00:23:32.215 their pocus competency. Doesn't mean  
NOTE Confidence: 0.97389466

00:23:32.215 --> 00:23:34.055 ten observations and your learner  
NOTE Confidence: 0.97389466

00:23:34.055 --> 00:23:35.815 is competent in pocus. It  
NOTE Confidence: 0.97389466

00:23:35.815 --> 00:23:37.115 means after ten observations,  
NOTE Confidence: 0.99972725

00:23:37.734 --> 00:23:38.635 I can reliably  
NOTE Confidence: 0.9997168

00:23:39.095 --> 00:23:39.595 understand  
NOTE Confidence: 0.9989489

00:23:40.215 --> 00:23:41.734 what level that they are

NOTE Confidence: 0.9989489  
00:23:41.734 --> 00:23:42.234 at.  
NOTE Confidence: 0.9729177  
00:23:44.269 --> 00:23:45.789 So that's that's quite useful  
NOTE Confidence: 0.9729177  
00:23:45.789 --> 00:23:46.669 for helping us to to  
NOTE Confidence: 0.9729177  
00:23:46.669 --> 00:23:47.869 understand sort of sort of  
NOTE Confidence: 0.9729177  
00:23:47.869 --> 00:23:48.609 next steps.  
NOTE Confidence: 0.9713063  
00:23:49.789 --> 00:23:51.230 The limitations of the of  
NOTE Confidence: 0.9713063  
00:23:51.230 --> 00:23:52.750 our of our work, I  
NOTE Confidence: 0.9713063  
00:23:52.750 --> 00:23:54.109 think the main limitation, we  
NOTE Confidence: 0.9713063  
00:23:54.109 --> 00:23:56.109 did it across three large  
NOTE Confidence: 0.9713063  
00:23:56.109 --> 00:23:57.835 academic hospitals. So it was,  
NOTE Confidence: 0.9713063  
00:23:58.075 --> 00:23:58.875 it was us, it was  
NOTE Confidence: 0.9713063  
00:23:58.875 --> 00:24:00.734 MGH, and it was, OHSU  
NOTE Confidence: 0.9713063  
00:24:01.034 --> 00:24:02.635 that were, part of it.  
NOTE Confidence: 0.9713063  
00:24:02.635 --> 00:24:03.994 Most of the observations came  
NOTE Confidence: 0.9713063  
00:24:03.994 --> 00:24:05.615 from us here at Yale.  
NOTE Confidence: 0.98096013

00:24:06.554 --> 00:24:07.294 I think,  
NOTE Confidence: 0.9980089

00:24:08.315 --> 00:24:09.294 I think that  
NOTE Confidence: 0.99874496

00:24:09.619 --> 00:24:10.840 influences the generalizability  
NOTE Confidence: 0.97574085

00:24:11.220 --> 00:24:12.500 of of what we're what  
NOTE Confidence: 0.97574085

00:24:12.500 --> 00:24:14.280 we're putting out there. How,  
NOTE Confidence: 0.97574085

00:24:14.420 --> 00:24:15.300 you know, how would a  
NOTE Confidence: 0.97574085

00:24:15.300 --> 00:24:16.180 tool like this work at  
NOTE Confidence: 0.97574085

00:24:16.180 --> 00:24:17.860 a smaller program, someplace that  
NOTE Confidence: 0.97574085

00:24:17.860 --> 00:24:18.980 it does not have such,  
NOTE Confidence: 0.9716722

00:24:19.300 --> 00:24:21.080 robust, point of care ultrasound,  
NOTE Confidence: 0.7754811

00:24:21.860 --> 00:24:22.360 expertise,  
NOTE Confidence: 0.9717265

00:24:24.005 --> 00:24:24.505 unclear.  
NOTE Confidence: 0.96167505

00:24:25.045 --> 00:24:26.085 And it's mostly in an  
NOTE Confidence: 0.96167505

00:24:26.085 --> 00:24:27.365 inpatient setting. How does this  
NOTE Confidence: 0.96167505

