# Patient Engagement & OpenNotes

AMDIS
Physician Computer Connection Symposium
June 22, 2016

Homer Chin MD (OpenNotes, OHSU, KPNW)
John Santa MD MPH (OpenNotes)
Alistair Erskine MD (Geisinger)
Colin Banas MD (VCU)
Albert Chan MD (Sutter Health)

1

# Agenda

- OpenNotes: Background &NW OpenNotes Consortium (Chin)
- Geisinger (Erskine)
- VCU (Banas)
- Sutter (Chan)
- National Overview & Summary (Santa)
- Discussion



# What is OpenNotes?

- Patients invited to review their providers' visit notes through secure patient portals; patient notified by email that visit note is available for review.
- "OpenNotes" is a movement to give patient's access to their EHR notes via the internet. Not a specific vendor product or software.
- Research and demonstration project in 2010

Adapted from a presentation by: Tom Delbanco, MD, MACP and Jan Walker, RN, MBA Harvard Medical School and Beth tereol Descoraes Medical Center

# 3 Overall Study Findings

- Patients are more engaged in their care:
  - 80% opened at least one note.
  - 70 80% reported taking better care, better understanding, better prepared for visits, felt more in control, better at taking meds.
  - 1-8 % caused confusion, worry, or offense
- Providers not adversely affected
- After one year, 99% of patients wanted to continue, no provider asked to have OpenNotes turned off.

Adepted from a presentation by: Tom Delbanco, MD, MACP and Jan Walter, RM, MEA

## NW OpenNotes Consortium

June 2013: Convene meeting of Oregon's health systems, consumer groups, and policy makers. Presentation from Tom Delbanco and Jan Walker

September 2013: Agreement to form a consortium of health systems to collaborate together to implement OpenNotes as a community

Monthly Quarterly: Meetings involving major health systems

# **NW Consortium Clinical Participants**





















# Status

- 11 major health organizations committed to implementing OpenNotes (by YE 2015)
- Estimate: 1 million patients in Portland Metro/Oregon with access to their provider's visit notes
- All but 2 completely implemented (2 still in pilot)
- Most implemented "big bang"
- Cooperatively competitive
- Smaller practices more difficult
- Now looking to extend consortia approach to:
  - Boise, ID
  - Minneapolis, MN
  - Salt Lake City, UT
  - Denver, CO
  - Madison/Milwaukee, WI





# Geisinger

### OpenNotes @ Geisinger

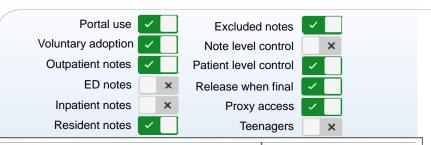
Alistair Erskine MD
Chief Strategic Informatics Officer

10

### **MyGeisinger – MyChart Patient Portal**



### OpenNotes® - Study and configuration



#### **Annals of Internal Medicine**

#### ORIGINAL RESEARCH

# Inviting Patients to Read Their Doctors' Notes: A Quasi-experimental Study and a Look Ahead

Tom Delbanco, MD\*; Jan Walker, RN, MBA\*; Sigall K. Bell, MD; Jonathan D. Darer, MD, MPH; Joann G. Elmore, MD, MPH; Nadine Farag, MS; Henry J. Feldman, MD; Roanne Mejilla, MPH; Long Ngo, PhD; James D. Ralston, MD, MPH; Stephen E. Ross, MD; Neha Trivedi, BS; Elisabeth Vodicka, BA; and Suzanne C. Leveille, PhD, RN

Background: Little information exists about what primary care physicians (PCPs) and patients experience if patients are invited to read their doctors' office notes.

of electronic messages from patients did not change. After the intervention, few doctors reported longer visits (0% to 5%) or more time addressing patients' questions outside of visits (0% to 8%), with practice size having little effect; 3% to 36% of doctors

Objective: To evaluate the effect on doctors and patients of facil-

#### OpenNotes® - Study Results (Geisinger)

		Preintervention Survey (n = 22)	PostIntervention Survey ( $n = 22$ )
	Visits will/did take significantly longer	32	5
	Will/did spend more time addressing patient questions outside of visits§ (not asked)	45 (-)	0 (32)
	Will/did spend more time writing/dictating/editing my notes	36	14
	Will be/was less candid in documentation	32	9
	I will/did change the way I address these topics in my notes:		
	Cancer/possibility of cancer	18	18
	Mental health	27	27
	Substance abuse	32	23
	Overweight/obesity	18	5
	Medical care will be/was delivered more efficiently	27	32
	Notes can be useful for patient communication and education	91	91

