



Growing Imaging Referrals

Four lessons for securing volumes from imaging's most important stakeholders

PUBLISHED BY

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BEST FOR

Imaging administrators and radiology group leaders

READING TIME

30 min.



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Executive Summary

Four lessons for imaging leaders

- 1 Imaging programs can realize significant volume and market share growth by **leveraging robust leakage analytics to target outreach and support** for referring providers, as well as capacity expansion.

> Page 6: Identify physicians for targeted marketing
- 2 **Faster scheduling and customization** of access, protocol, and reporting options—based on a deep understanding of referrer preferences—**can transform referral patterns** in a market.

> Page 11: Differentiate on customization and ease of use
- 3 To secure referrals for screening, IR, and incidental finding follow-up, progressive imaging programs are creating deeply targeted physician education and providing **hands-on support at all stages of the referrer's clinical workflow**.

> Page 15: Integrate into referrer clinical workflow to capture underutilized services
- 4 As consumerism advances, **meeting patients' needs and winning their attention** is an important opportunity to gain referrals by influencing patient-physician conversations.

> Page 22: Engage referrers by appealing to patients

Referring physicians: An ever-critical constituency

Despite market changes, referrers remain principal force governing patient choice

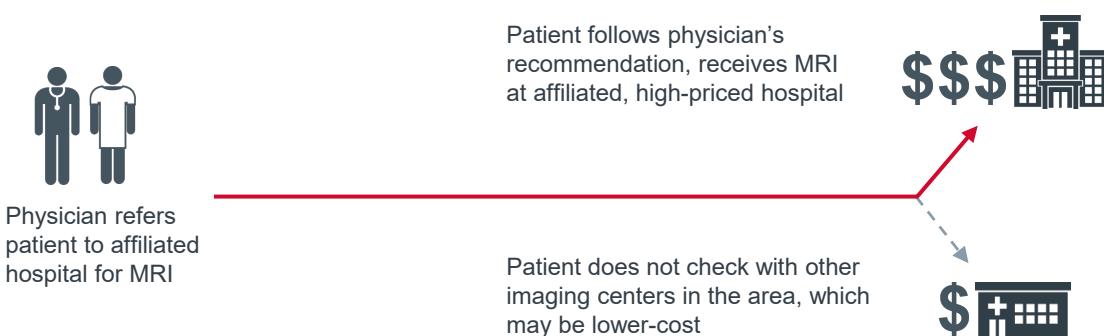
Referring physicians have always been imaging's most important stakeholders. Any imaging program seeking to grow, or even simply maintain, volumes must focus on building strong relationships with referrers to ensure their ongoing satisfaction and engagement. Despite appearances, recent market trends have not altered this reality.

For example, growing physician employment by hospitals has led some programs to reduce their focus on referrer relationships due to the belief that employment will ensure loyalty. However, Advisory Board research and data analysis suggests that employed physicians often direct referrals outside the system based on both their own and patient preferences. This is a growing concern as there is some evidence that physician dissatisfaction with hospital employment has increased in recent years.

40%

Average **employed PCP referral leakage**
out of the health system

While some imaging leaders may assume an unrealistic level of loyalty by employed physicians, others may discount physician influence as high-deductible health plans become more prominent and patients seek more affordable care options. Affordability is certainly a new and important concern for patients. However, evidence so far shows that, even in the face of price sensitivity, referring physician recommendation remains paramount in where patients choose to seek imaging care.



Are health care services shoppable? Evidence from consumption of lower-limb MRI scans

Michael Chernew, Zack Cooper, et al.

- Researchers analyzed 2013 claims data for non-contrast lower-limb MRIs from a large national insurer that has coverage in all 50 states (sample size: 50,484 MRI scans)
- Key findings:**
 - Despite significant out-of-pocket costs and little variation in quality, patients often received MRIs at high-priced locations when lower-priced options were available
 - The key determinant of where a patient received MRI was referring physician recommendation
 - On average, patients—including those on high-deductible health plans—bypassed six lower-priced imaging facilities on their way to the physician-recommended site

Source: Imaging Performance Partnership interviews and analysis.

