



**Brian McHugh-00:00**

Sorry about that, guys. How are you, Vijay?



**Vijay Agarwal-00:02**

I'm very well. How are you?



**Brian McHugh-00:04**

Good.



**Vijay Agarwal-00:05**

I believe you guys are enjoying the.



**Vijay Agarwal-00:07**

Refreshed weather now with all these winters.



**Brian McHugh-00:11**

Yes, finally. Snow melted.



**Vijay Agarwal-00:14**

Yep, finally.



**Vijay Agarwal-00:16**

So I know that you have your surgical day off and hence we wanted to do this today.



**Brian McHugh-00:21**

Perfect.



**Vijay Agarwal-00:22**

When you are at peace.



**Vijay Agarwal-00:24**

So the objective is we show you. Actually, we want to show you a lot of things, but I'll try to.



**Vijay Agarwal-00:30**

Show you the crisp items that matter to you today and to, you know,.



**Vijay Agarwal-00:35**

Let you know that we are completely.



**Vijay Agarwal-00:37**

On track with what we are doing on the project. So let me start by sharing my screen.



**Vijay Agarwal-00:49**

So our objective is to give you a two or three.

There is some echo. Who is that?

 **Brian McHugh-00:58**

I'll go mute.

 **Brian McHugh-01:01**

So.

 **Vijay Agarwal-01:03**

We have set up a actual working version of the admin portal for.

 **Vijay Agarwal-01:10**

The billing admin and our teams that.

 **Vijay Agarwal-01:13**

Are going to be there at the practice. So we have that whole web now converted into an actual app communicating with the back of the whole ecosystem.

 **Vijay Agarwal-01:27**

And then we have a video of.

 **Vijay Agarwal-01:29**

The mobile app which is being currently built, which will eventually get delivered to us as a whole working beta. We are aiming for end of May. However, our original plan was sometime in end of June.

 **Vijay Agarwal-01:45**

So we are trying to expedite a.

 **Vijay Agarwal-01:47**

Lot of these things so that we can go to market quicker.

 **Vijay Agarwal-01:51**

Today's objective to show you the demo.

 **Vijay Agarwal-01:53**

Of what we had shown you in PDF format.

 **Vijay Agarwal-01:57**

So in terms of our deliverables so far, we completed our architecture and the.

 **Vijay Agarwal-02:03**

Deployment that was originally planned.

 **Vijay Agarwal-02:06**

We were having a lot of back.

And forth on the payer policies which.

 **Vijay Agarwal-02:11**

We tried to find online. And then Emily did some chatgpt and she gave us a version that we could use. We had already downloaded the Internet available versions, but we have now consolidated all the pair policies and we have also.

 **Vijay Agarwal-02:26**

Trained them into our business rules, which I will show you now. We have a very comprehensive document that details out and does a performance benchmark on all the various types of rules. It's a long, long document, but I'll tell you what it looks like and what is more critical to you. So we have defined rules now for clinical reviewers on how different transcripts will be converted into a score so that you know, we have high probability of acceptance and rejected rejection so that billers know exactly that.

 **Vijay Agarwal-03:16**

We have done so many different rule.

 **Vijay Agarwal-03:18**

Matching and Iambili would automatically highlight that this needs extensive review and this is good to go. Right.

 **Vijay Agarwal-03:29**

So there are some internal rules which the system is now set up with.

 **Vijay Agarwal-03:32**

Where we say everything has been recognized in the transcript All ICDs are recognized. You know, we say that there are.

 **Vijay Agarwal-03:42**

Certain situations when diagnosis or service lines.

 **Vijay Agarwal-03:44**

Are not clear in the claim, okay. We look at medical necessities, add ons,.

 **Vijay Agarwal-03:52**

Bundling, lumbar fusion without instrumentations, and so on, okay? So all these rules got identified from.

 **Vijay Agarwal-04:00**

The content that we saw on the.

 **Vijay Agarwal-04:02**

Sample claim documents and the policy documents.

 **Vijay Agarwal-04:05**

And then we benchmarked on some examples.

So I'm going to show you how.

 **Vijay Agarwal**-04:09

This report talks about.

 **Brian McHugh**-04:11

So.

 **Vijay Agarwal**-04:15

I hope this is readable now. So this is what we have mapped so far in terms of CPD categories, ICD categories, okay? And then what we have done is.