#### **Key points**

- Providers more concerned than patient pre-implementation
- Provider concerns mollified post implementation
- Secured email communication remains constant
- · High degree of patient participation continued

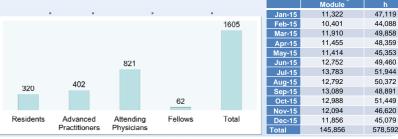
Geisinger

#### **OpenNotes® - Voluntary Adoption**

#### **Key Points**

- 600k encounter reviewed out of 2M visits/year
- · Virtually no complaints from patient/providers
- Total of 277 (<1%) patient excluded by providers

· Sustained adoption



Geisinger

#### **Outcomes papers**

#### **Med Adherence**

prescription vs claims slightly better for HTN no effect on lipids

#### **Caregiver Access**

Addressed lack of: health literacy computer skills



### OpenNotes® Next - Epic Bedside (inpatient)



Geisinger

Keep patients Engaged, Informed, Connected and Entertained throughout the care process to promote faster recovery, better decision making, and increased patient satisfaction

Infotainment on iPad and Apple TV & MyChart Bedside



#### **Potential Expansions:**

• G-CMC: 240

Holy Spirit: 316

Geisinger

#### **Interactive Patient System Overview**

The Interactive Patient System (IPS) provides patients with entertainment and clinical content during a hospital stay

















Patients indicate IPS helps distract them from their pain and keep them informed about their hospital stay.

Geisinger

### Take-Home iPad Build and Integration

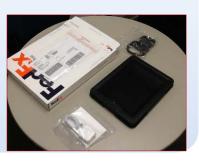
#### iPad content:

#### App with reminder schedule pre- and post surgery

- > Educational materials (documents and videos)
- Informational materials (clinic contacts, directions, maps)
- Med Rec and 90 day postop N2QOD Lumbar Spine questionnaires
- Pre and Post Surveys
- Spine Education Class Videos
- FaceTime call with provider
- FitBit 3-axis accelerometer

#### Metrics:

- > Pre- & Post- qualitative feedback surveys
- > N2QOD Lumbar Spine questionnaire
- Medication Reconciliation questionnaire



# Geisinger

### **On-going Projects Exploring OpenNotes**

- Adherence: Found that OpenNotes increase adherence to certain medications
- Resident Learners: Impact of opening resident/fellow notes on the learners and faculty
- Caregivers: Extended OpenNotes to adult patients who had granted someone proxy access to their online portal
- MFM: Impact of OpenNotes on maternal anxiety in high-risk pregnancies
- **Mental Health:** Impact of opening mental health notes to patients
- Long-term Users: Resurveying initial OpenNotes users to understand impact over time
- OurNotes: Agenda setting and cogeneration of notes

### OurNotes® - Proposed workflow



Step I: Pre-Visit agenda setting



tep III: Patient-provider narrative

Geisinger



Step II: Agenda setting and data entry in office waiting room



Step V: Post-visit co-signature and opportunity for comments and questions

BIDMC (PI - Delbanco) OurNotes study funded by Commonwealth Fund

Geisinger

#### OurNotes® - Proof of Concept

- Explored the use of HIT to engage patients and families through co-generation of clinical progress
  - Developed a process of collecting pre-visit documentation by testing multiple technologies
  - Identified barriers and areas of opportunity from the patient and provider perspective
  - Formulated an implementation plan for broader scale
- Two week pilot in Geisinger Clinic
  - · Structured and unstructured narratives
- Modalities
  - iPad
  - Stylus
  - · Bluetooth keyboard

BIDMC (PI – Delbanco) OurNotes study funded by Commonwealth Fund

Geisinger

#### OurNotes® - POC results

- Patient Exit Survey and Interviews
  - 64 OurNotes completed (N=7 family caregivers)
  - 77% reported less than 2 minutes to complete
  - 64% reported being 'very comfortable' with technology
  - 70% reported that OurNotes made them feel more involved
  - 83% reported that OurNotes allowed for focused time with provider to review health goals
- Provider Interview
  - · Patient was able to set their agenda for the visit
  - Kept patient/provider from missing something wanted to discuss
  - Patient provided chief complaint and provider can be ready to discuss prior to appointment
  - Added to efficiency did not slow down visit