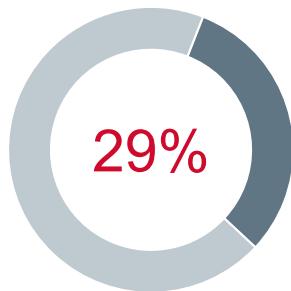
Referrers also a key audience for patient-focused marketing

Patients express their needs and concerns to referring physicians

Physician recommendation is the primary force behind patient choice of an imaging facility. But in today's increasingly consumeristic culture, more patients are becoming vocal about their needs and preferences—whether related to affordability or other concerns. But even for those patients, referring physicians play a critical role in directing imaging care.

An analysis of the documented reasons why physicians refer out of network shows that patient preference plays an important role. This suggests that activated patients are not ignoring their physician's recommendation, but rather communicating their needs and concerns to the physicians—and these conversations inform the physicians' referral decisions.

Average percentage of referrals going out of network



*The average hospital member¹ is losing nearly **one third of referrals** to out-of-network providers.*

Top five documented reasons for sending referrals out of network

- 1** Patient preference: **23.0%**
- 2** Provider directed: **22.7%**
- 3** No specialist in network: **15.4%**
- 4** Availability: **12.5%**
- 5** Continuity of care: **11.7%**

This suggests that imaging leaders have an additional opportunity to capture referral volumes, in two ways:

- By ensuring that referring physicians know how their imaging program can meet important patient needs, and do so better than local competitors.
- By directly encouraging patients to ask physicians for a referral to their imaging program.

¹) Average hospital member participating in Advisory Board's Crimson Medical Records survey.

Source: Tu H, et al., "Word of Mouth and physician Referrals Still Drive Health Care Provider Choice," Center for Studying Health System Change, 2008; Advisory Board's Crimson Medical Referrals data and analysis; Advisory Board's Market Innovation Center interviews and analysis; Imaging Performance Partnership interviews and analysis.

Three lessons for growing physician referrals

In light of the pivotal role played by referring physicians, how can imaging programs create stronger ties with these stakeholders to win their trust and, ultimately, grow outpatient volumes?

The first lesson is identifying the physicians you need to focus on. Most imaging programs have limited resources for outreach and service recovery. What is the best way to prioritize the effort?

The next priority is making it clear to referrers how your imaging program differentiates itself on the things that matter most. What makes referring physicians feel like valued customers?

Third, imaging programs can benefit from zeroing in on services which are often underutilized, such as screening or interventional radiology. What processes can imaging programs create to help physicians understand those services and direct patients to them?

Finally, programs that engage patients and effectively meet patient needs can win those referral decisions that are influenced by physician discussions with activated patients.

1

Identify physicians for targeted marketing

Key questions

- How do we identify referring physician offices that present an opportunity to expand referral streams?
- How do we prioritize limited marketing resources?
- How do we prioritize resources for service recovery?

2

Differentiate on customization and ease of use

Key questions

- How can we ensure that referring physicians feel like valued customers?
- How do we find out what referring physicians want and need from imaging?

3

Integrate into referrer clinical workflow to capture underutilized services

Key questions

- How can we help providers identify screening-eligible patients and refer them to us?
- How can we work with providers to strengthen patient compliance?
- How do we make referring physicians aware of new services available at our system?

