Telemedicine Radiology Provider Consultation Service After Outpatient Spine Imaging: A Pilot Study

Lucinda Lau BS[1], Manisha Koneru MD[1,2], Todd Siegal MD[2], Khuram Kazmi MD[2], Hamza A. Shaikh MD[2]
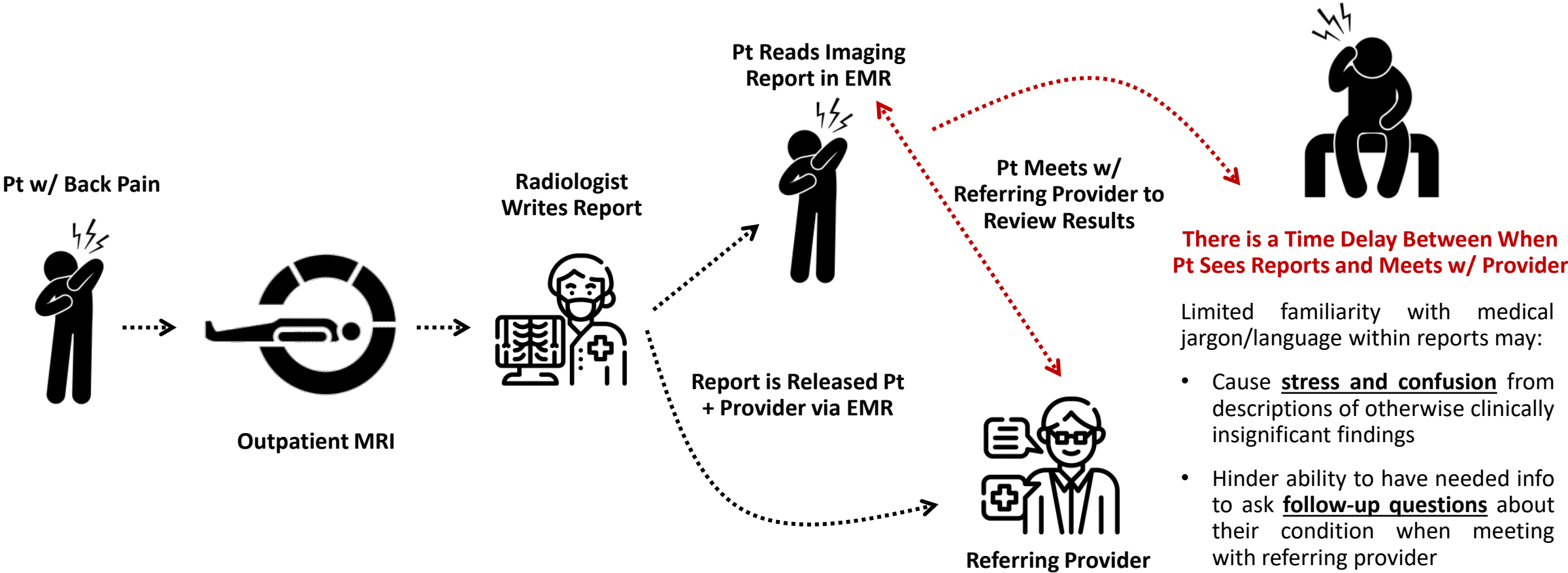
[1]Cooper Medical School of Rowan University, Camden, NJ 08103, United States

[2]Department of Neuroradiology, Cooper University Hospital, Camden, NJ 08103, United States.

Disclosures

None

Bringing the Communication Gap

Pt w/ Back Pain

Outpatient MRI

Radiologist Writes Report

Pt Reads Imaging Report in EMR

Report is Released Pt + Provider via EMR

Pt Meets w/ Referring Provider to Review Results

Referring Provider

There is a Time Delay Between When Pt Sees Reports and Meets w/ Provider

Limited familiarity with medical jargon/language within reports may:

- Cause **stress and confusion** from descriptions of otherwise clinically insignificant findings

- Hinder ability to have needed info to ask **follow-up questions** about their condition when meeting with referring provider

Objectives

Primary Question:

Can a telemedicine radiology consult service bridge the communication gap between back pain patients and their outpatient spine imaging reports?