 **Vijay Agarwal**-04:27

We created sample,.

 **Vijay Agarwal**-04:31

You know, speech. And from the speech we created or identified examples, okay? And for that example, it tries to pull out what are the CPTs and ICDs, okay?

 **Vijay Agarwal**-04:46

And then our rule evaluation says whether.

 **Vijay Agarwal**-04:49

This is a pass or whether there are warnings or flags or rejections, okay?

 **Vijay Agarwal**-04:54

And those are the various data points that we are trying now. So when you have a lot of.

 **Vijay Agarwal**-05:00

Sample speech and you have the identified mapping of CPDs and ICDs as the.

 **Vijay Agarwal**-05:09

Test data, we can now start running.

 **Vijay Agarwal**-05:12

It through the engine and give you the output and we can, we can start basically validating how good the engine is. Okay?

 **Vijay Agarwal**-05:21

And similarly we had tried for different ones like billing error is getting caught.

 **Vijay Agarwal**-05:25

Here in this scenario.

 **Vijay Agarwal**-05:28

So there is a engine catches the.

Hard NCCI bundle, a real world billing error.

 **Vijay Agarwal-05:33**

And then we try to identify here.

 **Vijay Agarwal-05:35**

That there is one flag, okay?

 **Vijay Agarwal-05:38**

It says what is the flag?

 **Vijay Agarwal-05:39**

CPD.

 **Vijay Agarwal-05:40**

This is bundled with 22551 per NCCI.

 **Vijay Agarwal-05:43**

Without the modifier, right. And will be denied. So this is actually happening now on the model that we have set up as part of the billing and policy setup. So that was that part.

 **Vijay Agarwal-06:00**

And then we have gone ahead and.

 **Vijay Agarwal-06:02**

Also, you know, completed the first part of the speech to text platform based on Whisper. And we have the performance reports same way like we have for the policy model.

 **Vijay Agarwal-06:14**

We also have a quick demo. So I'll show you the demo video.

 **Vijay Agarwal-06:18**

Which is a bit more interesting. Try to zoom in.

 **Vijay Agarwal-06:25**

Although this is all happening at our backend because the mobile is still not completely stitched with the web. But once it is staged, this is what is expected.

 **Vijay Agarwal-06:34**

So on the left this is, this is what the original dictation, original transcript was. And then we made the program dictated for us.

 **Vijay Agarwal-06:49**

So we wrote a, wrote a program that simulates recording. It does the recording.

 **Vijay Agarwal-06:53**

Okay.

Once that is recorded,.

 **Vijay Agarwal-06:59**

We go to.

 **Vijay Agarwal-06:59**

The next step and we say transcribe and then we are using the whisper.

 **Vijay Agarwal-07:04**

Large int8 quantized model. Okay. And once transcription is done, we get the full transcript and which we have checked, you know, with the original. So now let me just zoom out.

 **Vijay Agarwal-07:20**

So we check the whole transcript with.

 **Vijay Agarwal-07:23**

The original and we also identified what.

 **Vijay Agarwal-07:27**

Are we missing in the language. Okay.

 **Vijay Agarwal-07:29**

So some words which are medical dictionary.

 **Vijay Agarwal-07:33**

Words the speech to text doesn't recognize, which is okay because we know we.

 **Vijay Agarwal-07:38**

Are going to be able to replace that.

 **Vijay Agarwal-07:39**

For example, the radiculopathy doesn't get recognized as is and it is actually showing ready cholopathy. Okay.

 **Vijay Agarwal-07:52**

So we know that there are these kind of situations that are going to.

 **Vijay Agarwal-07:55**

Occur and for that we have our report which talks about this STD benchmark and I'm going to show you that report as well. Yeah. So if you see the original transcript has 58 radiculopathy, but the STD misses some of the things. Okay.

 **Vijay Agarwal-08:36**

Or misunderstands some of the words. Okay.

 **Vijay Agarwal-08:40**

So we have actually categorized them in.

Terms of where we are missing, whether.

 **Vijay Agarwal-08:46**

It's a medical word or a anatomical.

 **Vijay Agarwal-08:49**

Word or an instrument or a number. And then we are identifying the error ratios and the approach now is going.