4

Engage referrers by appealing to patients

Key questions

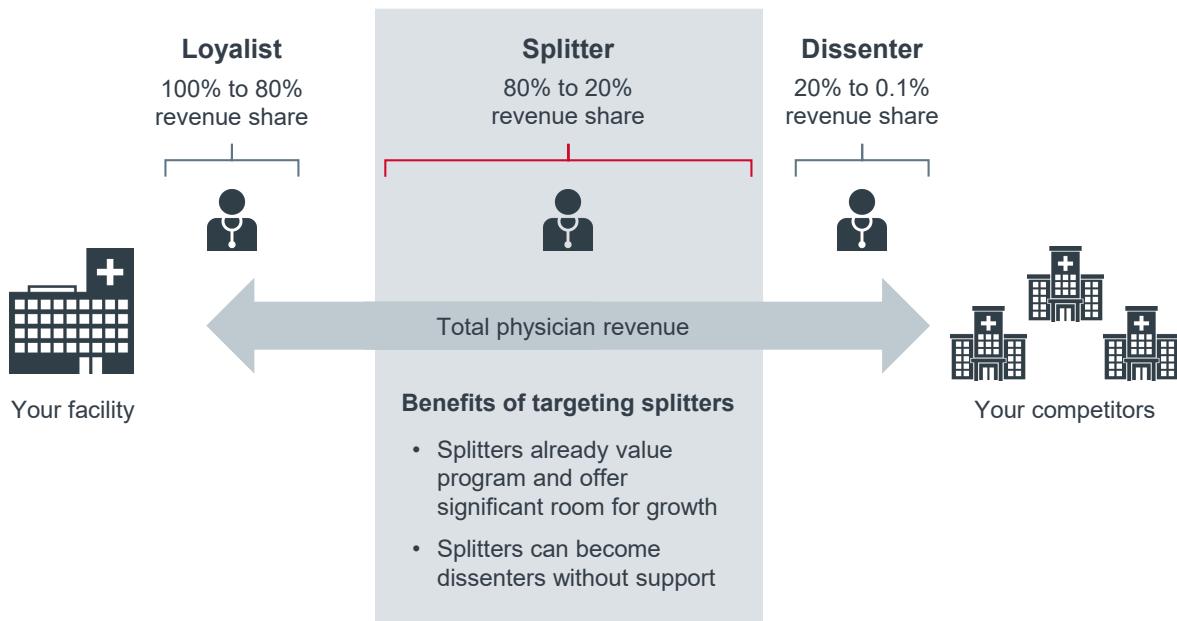
- How can we differentiate ourselves on meeting patient needs?
- How can we ensure that physicians know about these differentiating factors?
- How can we motivate patients to request a referral to our imaging program?

Source: Imaging Performance Partnership interviews and analysis.

Target splitters to protect and grow referrals

When allocating outreach resources, priority should be placed on physicians who present the biggest opportunity to grow referral streams.

From the perspective of an imaging program, referring physicians fall into three categories, determined by the proportion of referrals they send to that program: loyalists, splitters, and dissenters.



Splitters are the most important category to target for outreach. Unlike the dissenters, they value your imaging program. But unlike the loyalists, there is opportunity to capture more of their business. In a large health system, many splitters are likely to be employed or affiliated doctors who have a higher leakage rate.

Source: Advisory Board's Crimson Market Advantage meta-analysis; Imaging Performance Partnership interviews and analysis.

Give physician liaisons access to leakage data

Physician Salesforce page a one-stop shop for liaisons



Many imaging programs track historical referral patterns, but are not tracking leakage to identify splitters and understand where there might be untapped opportunity. Leaders in the outpatient imaging program at UCLA wanted to improve on this approach.

UCLA focuses on preventing leakage from their employed physician network. The system is leveraging Epic to make physicians note when they send a referral outside the system.

Imaging needed to make this information easily available to marketing staff, who are not able to access Epic. They created a process for pulling physician office profile data—including their in-network versus total referrals—from Epic into Salesforce, a customer relationship management platform. These Salesforce profiles are easily accessible to physician liaisons, including on their phones. Liaisons are also able to update the profiles, creating a record of their interactions with each physician office.

Sample Salesforce referring physician profile

The mock-up shows a Salesforce page for "Smith and Smith Orthopedics". The page includes sections for "Office profile", "Recent interactions", and historical data tables for "Smith, John" and "Smith, Jim". Callouts explain the data: "Office profile" includes a list of specialists and address; "Recent interactions" lists recent contact types and dates; and historical data tables show monthly referral counts for X-ray, MRI, and CT scans, categorized by "Total" and "In-network". A callout notes the table houses 14 months of historical referral data. A red arrow points to a "Future updates" section on the right, listing improvements like provider ranking, outreach prioritization, and clinical manager access.

