If you build it, they will come. Or will they?
A quantitative answer to “do we have sufficient patient portal enrollment to leverage portal communication for efficient workflow?”

An exploration of the secure messaging journey at Mayo Clinic

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MAYO CLINIC FLORIDA
About the authors

**Wendy Hattery**

- Wendy joined Mayo 20 years ago and has served in various engineer and administrative roles within Systems and Procedures, Medical Education at Mayo Clinic Rochester, Arizona and Florida. Wendy is currently an Operations Manager within the Center for Connected Care focused on Florida operations. Wendy holds a degree in Industrial Engineering from the University of Wisconsin-Madison. Wendy is currently seeking certification in the Mayo Quality Gold Fellow.

**James Houck**

- James has been with Mayo for over 20 years and is a Continuous Improvement Statistician in the Systems and Procedures division, an internal business consulting unit. James holds a Masters in Statistics/Mathematical Sciences from the University of North Florida. He has earned the Mayo Quality Silver Fellow.
Rachel Martin

- Rachel has been with Mayo Clinic for 24 years and is a Senior Principal Health Systems Engineer in their Systems and Procedures division, an internal business consulting unit. She earned a Masters in Industrial Engineering Health Systems from Georgia Institute of Technology. Rachel holds Prosci Change Management certification and HIMSS Certified Professional in Healthcare Information and Management Systems (CPHIMS). She is a Mayo Clinic Gold Quality Fellow and is assigned to efforts in Connected Care and Population Health.

Lisa Nordan

- Lisa joined Mayo Clinic over 22 years ago, working on key projects such as the implementation of the electronic medical record, quality control initiatives and imaging conversions. Lisa served as a practice Liaison, developing training materials, working with application teams, testing, data collection and data analysis. Lisa holds a BA in Information Technology and a Masters in Business Information Technology. She is working towards PMP and Mayo Clinic Gold Quality Fellow certifications.
Mayo Clinic is a nonprofit worldwide leader in medical care, research and education for people from all walks of life.

Mayo Clinic President and CEO John Noseworthy, MD has shared that Mayo wants to serve 200 million patients by 2020.

That service includes the Primary Care Population Health program ... and one tool is secure messaging.
Health care isn’t the same as it was 20 years ago or even five years ago ...

The medicine of yesterday doesn’t look like medicine of today. There are more ways than ever for our patients to access the care they need.
Connected Care (formerly known as e-Health) is a vital Mayo Clinic practice strategy aimed at improving access, service, and affordability of health care by using technology to extend Mayo Clinic knowledge and expertise to patients and providers.

Mayo Clinic Patient Online Services allows patients to connect securely with Mayo Clinic via the internet or Mayo Clinic mobile app anytime, anywhere.
Patient Online Services Principles

Helps patients to understand their health and make decisions

Opens opportunities to practice medicine in new ways

Opens opportunities to practice medicine in new ways

Allows the practice to manage patients more easily, quickly and with superior outcomes

Matches patient’s need for convenience with the practice’s need for efficiency

Is a healing tool, the healing begins at login

Is a healing tool, the healing begins at login

Keeps data safe and meets federal and state guidelines to build Mayo’s reputation as a trusted partner

Allows Mayo Clinic to reach patients here, there and everywhere

Is a data access and management tool that connects patients to their data

Is a transaction tool that allows patients to conduct business with Mayo

Is a connection tool that connects patients to their care team

Builds the Mayo brand and reputation by providing a peerless experience for patients in the online space

Is a personalized service

Is a personalized service
Patient Online Services

Connecting patients via the internet or mobile application with Mayo Clinic anytime, anywhere

Top Uses

- View lab results
- View clinical note
- Secure messaging
- View appointments
- Pay bill
- Complete forms, insurance/registration
Facts by the Numbers

• Approximate accounts by site
  • Arizona: 101,000
  • Florida: 102,500
  • MCHS: 125,000
  • Roch: 355,000

• 26,000 proxy accounts

• 40,000 employees have an account

• Over $46M bills paid online in 2014
"[I love] being able to get a quick response to a question. Trying to get in touch with the healthcare provider by phone, proved to be difficult. We just seemed to miss each other and wound up playing telephone tag. That's why the Patient Portal was so helpful."
Increased use and integration of secure messaging into practice workflows requires an objective measure of how much enrollment is sufficient.