Geisinger

22

### **Proven Experience - Patient Feedback**





VCU Health and OpenNotes

AMDIS June 2016

# Our Patient Portal – HealtheLife (Cerner)

- Started 2011
- 56,000 patients
- Contains
- Messages
- Medication refills
- Education
- Labs (real time)
- Radiology (4d)
- Pathology (4d)

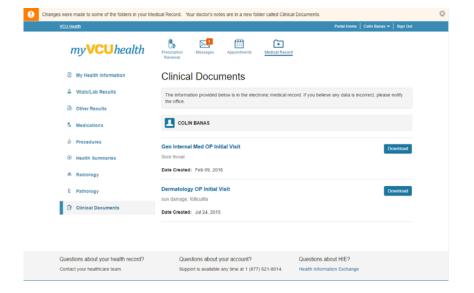




March 29, 2016

### Addressed fears up front

radiooca iodio de nom					
Problem	Solution				
Could be dangerous	Or could avoid danger				
I will get all kinds of requests for corrections	Doesn't usually happen				
They won't understand the terminology	Use Open Notes FAQs and abbreviations				
What about my patients who have mental health issues?	Haven't heard of issues				
What about psychiatry notes?	Not in yet, but Open Notes studying				
What if I want to write something the patient shouldn't see (their safety/my safety)	Protected note, not in portal				
<b>®VCU</b> Health	March 29, 2016 26				



# What notes we share (currently)

- Outpatient, signed, provider visit notes
  - · Cerner only allows release based on Note Type, doesn't allow for a provider to decide when to release the note or the content
- o Resident notes are only seen after authentication by attending
- o "Released" at midnight
- o Issues with implementation:
  - Turn on additional note types, these will be visible from the original date
- o Issues post go-live
- o Optimal to have patient notification on note publication



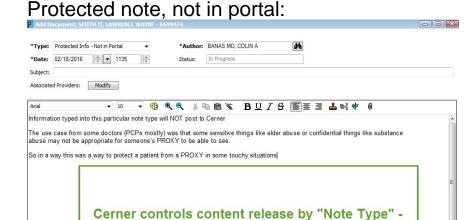
# What we don't share (yet)

- Inpatient Notes
- Psychiatry / Psychology Notes
- Allied Health notes PT/OT
- Discharge Summaries –Currently approved and awaiting implementation



March 29, 2016





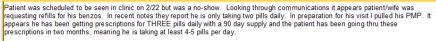
so we created "Protected Info - Not in Portal"

Protected Note: Not in Portal

- Used 16 times since creation ( > 1 year)
- APS / CPS concerns

UHealth.

- Substance Abuse concerns and care planning
- Malingering concerns
- User error



A discussion should be had with the patient and his wife at the next visit about appropriate benzo use and if this medication should be

During examination, I was examining pt's L lower leg wounds when I noticed what appeared to be a small fruit fly (~1-2mm long by 1mm wide) in the ointment pt had applied to his wound (which he stated was vitamin E). There was clearly no evidence of erythema, inflammation, laceration, lesion, or any other disturbance of the skin in the immediate vacinity of the fruit fly (about 1 cm away from the active wounds). As I was examining the wound, he produced an exacto-knife. Before I could convince him otherwise, he began to scrape up some of the fibrinous material covering one lesion. I went out of the exam room to grab a microscope slide, and when I came back, he had produced a small pile of skin scrapings including the dead fruit fly. With no involvement of the skin under the fly and the fact that it was contained within the ointment, I suspect it was placed next to the wound to by the patient in order to garner support for his theories of parasite infestation.

Isaw in PGP clinic today. While I was in the exam room with Mom and the 2 boys, I witnessed her appear to slap Her open hand appeared to have hit his right cheek. He then held his right cheek. No mark was left. Also I noted 2 times that walked up to his mother, she grabbed him roughly by the arms making him lose his balance and fall backwards onto the ground. Of note he does have an abnormal gait. I notified clinic social worker Of note I did not find any bruising on exam of either boy