Smith and Smith Orthopedics

Office profile

Recent interactions

Allows liaisons to track visits, conversations, physician requests

Houses 14 months of historical referral data, provides view of monthly trends

Future updates

- Ability to rank providers by volume to identify key physicians from landing page
- “Time since last visit” function to automatically track which physicians should be outreach priorities
- Providing view to clinical operational managers at referring physician offices

In addition to what's visible in the mock-up above, these Salesforce profiles include the locations each physician refers to, the geographic origin of the patients, and payer mix.

Source: UCLA Health Radiology, Los Angeles, CA;
Imaging Performance Partnership interviews and analysis.

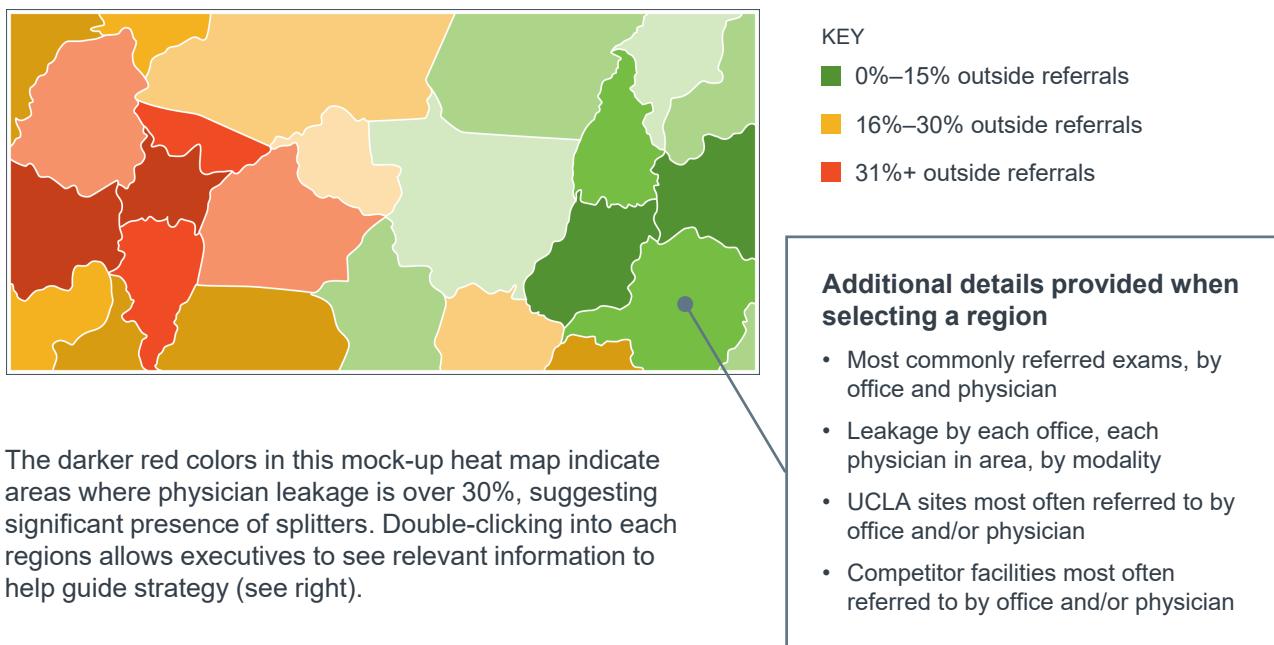
Connect leakage and geography to set strategy

Tableau data visualization helps set strategy based on leakage rates

Salesforce gives marketing liaisons an easy way to prioritize and focus their activities. But UCLA also pulled the leakage rates into a view that helps executives plan more holistic strategy.

UCLA's imaging business development analysts feed the Salesforce data into Tableau, data visualization software that can generate market-wide heat maps of physician leakage. These enable UCLA's planning team to get a full view of their large geographic territory and prioritize areas to focus on based on physician opportunity.