00:24:27.365 --> 00:24:28.965 translate to an outpatient setting,  
NOTE Confidence: 0.96167505

00:24:29.205 --> 00:24:30.565 where ultrasound is also being

NOTE Confidence: 0.96167505  
00:24:30.565 --> 00:24:32.345 used, also unclear.  
NOTE Confidence: 0.91734856  
00:24:34.245 --> 00:24:36.005 So conclusions and and next  
NOTE Confidence: 0.91734856  
00:24:36.005 --> 00:24:36.505 steps,  
NOTE Confidence: 0.9458948  
00:24:37.230 --> 00:24:37.730 the,  
NOTE Confidence: 0.96786356  
00:24:38.429 --> 00:24:39.630 you know, the within the  
NOTE Confidence: 0.96786356  
00:24:39.630 --> 00:24:41.070 study, we were able to  
NOTE Confidence: 0.96786356  
00:24:41.070 --> 00:24:42.130 generate validity,  
NOTE Confidence: 0.9993826  
00:24:42.669 --> 00:24:43.410 and feasibility  
NOTE Confidence: 0.971961  
00:24:43.790 --> 00:24:44.929 evidence to support,  
NOTE Confidence: 0.89114773  
00:24:45.390 --> 00:24:46.510 what is a a a  
NOTE Confidence: 0.89114773  
00:24:46.510 --> 00:24:47.330 very novel,  
NOTE Confidence: 0.99738455  
00:24:47.710 --> 00:24:49.230 approach to looking at point  
NOTE Confidence: 0.99738455  
00:24:49.230 --> 00:24:50.130 of care ultrasound,  
NOTE Confidence: 0.9991176  
00:24:50.590 --> 00:24:51.090 competency.  
NOTE Confidence: 0.99962354  
00:24:52.215 --> 00:24:52.715 We  
NOTE Confidence: 0.9780806

00:24:53.174 --> 00:24:54.054 need to put more time,  
NOTE Confidence: 0.9780806

00:24:54.054 --> 00:24:55.755 I think, into rater training,  
NOTE Confidence: 0.96290493

00:24:56.215 --> 00:24:57.895 to make sure that raters  
NOTE Confidence: 0.96290493

00:24:57.895 --> 00:24:59.595 are being consistent in their  
NOTE Confidence: 0.96290493

00:24:59.655 --> 00:25:00.475 in their assessments,  
NOTE Confidence: 0.98944324

00:25:01.255 --> 00:25:02.615 of of the learners, which  
NOTE Confidence: 0.98944324

00:25:02.615 --> 00:25:03.595 probably means,  
NOTE Confidence: 0.9998292

00:25:04.054 --> 00:25:04.554 both  
NOTE Confidence: 0.97610354

00:25:04.980 --> 00:25:07.300 reorienting them to EPAs and  
NOTE Confidence: 0.97610354

00:25:07.300 --> 00:25:08.260 making sure they feel comfortable  
NOTE Confidence: 0.97610354

00:25:08.260 --> 00:25:09.559 with that and and probably  
NOTE Confidence: 0.9989422

00:25:09.940 --> 00:25:11.619 doing some calibration training to  
NOTE Confidence: 0.9989422

00:25:11.619 --> 00:25:13.059 make sure that my level  
NOTE Confidence: 0.9989422

00:25:13.059 --> 00:25:13.859 three is the same as  
NOTE Confidence: 0.9989422

00:25:13.859 --> 00:25:15.160 your level three, etcetera.  
NOTE Confidence: 0.94834316

