

Conversations with a Virtual Nurse Make Patients Healthier and Happier

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SCHWADRON
"WOULD YOU MIND IF I ASK SIRI FOR
A SECOND OPINION?"

What do we do?

- Virtual nurse avatar (“Molly”)
- Molly helps patients with chronic health conditions
 - CHF, addiction, diabetes, asthma
- She speaks to patients, and patients can speak back

Video Demo: Chronic Heart Failure Daily Check-In

- Patient gets daily reminder from app
- Uses Bluetooth scale and blood pressure cuff
- Answers questions
- Info triaged & sent to clinician

<https://youtu.be/ka0WXPtq64Q>

Clinician Portal

NOTIFICATION DASHBOARD



All Notifications



Red Alerts



Yellow Alerts



New Symptom



Call Request



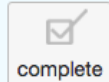
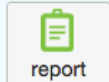
Non-Compliance



2 Patients with Notifications

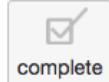
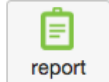
Sort by ▾

McCarthy, Mike Phone: [REDACTED]
ID: [REDACTED]



High blood pressure: (160/97 71 BPM) 03/08/16 06:01 AM

[REDACTED], bryant Phone: [REDACTED]
ID: [REDACTED]



Weight gain: (TDW 250) Last Weight: 262.7 +18.3 lbs 03/08/16 04:39 AM

Weight gain (4 lbs over 5 days): (TDW 250) Last Weight: 262.7 +18.3 lbs 03/08/16 04:39 AM

Mike McCarthy (1) [REDACTED]



High blood pressure: (160/97 71 BPM) 03/08/16 06:01 AM

Patient Notes

Check-Ins Which Generated Alerts: ▶

Weight Charts ▶

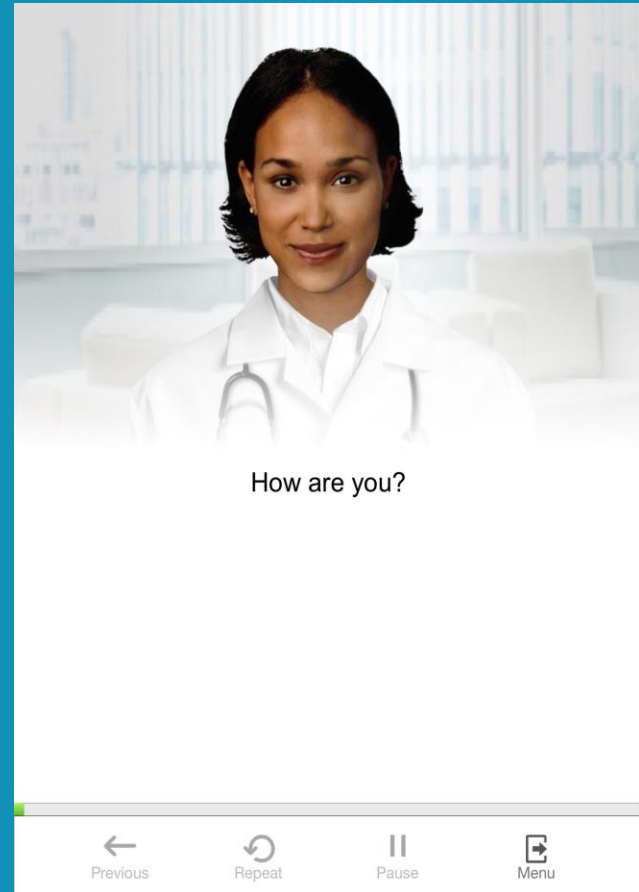
When do callers talk to Molly?

Opening question: “How are you doing today?”

Final question: “Anything else you’d like to share with me today?”

What does Molly say back?

“Thanks for sharing that with me.”



What are they saying to Molly?

- I'm sick
- was in the hospital Monday Tuesday got home last night doing better
- Okay my right leg really hurts
- the problem with my lower back from the procedure yesterday and it's very painful difficult to walk everything
- did not take medicine in the AM
- Doing ok after the operation

Health updates

What are they saying to Molly?

- now I gotta lose my Christmas weight now
- well I will continue with the 40 grams of lasix in the morning and the evening for one more day
- yeah I forgot to take my meds last night I came home fell asleep and obviously it's Thanksgiving so you know how that goes and that's why
- yes I did cut back on the lasix yesterday as required and my stomach area is still bloated
- yes I have a cold and I want to know if I could take Afrin nasal spray it's an over the counter medication

Health updates

What are they saying to Molly?

- I'm good and my day is for angiogram so I'm a little anxious
- I'm ok my mom was in the hospital last night so I can't get a lot of sleep
- yeah I went out to saddle ranch with my family yesterday saddle ranch restaurant had a salad but I also had some wings

Worries

What are they saying to Molly?

- doing good sorry I took the weekend off no check ins
- I feel great Molly thank you for asking
- I'm busy cooking but fine thank you
- I'm good Martin Luther King Day got a day off yay
- sad I didn't win the lottery Powerball is 1.4 billion
- have a nice day dear
- I just have been overeating and I'm going to cut back
- not today have a good Turkey Day gobble gobble
- yes it's Sunday so time to go to church
- happy Halloween oh my god the ghost behind you
- no I'm good Snoop Dogg

Personal, humorous

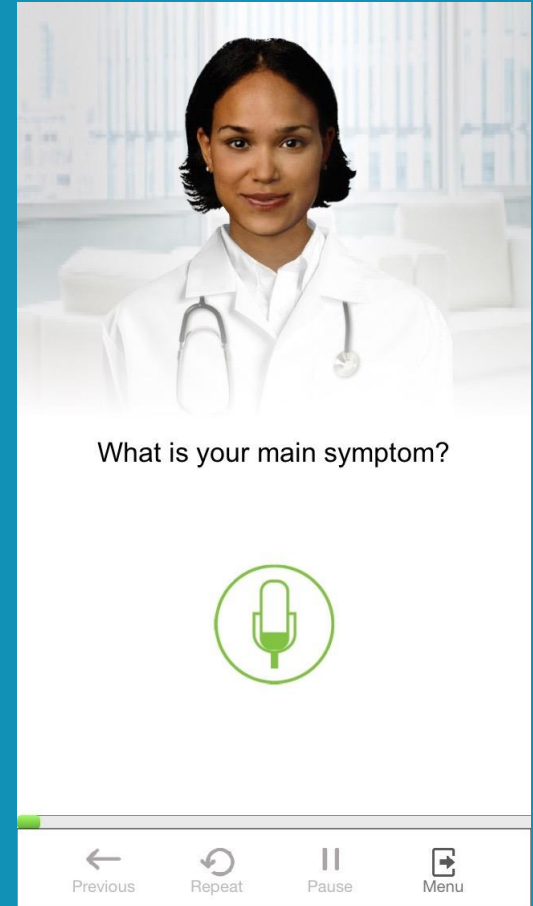
Why does it matter?

- More engagement
 - “Feels like someone is holding my hand”
 - “Not a cold machine”
- Engagement = compliance = healthier outcomes
- Patient Self-Management

Future use of voice

- Intelligent / empathetic responses
- Negative / stressful word patterns
- Emotion detection

Stress can be indicative of health event not yet detected by BP / weight



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Author of upcoming O'Reilly
book, *Designing Voice User
Interfaces* (end of 2016)



Thanks,
Mobile
Voice!