UCLA Health Radiology turns Epic data into detailed leakage heat maps



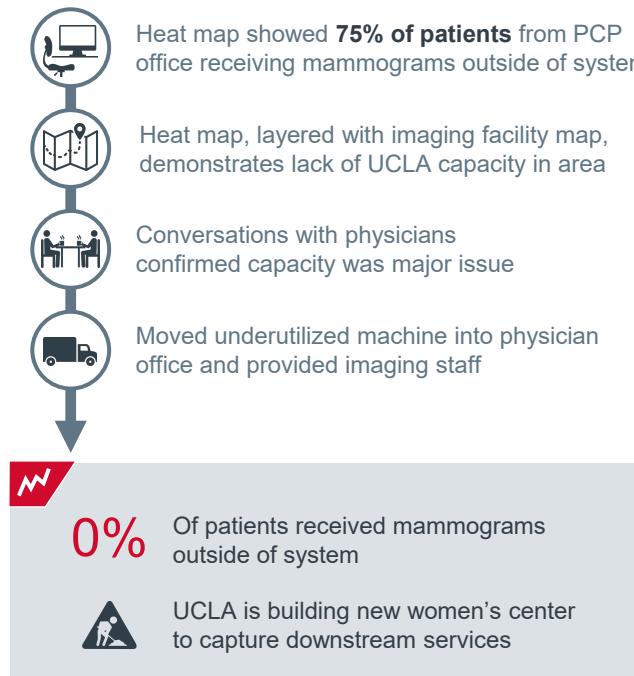
Steps taken to generate heat maps

- Created homegrown process to feed Salesforce physician page data into Tableau
- Data allows for two different heat map views:
 - **Overall volumes** by provider and patient home location
 - **Leakage** by health-system provider (outgoing referrals created in Epic)

Source: UCLA Health Radiology, CA; Imaging Performance Partnership interviews and analysis.

Follow the leakage trail to growth opportunities

Below is an example of how leaders at UCLA used the heat map to identify and address a high mammography leakage rate from a specific primary care office. Overall, leaders at UCLA estimate that, by using the heat maps to target capacity expansion and other outreach strategies, the program has realized about \$30 million in revenue.



RESULTS



“The heat maps have allowed us to assess our current growth, identify opportunities to place new capacity or address physician concerns, and view the impact of these changes over time.”

Jay Won
Director of Access and Business Development
UCLA Health Radiology

Source: UCLA Health Radiology, Los Angeles, CA;
Imaging Performance Partnership interviews and analysis.

Multiple ways to track referring physician leakage

At least four options available to imaging leaders



Utilize **EHR capabilities** to track when physicians order outside of system

UCLA requires physicians to use EHR field that tracks where orders are sent, including outside the system.

1



Leverage market-wide **professional claims data**

Radiology groups that read most studies in a market can use professional services claims to understand market share and leakage patterns

2



Purchase or access **comprehensive claims data**

Health systems can purchase comprehensive market-wide claims data that can be used for leakage analysis, such as Advisory Board's Crimson Market Advantage platform.

3



Compare existing physician referral volumes to benchmarks

Another option is to compare existing referral volumes to specialty-specific referral benchmarks.

4

For the fourth method, imaging leaders can use specialty-specific, multi-payer outpatient imaging referral benchmarks available with Imaging Performance Partnership membership. Three views of the benchmarks are available:

View #1: How many referrals should I be getting?

Estimate leakage by comparing expected to real volumes from a given specialty mix

Referrer Specialty	Enter Number of Physicians Here	CT	MRI
Obstetrics & Gynecology	5	49.9	31.7
Oncology & Hematology	6	913.6	240.4
Ophthalmology	2	6.6	14.3
Orthopedics-Sports Medicine	2	32.4	651.0
Pain Medicine	1	12.7	114.9
	Total Potential Annual Referrals	1074.8	1537.6

View #2: Which referrers support key modalities?

Identify specialists to target for modality-specific growth

Modality	Referrer Specialty	Share of Potentially Referable Encounters
MRI	Primary Care	23%
MRI	Orthopedics-All Other	13%
MRI	Neuro-Neurology	11%
MRI	Advanced Practitioner	10%
MRI	Orthopedics-Sports Medicine	7%
MRI	Neuro-Neurosurgery	4%
MRI	Physical Medicine & Rehabilitation	4%

View #3: Which modalities matter to key referrers?