00:25:16.580 --> 00:25:18.020 When you find the outlier

NOTE Confidence: 0.94834316  
00:25:18.100 --> 00:25:19.300 using these data, can you  
NOTE Confidence: 0.94834316  
00:25:19.300 --> 00:25:20.440 find the people that's  
NOTE Confidence: 0.9044909  
00:25:21.165 --> 00:25:22.365 find the raters who are  
NOTE Confidence: 0.9044909  
00:25:22.365 --> 00:25:24.285 giving everybody Yeah. Who yeah.  
NOTE Confidence: 0.9044909  
00:25:24.285 --> 00:25:25.565 We probably can. Yeah. We  
NOTE Confidence: 0.9044909  
00:25:25.565 --> 00:25:26.845 probably could probably jump in  
NOTE Confidence: 0.9044909  
00:25:26.845 --> 00:25:27.725 and and figure out, like,  
NOTE Confidence: 0.9044909  
00:25:27.725 --> 00:25:29.165 who, like, pinpoint who who  
NOTE Confidence: 0.9044909  
00:25:29.165 --> 00:25:30.525 really who really needs the  
NOTE Confidence: 0.9044909  
00:25:30.525 --> 00:25:31.025 help.  
NOTE Confidence: 0.92575735  
00:25:32.125 --> 00:25:33.005 But I guess it's, you  
NOTE Confidence: 0.92575735  
00:25:33.005 --> 00:25:34.340 know, it's it's challenging because  
NOTE Confidence: 0.92575735  
00:25:34.340 --> 00:25:34.980 you always gotta say, like,  
NOTE Confidence: 0.92575735  
00:25:34.980 --> 00:25:36.100 what's your like, who's the  
NOTE Confidence: 0.92575735  
00:25:36.100 --> 00:25:37.220 standard, I guess, that you  
NOTE Confidence: 0.92575735

00:25:37.220 --> 00:25:38.600 would compare to. So,  
NOTE Confidence: 0.95071065

00:25:40.100 --> 00:25:41.380 maybe it's me. Maybe me.  
NOTE Confidence: 0.95071065

00:25:41.380 --> 00:25:42.420 I'm too lenient or too  
NOTE Confidence: 0.95071065

00:25:42.420 --> 00:25:43.700 strict. I don't know. So  
NOTE Confidence: 0.95071065

00:25:43.700 --> 00:25:44.660 it'd be interesting to to  
NOTE Confidence: 0.95071065

00:25:44.660 --> 00:25:45.460 think about. That might be  
NOTE Confidence: 0.95071065

00:25:45.460 --> 00:25:46.660 another another study that we  
NOTE Confidence: 0.95071065

00:25:46.660 --> 00:25:48.415 look at. We'll group the  
NOTE Confidence: 0.95071065

00:25:48.415 --> 00:25:50.175 standard. I mean, basically, what  
NOTE Confidence: 0.95071065

00:25:50.175 --> 00:25:51.615 you you do is predict  
NOTE Confidence: 0.95071065

00:25:51.615 --> 00:25:52.815 the score based on the  
NOTE Confidence: 0.95071065

00:25:52.815 --> 00:25:53.715 rater identification.  
NOTE Confidence: 0.9996102

00:25:54.415 --> 00:25:54.915 Interesting.  
NOTE Confidence: 0.9127505

00:25:55.295 --> 00:25:56.734 People who have higher than  
NOTE Confidence: 0.9127505

00:25:56.734 --> 00:25:57.855 average scores, you can do  
NOTE Confidence: 0.9127505