- Previously piloted by Freeman et al. (2023) @ Penn for lung cancer screening CTs

Additional Questions:

- What is the optimal format for a consult service?
- What are the experiences of the patients with this service?
- What are the barriers to implement this service?
- How can we optimize the workflow to scale-up this service?

Introducing Our Core Team

Lucinda Lau

Medical Student

Todd Siegal, MD

Neuroradiologist

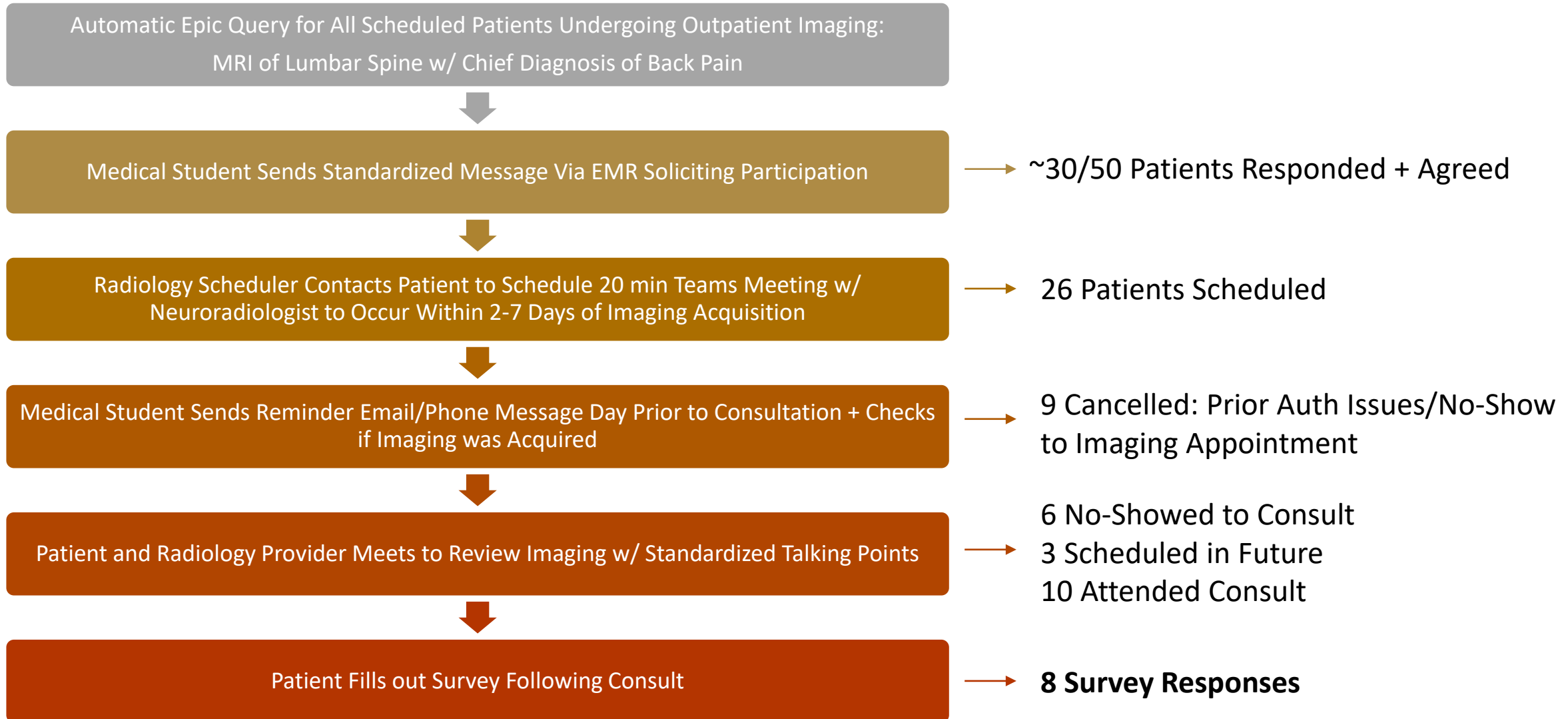Khuram Kazmi, MD

Neuroradiologist

Manisha Koneru, MD

Research Coordinator

Hamza Shaikh, MD

*Neuroradiologist*

Our Workflow

Automatic Epic Query for All Scheduled Patients Undergoing Outpatient Imaging:
MRI of Lumbar Spine w/ Chief Diagnosis of Back Pain