Action List



Sign Save Save & Close Cancel

# Notes/Depart Summaries: Viewed/Downloaded

Sept 2015 - 2312/1600

Oct. 2015 - 5753/4119

Nov. 2015 – 5534/3822

Dec 2015 - 5330/4895

Jan 2016 - 6037/4731

Feb 2016 - 6439/5239





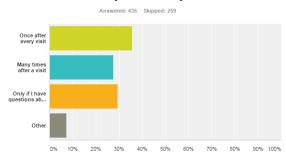
March 29, 2016



# Portal Survey (patients)

- o 3 weeks, 694 responses
- o 77% knew they could see their notes, 87% looked

#### How often have you looked at your notes?

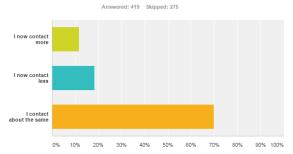


**WVCU**Health.

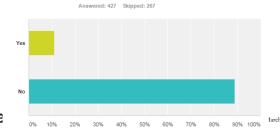
March 29, 2016



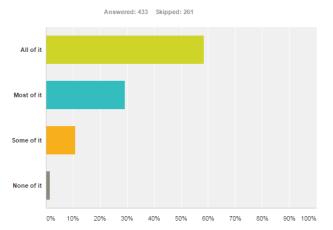
# Does reading your note change how often you contact your provider?



### Do you ever contact your provider to make a correction to the note?



# How much of what was in the note did you understand?

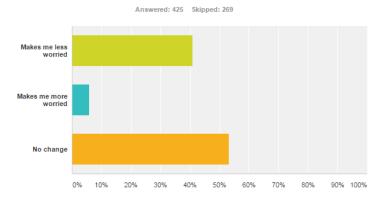




March 29, 2016



# How does reading a note affect how worried you are about something?

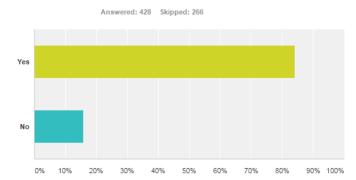




March 29, 2016



# Did you think seeing your note helps you take better care of yourself?





March 29, 2016



### Comments

- It increases my sense of empowerment and reinforces my role as the most important member of my health care team.
- Seeing my notes enlightens my knowledge of my health and has me less worried. So, thank you,
- This has changed my understanding of my disease and illness. I feel like a partner in my health treatment and no longer a victim to my illness.
- o It allows me to be more involved in my healthcare without the need to drive to or sit in the office of or take up the time of my provider.
- I often did not understand the instructions or information at the visit.
   After reading the note I felt empowered with what was needed on my part to improve my health condition
- Good reminder to comply with the prescribed plan of care
- o Allows me to see how I and my concerns were perceived.





# Comments: Dirty laundry

- Not accurate: misses some health issues, some listed health issues are not updated
- In addition to reviewing my medical information, the portal has also allowed me to detect provider documentation errors in my medical history, e.g. a documentation note that I am currently taking a medication that I had stopped taking 45 days earlier. This gives me the opportunity to correct my medical record
- Usefulness and thoroughness of info varies significantly with the provider
- "It Makes Me Stop seeing the Doctor who wrote the Note from their BS in the Note"





### Summary

- Tell the "why"
- · Use the Open notes website
- Be armed with data from sites that are live (from Open notes site)
- Encourage provider comments prior to go-live
- Decide on a note type at a time vs everything
- Needs to come from leadership
- Don't forget to tell patients that the notes are viewable













# Open Notes at Sutter Health

Albert S. Chan, MD, MS
Chief of Digital Patient Experience
Sutter Health
@albertschan



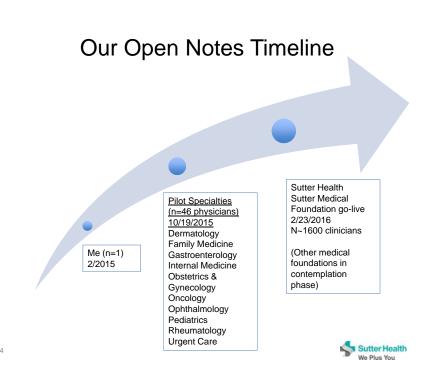
#### Our Sutter Health Network



# Serving more than 100 communities with:

- 5,000 physicians (physician medical foundation model; plus 4 IPAs); aligned under the Sutter Medical Network
- 24 acute care hospitals
- 51,000 employees
- \$10.2 billion in revenues (2014)
- Home health and hospice services throughout Northern Calif.
- Outpatient surgery and specialty care centers
- Medical research and medical education/training
- Largest singular Epic instance in the world





# Pilot Physician Survey

- · 61% of pilot providers responded to the survey
- 96.4% of doctors are minimally or not concerned at all that visits will take more time with Open Notes
- 92.9% of physicians stated "Making visit notes available to patients online will decrease or not change my risk for lawsuits"
- 82.8% of physicians agreed or somewhat agreed that Open Notes would help patients "Better remember the plan for their care"
- 78.6% of physicians agreed or somewhat agreed that Open Notes would help patients "Be more likely to take medications as prescribed"
- For all questions pertaining to Impact of Open Notes on My Practice, no physician indicated "I am so concerned that I do not want open notes"
- Physician piloteers are concerned that the pilot is somehow not representative of viewing
  practices of patients because we have not heavily advertised the availability of notes
- Many doctors believe it would be useful to have the ability to selectively block notes for benefit of the patient, few have done so in the pilot