00:25:57.855 --> 00:25:59.295 that. People who have lower

NOTE Confidence: 0.9127505  
00:25:59.295 --> 00:26:00.255 than average scores, you can  
NOTE Confidence: 0.9127505  
00:26:00.255 --> 00:26:01.930 do that. Yeah. Nice. So  
NOTE Confidence: 0.9127505  
00:26:01.930 --> 00:26:03.450 the the the question for  
NOTE Confidence: 0.9127505  
00:26:03.450 --> 00:26:05.310 the, for the Zoom room,  
NOTE Confidence: 0.99223495  
00:26:06.090 --> 00:26:07.690 was about using the data  
NOTE Confidence: 0.99223495  
00:26:07.690 --> 00:26:08.190 to,  
NOTE Confidence: 0.97068864  
00:26:08.650 --> 00:26:10.170 to predict who who are  
NOTE Confidence: 0.97068864  
00:26:10.170 --> 00:26:11.210 the more lenient or the  
NOTE Confidence: 0.97068864  
00:26:11.210 --> 00:26:11.950 more strict,  
NOTE Confidence: 0.8913054  
00:26:12.410 --> 00:26:12.910 raters.  
NOTE Confidence: 0.97228384  
00:26:14.090 --> 00:26:15.690 And, doctor Justice was just  
NOTE Confidence: 0.97228384  
00:26:15.690 --> 00:26:16.810 giving some some tips on  
NOTE Confidence: 0.97228384  
00:26:16.810 --> 00:26:18.284 how we might, might design  
NOTE Confidence: 0.97228384  
00:26:18.284 --> 00:26:18.784 that.  
NOTE Confidence: 0.9816257  
00:26:20.924 --> 00:26:21.565 I think one of the  
NOTE Confidence: 0.9816257

00:26:21.565 --> 00:26:22.764 things that that I'm interested  
NOTE Confidence: 0.9816257

00:26:22.764 --> 00:26:24.125 in thinking about is, you  
NOTE Confidence: 0.9816257

00:26:24.125 --> 00:26:25.484 know, particularly as we're working  
NOTE Confidence: 0.9816257

00:26:25.484 --> 00:26:27.085 on this privileging process at  
NOTE Confidence: 0.9816257

00:26:27.085 --> 00:26:28.284 the hospital for point of  
NOTE Confidence: 0.9816257

00:26:28.284 --> 00:26:29.565 care ultrasound is is thinking  
NOTE Confidence: 0.9816257

00:26:29.565 --> 00:26:30.845 about using this as a  
NOTE Confidence: 0.9816257

00:26:30.845 --> 00:26:33.350 tool, for more summative level  
NOTE Confidence: 0.9816257

00:26:33.350 --> 00:26:34.250 decision making,  
NOTE Confidence: 0.9597689

00:26:34.789 --> 00:26:35.289 around,  
NOTE Confidence: 0.95775104

00:26:35.750 --> 00:26:36.650 around the privileging,  
NOTE Confidence: 0.94252276

00:26:37.270 --> 00:26:37.770 process,  
NOTE Confidence: 0.99779224

00:26:38.150 --> 00:26:39.530 here at here at Yale.  
NOTE Confidence: 0.8061382

00:26:43.350 --> 00:26:43.850 Some  
NOTE Confidence: 0.983102

00:26:44.309 --> 00:26:45.429 thank you. So,  
NOTE Confidence: 0.9559423

00:26:46.225 --> 00:26:47.105 Janet and John, I did

NOTE Confidence: 0.9559423  
00:26:47.105 --> 00:26:47.984 this work as part of  
NOTE Confidence: 0.9559423  
00:26:47.984 --> 00:26:49.764 my masters of health  
NOTE Confidence: 0.8708674  
00:26:50.384 --> 00:26:51.764 science, Donna in the department,  
NOTE Confidence: 0.9957989  
00:26:52.304 --> 00:26:53.585 for making the the grant  
NOTE Confidence: 0.9957989  
00:26:53.585 --> 00:26:54.085 available.  
NOTE Confidence: 0.8805782  
00:26:55.585 --> 00:26:57.744 David and and Jeanette just,  
NOTE Confidence: 0.8805782  
00:26:57.904 --> 00:26:58.725 just master  
NOTE Confidence: 0.98381805  
00:26:59.400 --> 00:27:01.500 mentors and and really encouraging  
NOTE Confidence: 0.98381805  
00:27:01.520 --> 00:27:02.020 and,  
NOTE Confidence: 0.97281235  
00:27:02.440 --> 00:27:04.760 and facilitating my interaction with,  
NOTE Confidence: 0.97281235  
00:27:04.920 --> 00:27:06.040 with Haidong Liu, which is  
NOTE Confidence: 0.97281235  
00:27:06.040 --> 00:27:07.240 really what what made this  
NOTE Confidence: 0.97281235  
00:27:07.240 --> 00:27:09.100 project move, move forward,  
NOTE Confidence: 0.99329036  
00:27:09.720 --> 00:27:11.320 and then, the team of,  
NOTE Confidence: 0.99329036  
00:27:11.560 --> 00:27:12.300 of researchers  
NOTE Confidence: 0.9997997