Medical Student Sends Standardized Message Via EMR Soliciting Participation

→ ~30/50 Patients Responded + Agreed

Radiology Scheduler Contacts Patient to Schedule 20 min Teams Meeting w/ Neuroradiologist to Occur Within 2-7 Days of Imaging Acquisition

→ 26 Patients Scheduled

Medical Student Sends Reminder Email/Phone Message Day Prior to Consultation + Checks if Imaging was Acquired

→ 9 Cancelled: Prior Auth Issues/No-Show to Imaging Appointment

Patient and Radiology Provider Meets to Review Imaging w/ Standardized Talking Points

→ 6 No-Showed to Consult
3 Scheduled in Future
10 Attended Consult

Patient Fills out Survey Following Consult

→ **8 Survey Responses**

Results

Key Demographics

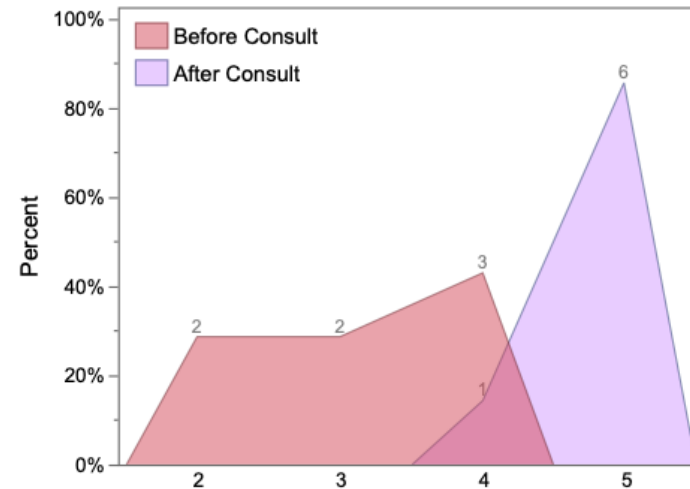**53 Years**
Avg Age

87.5%
Female

37.5%
BA -Level Edu
HS Diploma

Referring Provider
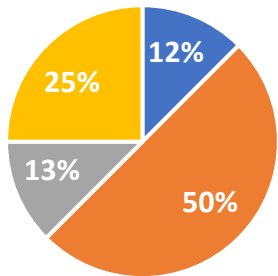
- 12% Primary Care
- 50% Pain
- 13% PMR
- 25% Ortho
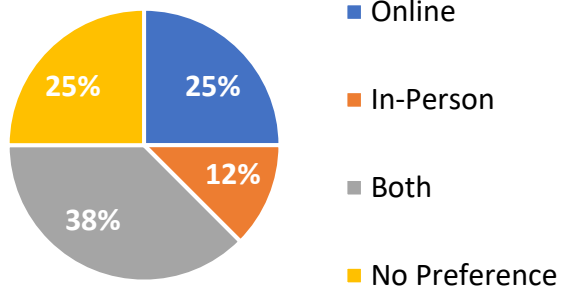
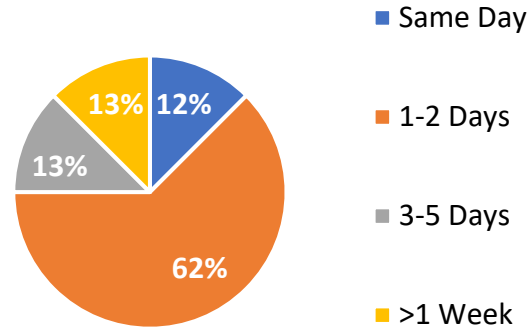## Patient-Reported Understanding of Imaging Findings