 **Vijay Agarwal-08:58**

To be wherever there is a medical.

 **Vijay Agarwal-09:00**

Or anatomical or instrument which we will fill in the second pass with the dictionary of the surgeries that we have so that the accuracy goes to the highest level and the numbers that.

 **Vijay Agarwal-09:18**

Will be cross referenced with the patient.

 **Vijay Agarwal-09:19**

Reports that we get in.

 **Vijay Agarwal-09:22**

So that's how we have done a.

 **Vijay Agarwal-09:24**

Lot of, you know, this sample transcripts.

 **Vijay Agarwal-09:28**

That getting checked and then we have the word error ratios.

 **Vijay Agarwal-09:32**

Okay. And the errors being correctly identified and we know how to get to the highest level. Okay. So this is another big report that.

 **Vijay Agarwal-09:41**

We will share with you when you.

 **Vijay Agarwal-09:44**

Want to spend some time and read through it. You don't have to. This is just to show that we.

 **Vijay Agarwal-09:49**

Are completely on track and we have gotten to the stage of converting audio to speech and then detecting relevant procedures happening in that and then from there.

 **Vijay Agarwal-10:01**

Mapping it to the CPT and ICD codes and also detecting if potential claim is going to fail.

Yeah, that's really great progress, bj. That's awesome. Yeah, Very, very interesting to see it in action to some degree.

 **Vijay Agarwal-10:17**

Yeah. So, and then I'll go to the dashboard.

 **Vijay Agarwal-10:21**

So if you remember, we had one.

 **Vijay Agarwal-10:25**

PDF that we shared with you now.

 **Vijay Agarwal-10:28**

That is no longer a PDF, that is an actual iambili.mchuneurosurgery.com URL which has.

 **Vijay Agarwal-10:36**

Its own, it has a, you know,.

 **Vijay Agarwal-10:40**

Login created for multiple types of users.

 **Vijay Agarwal-10:44**

It has Multi factor Authentication which sends an email to this email ID.

 **Vijay Agarwal-10:59**

And then you get the whole dashboard.

 **Vijay Agarwal-11:01**

Right now there is nothing of course,.

 **Vijay Agarwal-11:03**

But once you start getting in data at the back end from the mobile,.

 **Vijay Agarwal-11:07**

Then all of these numbers will start changing in real time. What is working on this is all.

 **Vijay Agarwal-11:13**

These numbers are coming from the data,.

 **Vijay Agarwal-11:14**

Which right now is zero. But you can add doctors who are supposed to access Ambili. I know right now it may be just you, but as we scale to.

 **Vijay Agarwal-11:24**

The next level we will have this.



Need for the individual practices to create their own doctors.

 **Vijay Agarwal-11:30**

Patients will get added automatically. Or you can create a manual patient,.

 **Vijay Agarwal-11:34**

Or you would create that from the mobile app. Right.

 **Vijay Agarwal-11:38**

And then we get the claims, once the claims get registered here, the templates which we have been talking about. So we have done this option to create a template in case our billers have something in mind as a template. They can just write the template name. We have given those standard examples here.

 **Vijay Agarwal-11:56**

They can write the CPD codes, the ICD codes and publish it.

 **Vijay Agarwal-11:59**

The moment they publish, surgeons and doctors.

 **Vijay Agarwal-12:02**

See it on their mobile version of the app.

 **Emily Clifford-12:05**

Vijay, is there going to be a dropdown or a template library that they can easily access? Okay.

 **Vijay Agarwal-12:11**

Of course, as soon as we. So what we will do by the end of next phase is we will.

 **Vijay Agarwal-12:18**

Add all the templates that we are.

 **Vijay Agarwal-12:19**

Aware of and that templates are going.

 **Vijay Agarwal-12:23**

To come from our own cheat sheet.

 **Vijay Agarwal-12:25**

That we have created.

 **Vijay Agarwal-12:26**

So we are actually creating our own.

 **Vijay Agarwal-12:28**

Cheat sheet on top of the biller cheat sheets. So I'll show you that. So you know, you gave us some.

Snapshots and into something that we can feed into.

 **Vijay Agarwal-12:54**

I am Billy. Okay.

 **Vijay Agarwal-12:56**

So we have our own categories, subcategories,.