Sutter Health We Plus You

45

#### Patient Feedback

 From: <Patient name removed> Sent: 6/29/2015 8:37 PM PDT To: Janahn C. Scalapino, MD

Subject: it worked! \*No Response Required\*

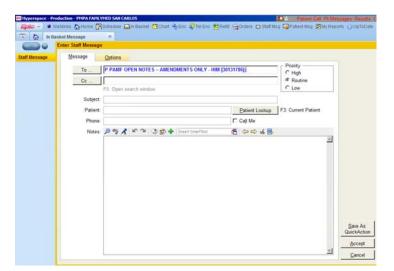
I LOVED the opportunity to read your complete progress note! what a huge difference from only being able to see the meaningless "after visit summary." turns out, it was right there as a part of the summary. I do hope this will become routine part of My Health Online for patients. I'd be happy to advocate for that if there's a way I can do it.

It was a pleasure to meet you today. I've already spoken to dan to let him know how impressed I was. I felt like you attended to me in a most personal (and personable) way, and your physical exam was probably the most thorough I've had since joining Sutter. I've often felt disheartened at how much the emphasis of documenting everything in the computer has been at the expense of patient contact, but you managed to bridge that gap! thank you.

<patient name removed>



# Implementation... Nitty gritty details



#### Sutter Health We Plus You

# Implementation... Nitty gritty details

Sutter Wiki My Health Online - OpenNotes

Typical User Roles: Ambulatory/SCC Clinicians & Office Staff | Health Records | MHO Wiki Home | Sutter Wiki Home Applies to: Ambulatory, SCX

Overview

Open Notes is currently live for select pilot providers as of \$/12/15.

All providers in the Sutter Medical Foundation service area will be live on 2/23/16.

Open Notes allows patients to see progress notes from their providers or from staff that leave notes on progress notes in these Encounters (see The Patient's Experience below for a sample). This change only applies to specific Encounter types dist below), for Encounters after the effective date of the pilot (please note that these notes will affect ChildTeen accounts as well, as long as the requirements below are met).

Encounter Types

Only the following Encounter types will have progress notes displayed. Please note that the Encounter must be closed (and after the pilot effective date) before the patient will see their progress notes.

• Office Visit [101]
• Home Visit [138]



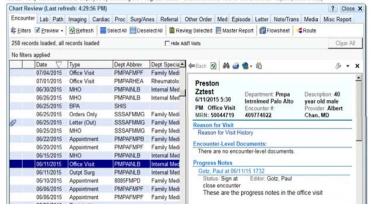
Urgent Care Office Visit [212]
Education [125]
Care Team Visit [244]

# Implementation... Nitty gritty details

#### **Blocking Note Release**

If circumstances require that a note should not be displayed to the patient, a standard SmartPhrase (.MYPROGRESSNOTEHIDE [1531753]) can be used in the body of a progress note to prevent the note from displaying to the patient. When that SmartPhrase is used, all progress notes from the Encounter will be hidden from the patient.

To later show notes from the Encounter, SmartPhrase .MYPROGRESSNOTESHARE [1531751] can be used to display progress notes. You can verify whether a note is displayed by checking the Progress Notes - Shown in MHO field on the Encounter Report (below in red).



Sutter Health
We Plus You

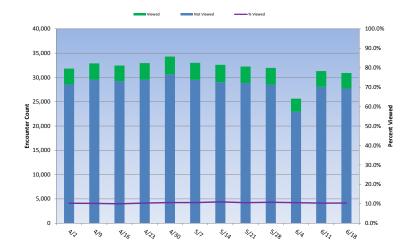
## Implementation... Nitty gritty details

#### The Patient's Experience

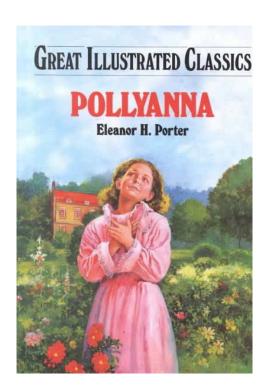
With Open Notes, patients will see their Progress Notes when viewing their After-Visit Summary reports (in red below).