100% of Respondents:

✓ Reported **Improved Understanding** of Imaging Findings After Consult

✓ Felt the Service was **Helpful**

✓ **Would Opt-In** to the Service in the Future

✓ Felt that the Radiologist **Addressed Their Concerns**

✓ Rated their Experience as a **5/5**

Results
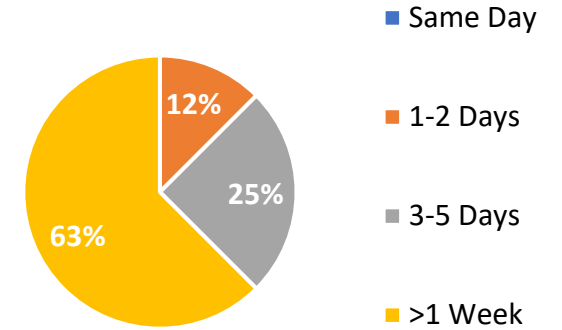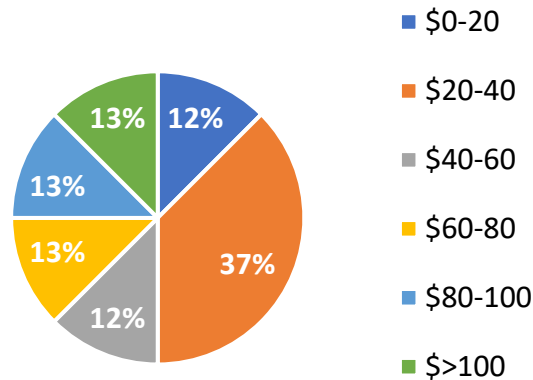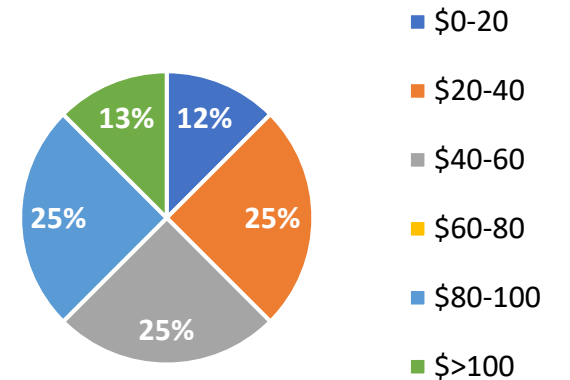
Format Preference

- Online — 25%
- In-Person — 12%
- Both — 38%
- No Preference — 25%

Ideal Time of Consult After Imaging

- Same Day — 12%
- 1-2 Days — 62%
- 3-5 Days — 13%
- >1 Week — 13%

Maximum Time of Consult After Imaging

- Same Day
- 1-2 Days — 12%
- 3-5 Days — 25%
- >1 Week — 63%

100% Reported the Consult Should Ideally **be 30 min Long**

Ideal Price for Optional Service

- $0-20 — 12%
- $20-40 — 37%
- $40-60 — 12%
- $60-80 — 13%
- $80-100 — 13%
- $>100 — 13%

Maximum Price for Optional Service

- $0-20 — 12%
- $20-40 — 25%
- $40-60 — 25%
- $60-80
- $80-100 — 25%
- $>100 — 13%

Future Directions

- **Overall, high satisfaction w/ service**
  - Telemedicine Format Favored
  - 30 min Duration
  - Willing to Pay
  - Positive Patient-Reported Experiences

- **Areas for Optimization:**
  - Automating Screening, Opting-In, Notification, and Scheduling
  - Allowing Patients to Manage/Modify via Online Portal

- **Scaling and Commercialization:**
  - Out-of-pocket v. Insurance
  - Telemedicine Billing Codes
  - Optimal, Accessible Meeting Platforms

- **Future Plans:**
  - Increase Respondents
  - Multicenter Efforts
  - Expanding Scope to Other Indications for Outpatient Imaging

Cooper University Health Care

Cooper Medical School of Rowan University

Questions?

Email: lauluc33@rowan.edu