 **Vijay Agarwal-12:58**

CPD codes and ICD codes all mapped into one place. Okay.

 **Vijay Agarwal-13:03**

And all the various type of surgeries.

 **Vijay Agarwal-13:05**

And their codes all available. So this will technically become the template for IMBD to begin. So all the cheat sheets that we had all of this converted into something that will get go in as a template. That's our cheat sheet.

 **Vijay Agarwal-13:24**

Great. And then of course you have as an admin you get all of these where if we are associated with multiple hospitals, we add those hospitals in. We have of course multiple types of users.

 **Vijay Agarwal-13:37**

So you create those users which are administrators, billers, supervisors.

 **Vijay Agarwal-13:42**

Then we take a look at what.

 **Vijay Agarwal-13:44**

Are connected right now. So the one thing that we spoke.

 **Vijay Agarwal-13:48**

About last time is to have the.

 **Vijay Agarwal-13:49**

Imbly shared folder because the hospitals may.

 **Vijay Agarwal-13:54**

Not give us access and there will.

 **Vijay Agarwal-13:56**

Be a human downloading it from their.

 **Vijay Agarwal-13:59**

Ehr and Manually uploading it to Imbele.

That's the shared folder for.

 **Emily Clifford**-14:05

On that note, Vijay, were you able to look into that Epic share link?

 **Vijay Agarwal**-14:11

We saw it at a first glimpse but we are going to do more deeper research on it next week. Prima facie it looks good for fetching patient information. Not yet clear.

 **Vijay Agarwal**-14:21

If you can, if you need anything else or you know, if it has any restrictions. So once we read through the whole specific, then we'll get back to you with further questions.

 **Emily Clifford**-14:30

And I'm right to say that if that does do what we want it to do, that I am. Billy, shared folder isn't necessary anymore, is that correct?

 **Vijay Agarwal**-14:38

Yes. At least for Athena and Epic.

 **Vijay Agarwal**-14:42

But if they are going to be.

 **Vijay Agarwal**-14:43

More situations and more hospitals, then the.

 **Vijay Agarwal**-14:45

Shared folder is still going to be required.

 **Brian McHugh**-14:47

Right.

 **Brian McHugh**-14:48

Okay.

 **Vijay Agarwal**-14:50

Yeah.

 **Vijay Agarwal**-14:50

So I think all of these parts, you know, which were required as a core setup along with the web build.

 **Vijay Agarwal**-14:57

Is actually now in place.

 **Vijay Agarwal**-14:58

You can actually log in, create users, login with the selected users, create doctors,.

Patients, create coding templates, all of this operational.

 **Vijay Agarwal**-15:10

And then let me show you the.

 **Vijay Agarwal**-15:13

Web, the mobile screen, Zoom in.

 **Vijay Agarwal**-15:22

So as soon as you log in it asks you for the microphone permissions.

 **Vijay Agarwal**-15:26

Then you have these today's claims, the.

 **Vijay Agarwal**-15:29

Number of things that are in pipeline. You have a live dictation or you can upload something.

 **Vijay Agarwal**-15:33

You select the patient, the encounter, you choose the template and you start your recording. All one tap. So you know you're not.

 **Vijay Agarwal**-15:46

I mean we know that surgeons are always with gloves so you don't want to type anything.

 **Vijay Agarwal**-15:50

So everything is tapped.

 **Brian McHugh**-15:52

Yeah, yeah,.

 **Vijay Agarwal**-15:54

Yeah. Thanks Vijay.

 **Brian McHugh**-15:55

That looks great.

 **Vijay Agarwal**-16:00

Yeah.

 **Vijay Agarwal**-16:01

And then we have done the sandbox connection establishment with Athena.

 **Emily Clifford**-16:06

Great.

 **Vijay Agarwal**-16:07

Next step is it to be connected.

To the Athena practice of our own practice for which I gave, gave the team go ahead this week because.

 **Vijay Agarwal**-16:18

I wanted to make sure that sandbox.

 **Vijay Agarwal**-16:20

Is clean and we are not doing anything incorrect. So next week we are going to.

 **Vijay Agarwal**-16:25

Attempt to connect with our own Athena.

 **Vijay Agarwal**-16:28

At the practice and fetch information.

 **Vijay Agarwal**-16:31

And then we have to look at.