00:27:12.680 --> 00:27:13.560 that I was able to  
NOTE Confidence: 0.9997997

00:27:13.560 --> 00:27:14.220 work with.  
NOTE Confidence: 0.9362741

00:27:14.845 --> 00:27:16.305 Alright. That's it. Matt.  
NOTE Confidence: 0.99390906

00:27:16.765 --> 00:27:18.125 Yeah. That's really great. Thank  
NOTE Confidence: 0.99390906

00:27:18.125 --> 00:27:18.625 you.  
NOTE Confidence: 0.93255997

00:27:19.565 --> 00:27:20.605 So I had a couple  
NOTE Confidence: 0.93255997

00:27:20.605 --> 00:27:21.825 questions. One was,  
NOTE Confidence: 0.9770134

00:27:22.605 --> 00:27:23.565 are there other at the  
NOTE Confidence: 0.9770134

00:27:23.565 --> 00:27:24.925 hospital level, in terms of  
NOTE Confidence: 0.9770134

00:27:24.925 --> 00:27:25.425 privileging,  
NOTE Confidence: 0.9974536

00:27:26.685 --> 00:27:28.365 is there anything analogous to  
NOTE Confidence: 0.9974536

00:27:28.365 --> 00:27:29.425 this sort of  
NOTE Confidence: 0.9595659

00:27:30.100 --> 00:27:31.539 level of really assessing like,  
NOTE Confidence: 0.9595659

00:27:31.539 --> 00:27:33.220 a heart transplant is probably  
NOTE Confidence: 0.9595659

00:27:33.220 --> 00:27:35.460 more competency assessment than a  
NOTE Confidence: 0.9595659

00:27:35.460 --> 00:27:36.200 heart transplant,

NOTE Confidence: 0.8563846

00:27:37.299 --> 00:27:38.919 for surgeon, I would think.

NOTE Confidence: 0.8563846

00:27:38.980 --> 00:27:40.740 Yeah. So and ask question

NOTE Confidence: 0.8563846

00:27:40.740 --> 00:27:42.100 one was, is is there

NOTE Confidence: 0.8563846

00:27:42.100 --> 00:27:43.515 something comparable to this,

NOTE Confidence: 0.99809796

00:27:44.155 --> 00:27:45.755 type of assessment in in

NOTE Confidence: 0.99809796

00:27:45.755 --> 00:27:47.215 other areas of privileging?

NOTE Confidence: 0.930664

00:27:47.994 --> 00:27:48.715 And then do you have

NOTE Confidence: 0.930664

00:27:48.715 --> 00:27:50.555 second question too? Second one

NOTE Confidence: 0.930664

00:27:50.555 --> 00:27:51.755 was, I know it's very

NOTE Confidence: 0.930664

00:27:51.755 --> 00:27:53.035 different, but you was there

NOTE Confidence: 0.930664

00:27:53.035 --> 00:27:54.095 anything useful

NOTE Confidence: 0.9993932

00:27:54.395 --> 00:27:56.015 in the radiology world

NOTE Confidence: 0.9568921

00:27:56.640 --> 00:27:58.500 in terms of how competency

NOTE Confidence: 0.9568921

00:27:58.640 --> 00:27:59.220 is assessed

NOTE Confidence: 0.9827224

00:27:59.680 --> 00:28:01.859 for either technicians or ultrasonographer

NOTE Confidence: 0.90587276

00:28:02.720 --> 00:28:03.220 radiologists?  
NOTE Confidence: 0.9639654

00:28:03.680 --> 00:28:04.640 Yeah. And then the second  
NOTE Confidence: 0.9639654