Objectives

- Discuss how to design patient portal enrollment
- Explain how to use an objective measurement methodology to assess enrollment success
- Share lessons learned along the way

This will be relevant to any health care institution that has or will be implementing secure messaging.
The secure messaging journey begins with getting patients enrolled

Objectives

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• Explain how to use an objective measurement methodology to assess enrollment success

• Share lessons learned along the way
First you build it
The Mayo Clinic Florida story

<table>
<thead>
<tr>
<th>Plan it</th>
<th>Prove it</th>
<th>Diffuse it</th>
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<tbody>
<tr>
<td>2010 – Formation of a project team focus to design and implement</td>
<td>2010 - Primary Care to include Family Medicine and Community Internal Medicine implementation</td>
<td>2012-2013 - Once proven, a controlled rollout to the practice</td>
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**Project Goal**
Make patient online services secure messaging feature available to all patients and staff
Next comes engagement...

Our staff
• Build Secure messaging into the workflows
• Develop education materials – guides & videos
• Inventory Use Case
• Communicate through stories

Our Patients
• Brochures and educational materials
• Promotional tactics
• Patient enrollment campaigns

At the end of the day, secure messaging is about engaging people.
Secure Message Adoption – Some internal tactics

<table>
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<th>Initiatives</th>
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<tr>
<td>Replace summary letters to patients with a secure message. Update procedure guides.</td>
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<tr>
<td>Replace appointment letters with a secure message. Update procedure guides.</td>
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<tr>
<td>Send a secure message for lab test results.</td>
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<tr>
<td>Use messaging for appointment follow-up with patients.</td>
</tr>
<tr>
<td>Return phone calls with a secure message/read receipt.</td>
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<tr>
<td>Direct patients to online services for record requests.</td>
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<tr>
<td>Development and implementation of educational toolkit.</td>
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<tr>
<td>Communication campaign.</td>
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<td>Incorporate online service promotion into front line staff scripts.</td>
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Now you have numbers

How do you define when you have sufficient portal enrollment for secure messaging to be a viable mode of communication?

How do you move from a subjective assessment of sufficient enrollment to an objective measurement?

Sufficient is more than just satisfying the MU enrollment %.
Now we turn to the science

Objectives

• How to design patient portal enrollment

• How to use an objective measurement methodology to assess enrollment success

• Lessons learned along the way
What we found

Why we did this

What we did

What it all means
In Florida, Primary care was the pilot site and early adopter of secure messaging. This practice cares for over 30,000 patients per year with over 50 providers. Multiple practices are recognized as Patient Centered Medical Home.

Primary care remains the heaviest user of the secure messaging feature. Secure messaging is a key practice efficiency tool and **heavily integrated into the practice’s population health efforts**.

**Why we did this**

A communication effort that relied heavily on secure messaging prompted several questions and the need for an objective review.
We simply did not know if 60% enrollment is acceptable or not to build secure messaging as a primary mode of communication. The absence of an objective standard for portal enrollment made that the first area of focus.
Hypothesis testing is simply comparing 2 or more groups and asking “are they different?”

1. **State a “Null Hypothesis”** ($H_0$)
2. **Gather evidence (a sample of reality)**
3. **Decide:**
   - What does the evidence suggest?
   - Accept $H_0$? or Reject $H_0$?
Overall approach

Practical Problem
Is portal enrollment good enough to embed into workflow?

Practical Solution
Portal enrollment is objectively good enough

Statistical Problem
H₀: Proportion for study population ≤ proportion for Mayo Clinic in Fla

Statistical Solution
Reject null hypothesis, conclude study pop. portal enrollment is significantly > rest of Mayo Clinic in Fla
Scheduling Flags are used to alert staff of portal status

What we did
We ran a query for who is enrolled, declined or still needs to be offered the service.

What we found
• The best of FL Primary care was 65%
• Our flags need some error proofing
• Minors don’t have flags because they aren’t eligible - yet
• “Why the declines?”
1. The Meaningful Use (MU) % is fine for MU, but we need more for workflow,... and that data isn’t out there.

2. Portal Enrollment Comparison: Mayo Clinic Florida (MCF) vs. DRM (study group)
   Assumption: MCF portal enrollment is sufficient for secure messaging communications

3. The P test performed
   \( P-Value = 0.039 \) (statistically significant)

4. Conclusion: Reject null hypotheses – DRM portal enrollment rate is sufficient and good enough
Now to reflect on what worked and what didn’t.

Objectives

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# Lessons learned along the way

| Make users the center of your design and the rest will come | • **Adoption is about staff and patients**  
| • **Equip the audience with the proper tools** |
| --- | --- |
| Partner with practice leadership to ensure efforts are makes sense and diffusible | • **Embed into workflows** |
| Communicate successes and best practices | • **Collaborate with Public Affairs**  
| • **Feature stories in staff newsletters** |
| Identify opportunities to promote Patient Online Services within your organization | • **Where may there be opportunities to interact with patients?**  
| • **A special campaign** |
| Assess, Educate, Promote – it’s an iterative process! | • **Let’s keep it in the forefront!** |
If you build it, they will come
And we have the science to prove it!
Thank you for your time and commitment today!