 **Vijay Agarwal**-16:33

The Epicare link which you know, we just got yesterday. So we'll look, look at that as the next step.

 **Emily Clifford**-16:39

Great.

 **Brian McHugh**-16:40

Okay.

 **Vijay Agarwal**-16:41

Yeah.

 **Vijay Agarwal**-16:42

So there are just few questions we had since both of you are on the call. We got one response in the email that said the audio recordings and transcripts are not required to be made visible.

 **Vijay Agarwal**-16:55

To billers and supervisors. But if it is accessible, it would.

 **Vijay Agarwal**-17:00

Be better for them to understand what.

 **Vijay Agarwal**-17:02

The surgeon spoke about and what the transcript was. Right?

 **Brian McHugh**-17:06

Yeah, that's true.

Yeah.

 **Emily Clifford**-17:08

So I think Brian was saying it's not required, but I think it's fine if they can see it. Right, Brian?

 **Brian McHugh**-17:13

Sure.

 **Brian McHugh**-17:14

Yeah. The transcript would be good. I doubt any of these billers would.

 **Brian McHugh**-17:17

Be going into the audio recording and trying to actually, you know, troubleshoot areas. They, they would probably just kick it.

 **Brian McHugh**-17:24

Back to the doctor and say, you.

 **Brian McHugh**-17:26

Know, here's your final transcribed draft and you're missing language X, Y and Z.

 **Brian McHugh**-17:32

And if, and frankly the doctor also.

 **Brian McHugh**-17:35

Is probably not going to go back to the audio recording and see if.

 **Brian McHugh**-17:37

That would, they would just re dictate it.

 **Vijay Agarwal**-17:40

Yeah, I think at the early stage.

 **Vijay Agarwal**-17:42

It may just be better for them.

 **Vijay Agarwal**-17:44

To create so that we know what is not working well and then eventually we can remove it if not required.

 **Brian McHugh**-17:52

Yeah.

 **Brian McHugh**-17:53

Okay, fair enough.

Cool. So we will keep that as is from our mock ups.

 **Vijay Agarwal**-17:59

And the second confirmation was that when.

 **Vijay Agarwal**-18:02

We are trying to fill the CMS 1500 form, we have to use some.

 **Vijay Agarwal**-18:08

Logic to determine the price. And so one of the things that we wanted to get clarity is should.

 **Vijay Agarwal**-18:17

We take it as 85% of the.

 **Vijay Agarwal**-18:20

80Th percentile charge or should we use.

 **Vijay Agarwal**-18:22

Some other math that our billers are using right now?

 **Brian McHugh**-18:26

Yeah, right now we just do like our fee schedule is 100% of the 80th percentile. PJ and then when it goes through various rounds of negotiations, that's just our starting point.

 **Vijay Agarwal**-18:39

Okay, so.

 **Brian McHugh**-18:42

You, you guys probably know.

 **Brian McHugh**-18:43

This, but if, if you don't, the Fair Health data is all geo zipped to specific areas. So the 80th percentile is, is not only different like state to state, but it's different zip code to zip code.

 **Vijay Agarwal**-18:59

Oh. So and for us, does the zip.

 **Vijay Agarwal**-19:03

Code of the patient apply or the.

 **Vijay Agarwal**-19:05

Zip code of the practice?

 **Brian McHugh**-19:08

Hospital or practice. Yeah, hospital or practice site of service, they say.

Okay, so then I believe we would.

 **Vijay Agarwal-19:17**

Also have to add a zip code,.

 **Vijay Agarwal-19:20**

Which we have, but maybe this will have to look up with the Fair Health charge data whenever we are going.

 **Vijay Agarwal-19:26**

To do our claim process.

 **Emily Clifford-19:29**

I don't think we've gotten to that point, Vijay. I don't think I've given you the Good Samaritan address in any of the npi. Right. So if you want to send me a list of all of that data, I can start filling it in.

 **Vijay Agarwal-19:40**

Yeah.

 **Vijay Agarwal-19:41**

Great.

 **Vijay Agarwal-19:42**

So maybe what we would do is.

 **Vijay Agarwal-19:44**

Make you fill everything here on the dashboard.

 **Emily Clifford-19:47**

Yeah, that's fine. Yeah. Even better,.