00:28:04.640 --> 00:28:05.520 question was there is there  
NOTE Confidence: 0.9639654

00:28:05.520 --> 00:28:06.880 anything comparable in the in  
NOTE Confidence: 0.9639654

00:28:06.880 --> 00:28:08.340 the radiology world?  
NOTE Confidence: 0.8224796

00:28:08.960 --> 00:28:10.420 So so the first question,  
NOTE Confidence: 0.9707223

00:28:10.774 --> 00:28:12.375 there's nothing comparable that I'm  
NOTE Confidence: 0.9707223

00:28:12.375 --> 00:28:14.154 aware of in within privileging.  
NOTE Confidence: 0.8343614

00:28:15.174 --> 00:28:16.215 If you're, you know, for  
NOTE Confidence: 0.8343614

00:28:16.215 --> 00:28:16.534 example,  
NOTE Confidence: 0.9318769

00:28:17.575 --> 00:28:18.794 privileging for,  
NOTE Confidence: 0.9891125

00:28:19.255 --> 00:28:19.914 you know,  
NOTE Confidence: 0.9390224

00:28:20.215 --> 00:28:21.255 if you're a heart surgeon  
NOTE Confidence: 0.9390224

00:28:21.255 --> 00:28:22.294 to do a heart transplant  
NOTE Confidence: 0.9390224

00:28:22.294 --> 00:28:23.414 is really kind of number  
NOTE Confidence: 0.9390224

00:28:23.414 --> 00:28:24.615 of cases that you've done

NOTE Confidence: 0.9390224

00:28:24.615 --> 00:28:26.309 in graduating from a, you

NOTE Confidence: 0.9390224

00:28:26.309 --> 00:28:28.230 know, an accredited program or

NOTE Confidence: 0.9390224

00:28:28.230 --> 00:28:29.509 you did your fellowship in

NOTE Confidence: 0.9390224

00:28:29.509 --> 00:28:30.869 x y or x y

NOTE Confidence: 0.9390224

00:28:30.869 --> 00:28:31.529 or z.

NOTE Confidence: 0.9976352

00:28:33.509 --> 00:28:34.710 A lot of training works

NOTE Confidence: 0.9976352

00:28:34.710 --> 00:28:35.750 that way. I think it's

NOTE Confidence: 0.9976352

00:28:35.750 --> 00:28:37.669 probably more comparable to sort

NOTE Confidence: 0.9976352

00:28:37.669 --> 00:28:38.570 of how we

NOTE Confidence: 0.9462856

00:28:39.845 --> 00:28:41.925 we privilege around procedures where

NOTE Confidence: 0.9462856

00:28:41.925 --> 00:28:42.645 it's like you have to

NOTE Confidence: 0.9462856

00:28:42.645 --> 00:28:44.745 do, you know, five

NOTE Confidence: 0.9634722

00:28:45.125 --> 00:28:46.405 central lines, and then you're

NOTE Confidence: 0.9634722

00:28:46.405 --> 00:28:48.645 you're magically competent in, in

NOTE Confidence: 0.9634722

00:28:48.645 --> 00:28:49.145 that,

NOTE Confidence: 0.96593887

00:28:49.765 --> 00:28:50.725 which which creates a real  
NOTE Confidence: 0.96593887

00:28:50.725 --> 00:28:51.845 problem. So, you know, a  
NOTE Confidence: 0.96593887

00:28:51.845 --> 00:28:53.390 lot of hospital systems  
NOTE Confidence: 0.98766047

00:28:53.770 --> 00:28:55.390 use, like, a number based  
NOTE Confidence: 0.98766047

00:28:55.530 --> 00:28:57.450 algorithm for deciding who's privileged  
NOTE Confidence: 0.98766047

00:28:57.450 --> 00:28:58.670 or not. So you've done  
NOTE Confidence: 0.9511545