# Open Notes Status – June 2016









10/5/2015

#### 2015 BOARD ELECTIONS...AND A CONTEST!

The first 5 people to correctly identify all 7 election-themed movies from the photos in this post, will win a coffee card!! Send your answers to



Sutter Health We Plus You



Link



# **O**UTCOMES

96%

- o 35,763 notes completed since October 2014 (as of 3/31/16)
- Overall data since November 2014 go-live:

PATIENT ACCEPTANCE | NOTES UNDER 5 MINUTES |

1/

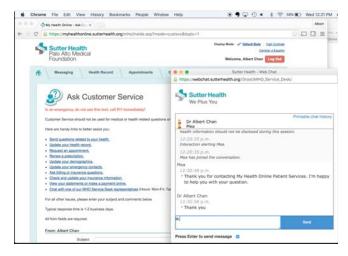
↑ PRODUCTIVITY

84%

15%

#### Sutter Health We Plus You

# Robust My Health Online Support







# **OpenNotes**

John Santa MD MPH Director Dissemination

Support from:

The Robert Wood Johnson Foundation
The Gordon and Betty Moore Foundation
The Peterson Center on Healthcare
The Cambia Health Foundation

Thanks to:
Many CMIOs across the US who are implementing
OpenNotes

The Cost of Technology



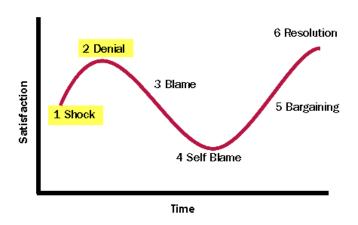
Toll, JAMA 2012 58

# OpenNotes)

#### **Key Questions**

- Do you want to pursue this kind of transparency?
- Do you have the tools to do so easily, efficiently, cheaply?
- Is this a "keep up" strategy or a "transformational" strategy?
- Most critical factor=organizational leadership

### Not About Technology, About Culture



6 Stages of Human Response to Change

57



### OpenNotes Crawling to Running

- Mental Health
- Inpatient
  - University of Iowa
  - Virginia Mason (all info except progress notes)
  - University of Minnesota (paper notes)
  - Dartmouth (procedures and DC summary)
- Safety/Errors
  - Sigall Bell (BIDMC) funded by CRICO
- Communication
- Business

### The OpenNotes Patient Safety Initiative

- Online patient reporting tool linked to notes-among first in the country
- Interdisciplinary team: 7 depts/divisions including PFAC in 2013
- Goal: Offload clinicians (report-action algorithm, vetting) while empowering patients as safety partners
- About 6000 patients with portal access seeing 40 participating providers were invited to participate
- A link at the end of the note led to a 9 item survey with both quantitative and qualitative questions.
- "Potential Safety Concern" not understanding the plan of care or reporting a possible inaccuracy



Generously funded by CRICO

62





Letting Patients Read Doctors' Notes

WALL STREET JOURNAL

Ten Ways Patients Get Treated Better



Will Reading Your Doctor's Notes Lead to Better Health?



The Road Toward Fully Transparent Medical Records

61



Consumers Gaining Ground in Healthcare



Inviting Patients to Read Their Doctors' Notes: A Quasi-Experimental Study and a Look Ahead



Should Patients See Their Doctors' Notes?



### **Business**

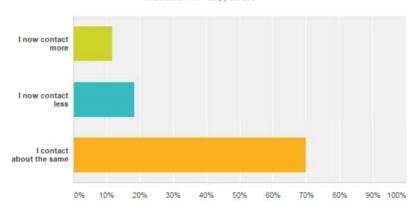
- OpenNotes has multiple positive business effects
  - Efficiency
  - Retention
  - Satisfaction
  - Data Integrity
- Virginia Mason
  - Success on portal high level strategic goal
  - "Informed patient gets best care"
  - "Getting information to patients = less waste"
  - Less human time spent on transactions related to information
    - Lab
    - · Appointments

64



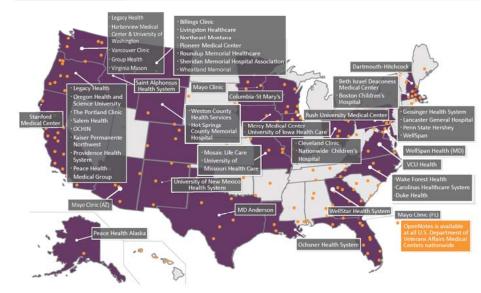
#### Does reading your note change how often you contact your provider?

Answered: 419 Skipped: 275



65







The Power of Knowing

www.opennotes.org