 **Brian McHugh-19:51**

That's a dynamic database as well.

 **Brian McHugh-19:54**

Pj so it might be something where.

 **Brian McHugh-19:55**

We need a, you know, to link.

 **Brian McHugh-19:58**

Into the Fair Health database. They updated, I believe every six months.

 **Brian McHugh-20:04**

So it's a.



It's meant to reflect real time market data on the charges and collections of the various practices.

 **Brian McHugh-20:13**

And then the way we done the.

 **Brian McHugh-20:15**

Interface, the way we interact with it.

 **Brian McHugh-20:16**

Is, hey, it's these CPT codes and then the zip code and it will.

 **Brian McHugh-20:21**

And it will push out the data.

 **Brian McHugh-20:23**

I don't know if that's.

 **Brian McHugh-20:26**

I just want to make sure everyone's envisioning the same thing because it may be something that needs to be pulled from in real time.

 **Vijay Agarwal-20:34**

It may still not be very real time.

 **Vijay Agarwal-20:36**

Right. For now we are.

 **Vijay Agarwal-20:37**

Okay.

 **Vijay Agarwal-20:38**

Even if you pull it once a.

 **Vijay Agarwal-20:39**

Month or once in three months. Right.

 **Brian McHugh-20:41**

Yeah.

 **Vijay Agarwal-20:44**

Let me write this down because. Okay. Yeah.

 **Vijay Agarwal-21:04**

So what's next? I mean, we just had these two questions.

 **Vijay Agarwal-21:08**

So we will continue doing the, you.

Know, last bit of web platform as.

 **Vijay Agarwal**-21:14

Per the mock ups. The next big thing is integrating the mobile app that we have now with the whole web and start testing that.

 **Vijay Agarwal**-21:25

For the end to end journey of.

 **Vijay Agarwal**-21:26

Speech to text and the ICD CPD mappings which we know is right now working in silos and we stitched together the whole journey. And yeah, I think we are aiming to get towards a fortnightly demo because.

 **Vijay Agarwal**-21:45

Now that the base is set up,.

 **Vijay Agarwal**-21:46

We can show you everything every fortnight.

 **Vijay Agarwal**-21:49

That's the intended velocity.

 **Vijay Agarwal**-21:52

So we would, you know, set up more time with you, Emily and Brian probably in next few weeks to show.

 **Vijay Agarwal**-21:59

You our progress again.

 **Emily Clifford**-22:00

Sounds great. Thank you.

 **Brian McHugh**-22:03

Yeah, thanks, Vijay. That's great.

 **Vijay Agarwal**-22:05

Yes.

 **Brian McHugh**-22:06

So this is what I missed the first part.

 **Brian McHugh**-22:09

Did you say, Is it Ernie? Who's.

 **Brian McHugh**-22:11

Who's gone for.

Will have. So she's not gone. Her.

 **Vijay Agarwal**-22:17

Her wedding is in June and she's the only child and single mother so she has to do her own preparations. So she will be for the whole.

 **Vijay Agarwal**-22:27

Month or even more.

 **Brian McHugh**-22:29

Yeah.

 **Vijay Agarwal**-22:29

And June is very critical for us on the project because that's when you.

 **Vijay Agarwal**-22:34

Would be testing and there will be iterations. So we got Pratik.

 **Brian McHugh**-22:38

Yeah, fair enough.

 **Brian McHugh**-22:40

Very good.

 **Vijay Agarwal**-22:41

Yeah.

 **Vijay Agarwal**-22:41

So we are actually helping her do her wedding prep. She's getting married outside the city.

 **Brian McHugh**-22:47

Oh, nice.

 **Vijay Agarwal**-22:48

We're outside the city. Yeah.

 **Brian McHugh**-22:49

Congratulations to her.

 **Vijay Agarwal**-22:51

Yeah, I will pass on.

 **Emily Clifford**-22:54

All right, thanks so much.

 **Vijay Agarwal**-22:56

Any questions?

No, it looks great.



**Brian McHugh**-22:59

No. Nice to meet you, Abhinav and Lance and thank you so much for your time, Africa.



**Vijay Agarwal**-23:08

Bye, Brian.



**Vijay Agarwal**-23:09

Good day.



**Brian McHugh**-23:15

Can drop.