00:28:59.210 --> 00:29:01.370 fifty cardiac studies. Now you're  
NOTE Confidence: 0.9511545

00:29:01.370 --> 00:29:02.750 privileged. But the number  
NOTE Confidence: 0.95734054

00:29:03.690 --> 00:29:04.890 definitely does not tell the  
NOTE Confidence: 0.95734054

00:29:04.890 --> 00:29:05.390 story.  
NOTE Confidence: 0.9867646

00:29:06.105 --> 00:29:07.625 I work with, with trainees.  
NOTE Confidence: 0.9867646

00:29:07.625 --> 00:29:09.145 Some have done fifty cardiac  
NOTE Confidence: 0.9867646

00:29:09.145 --> 00:29:10.625 studies, and they're great. And  
NOTE Confidence: 0.9867646

00:29:10.625 --> 00:29:11.545 I work with others that  
NOTE Confidence: 0.9867646

00:29:11.545 --> 00:29:12.505 have done fifty, and they  
NOTE Confidence: 0.9867646

00:29:12.505 --> 00:29:13.545 really still stink. And so

NOTE Confidence: 0.9867646  
00:29:13.545 --> 00:29:14.145 the number  
NOTE Confidence: 0.96219766  
00:29:14.745 --> 00:29:16.045 but there's always a feasibility  
NOTE Confidence: 0.96219766  
00:29:16.185 --> 00:29:17.385 element, you know, for the,  
NOTE Confidence: 0.96219766  
00:29:17.385 --> 00:29:18.525 you know, like, the credentialing  
NOTE Confidence: 0.96219766  
00:29:18.585 --> 00:29:19.865 committee where where they have  
NOTE Confidence: 0.96219766  
00:29:19.865 --> 00:29:20.765 to say, like,  
NOTE Confidence: 0.9372  
00:29:21.590 --> 00:29:22.230 you know, if it gets  
NOTE Confidence: 0.9372  
00:29:22.230 --> 00:29:22.970 too complicated,  
NOTE Confidence: 0.8890898  
00:29:23.350 --> 00:29:24.730 it it it gets unmanageable  
NOTE Confidence: 0.8890898  
00:29:24.870 --> 00:29:25.670 for them to do. So  
NOTE Confidence: 0.8890898  
00:29:25.670 --> 00:29:27.050 numbers make it very simple.  
NOTE Confidence: 0.8890898  
00:29:27.110 --> 00:29:28.310 Alright? I I can check  
NOTE Confidence: 0.8890898  
00:29:28.310 --> 00:29:29.510 the box. They've done x  
NOTE Confidence: 0.8890898  
00:29:29.510 --> 00:29:30.870 number and therefore you're you're  
NOTE Confidence: 0.8890898  
00:29:30.870 --> 00:29:31.370 privileged,  
NOTE Confidence: 0.98508847

00:29:32.885 --> 00:29:34.325 which may work for for  
NOTE Confidence: 0.98508847

00:29:34.325 --> 00:29:35.525 privileging. I I think if  
NOTE Confidence: 0.98508847

00:29:35.525 --> 00:29:36.805 we run a true assessment  
NOTE Confidence: 0.98508847

00:29:36.805 --> 00:29:38.645 of competency though, we we  
NOTE Confidence: 0.98508847

00:29:38.645 --> 00:29:39.525 have to take a more  
NOTE Confidence: 0.98508847

00:29:39.525 --> 00:29:40.025 holistic  
NOTE Confidence: 0.9687674

00:29:40.885 --> 00:29:42.485 way of, of looking at  
NOTE Confidence: 0.9687674

00:29:42.485 --> 00:29:43.945 that. And then,  
NOTE Confidence: 0.99817336

00:29:44.575 --> 00:29:45.075 nothing  
NOTE Confidence: 0.9997112

00:29:45.890 --> 00:29:46.950 from the radiology  
NOTE Confidence: 0.9180758

00:29:47.490 --> 00:29:47.990 world.  
NOTE Confidence: 0.9681279

00:29:49.090 --> 00:29:50.310 I think also because  
NOTE Confidence: 0.9156425

00:29:50.930 --> 00:29:52.470 you you finish your residency  
NOTE Confidence: 0.9156425

00:29:52.530 --> 00:29:54.310 in in radiology and and  
NOTE Confidence: 0.9156425

00:29:54.530 --> 00:29:56.050 then you are privileged to  
NOTE Confidence: 0.9156425

00:29:56.050 --> 00:29:57.190 to be a a radiologist.

NOTE Confidence: 0.9156425  
00:29:57.410 --> 00:29:58.530 And and so I don't  
NOTE Confidence: 0.9156425  
00:29:58.530 --> 00:29:59.670 know that they're necessarily  
NOTE Confidence: 0.9655335  
00:30:00.285 --> 00:30:01.725 faced with this with this  
NOTE Confidence: 0.9655335  
00:30:01.725 --> 00:30:02.225 problem.  
NOTE Confidence: 0.9994948  
00:30:02.925 --> 00:30:03.805 And they have a whole  
NOTE Confidence: 0.9994948  
00:30:03.805 --> 00:30:04.305 residency  
NOTE Confidence: 0.97698593  
00:30:04.605 --> 00:30:05.645 to to learn this stuff,  
NOTE Confidence: 0.97698593  
00:30:05.645 --> 00:30:07.085 whereas we're trying to say  
NOTE Confidence: 0.97698593  
00:30:07.085 --> 00:30:08.125 how quickly can I get  
NOTE Confidence: 0.97698593  
00:30:08.125 --> 00:30:09.725 somebody from, you know, being  
NOTE Confidence: 0.97698593  
00:30:09.725 --> 00:30:11.245 a novice to an expert  
NOTE Confidence: 0.97698593  
00:30:11.245 --> 00:30:12.205 so they can start using  
NOTE Confidence: 0.97698593  
00:30:12.205 --> 00:30:13.505 this in clinical practice?  
NOTE Confidence: 0.9584133  
00:30:15.120 --> 00:30:16.400 I'll be mindful of the  
NOTE Confidence: 0.9584133  
00:30:16.400 --> 00:30:17.440 fact that you mentioned you  
NOTE Confidence: 0.9584133

00:30:17.440 --> 00:30:17.940 had  
NOTE Confidence: 0.80047244

00:30:18.960 --> 00:30:20.340 a obligation. So,  
NOTE Confidence: 0.9986218

00:30:20.960 --> 00:30:21.620 Thank you.  
NOTE Confidence: 0.6877481

00:30:22.000 --> 00:30:23.360 If you have questions, follow-up  
NOTE Confidence: 0.6877481

00:30:23.360 --> 00:30:24.180 that. I'm gonna  
NOTE Confidence: 0.79298806

00:30:24.880 --> 00:30:26.100 maybe I should tell people.  
NOTE Confidence: 0.79298806

00:30:26.345 --> 00:30:27.705 Oh, great. Yeah. So,  
NOTE Confidence: 0.98017764

00:30:28.185 --> 00:30:29.385 if there are more more  
NOTE Confidence: 0.98017764

00:30:29.385 --> 00:30:29.885 questions,  
NOTE Confidence: 0.99904716

00:30:30.905 --> 00:30:32.105 please feel free to to  
NOTE Confidence: 0.99904716

00:30:32.105 --> 00:30:32.925 email me.  
NOTE Confidence: 0.9044746

00:30:33.305 --> 00:30:34.585 Happy to to answer things  
NOTE Confidence: 0.9044746

00:30:34.585 --> 00:30:36.125 over over email as well.  
NOTE Confidence: 0.9044746

00:30:36.397 --> 00:30:38.017 I will. Great. Thanks.  
NOTE Confidence: 0.83255965

00:30:42.476 --> 00:30:44.317 Great testaments to finding the  
NOTE Confidence: 0.83255965

00:30:44.317 --> 00:30:44.817 interest.