Understand all modalities that can affect a referring physician's experience

Referrer Specialty	Modality	Share of Specialty's Total Orders
Pain Medicine	MRI	53%
Pain Medicine	X-Ray	36%
Pain Medicine	CT	6%
Pain Medicine	Ultrasound	2%
Pain Medicine	Nuclear Medicine	1%
Pain Medicine	Mammography	1%

Access the [Outpatient Imaging Referral Benchmarks](http://advisory.com/ipp/tools) at advisory.com/ipp/tools

Foster growth through referring physician service

Saint Thomas forms JV with Premier Radiology

Once an imaging program has identified which referring physicians present the biggest growth opportunity, the program can differentiate itself based on physician access and experience.



CASE
EXAMPLE

Premier Radiology

50-physician independent radiology group • Nashville, TN

After forming a joint venture (JV), Saint Thomas Health, a hospital system, and Premier Radiology, an independent provider, actively pushed volumes from the hospital into freestanding facilities—and realized significant market share growth.

Partners' freestanding footprint at outset



100,000

combined annual volumes

Joint venture footprint



400,000

combined annual volumes

Five years later

- Combined operations under purview of Premier
- All outpatient volumes, even those performed at hospital, included in JV

Premier emphasizes that this growth was not due to lower price. All the facilities that went into the JV already operated at freestanding rates. And Nashville at the time was not a price-sensitive market.

Instead, Saint Thomas and Premier believe the secret to success was excellent service. This consists of two critical strategies, detailed in the next several pages:

Tailor to physician preferences

- Dedicated physician liaisons identify physician priorities
- Scale allows individual practices to customize interaction with imaging

Provide faster service

- Scheduling shifted entirely to Premier Radiology
- Time to schedule drops from **22 minutes to 1.5 minutes**



¹ Four additional IDTFs purchased as part of the formation of the joint venture.

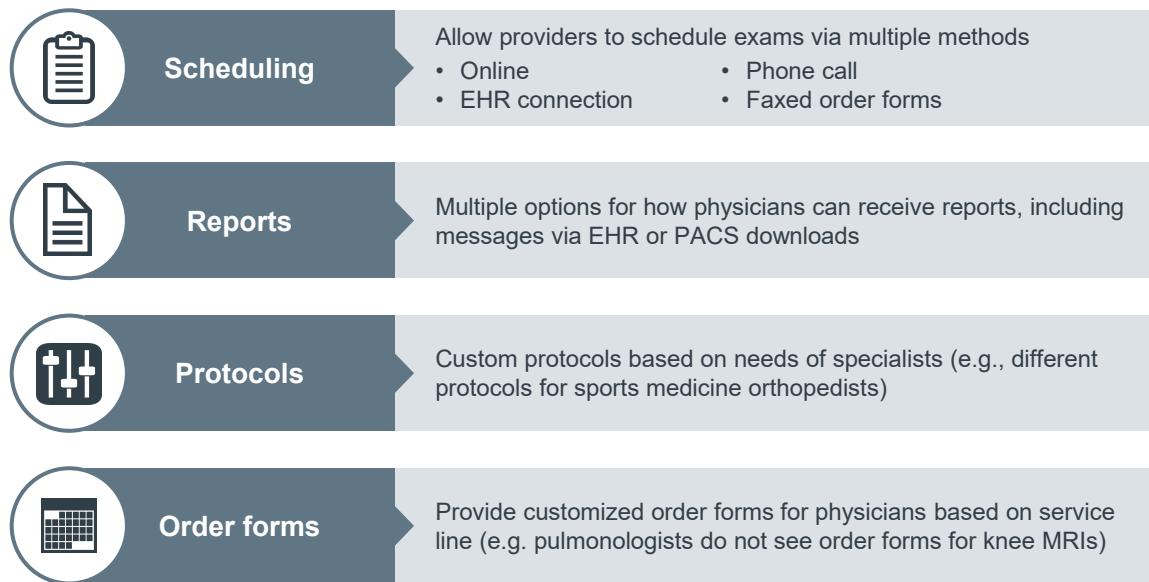
Source: Premier Radiology, Nashville, TN; Imaging Performance Partnership interviews and analysis.

Provide customized and exclusive service to referrers

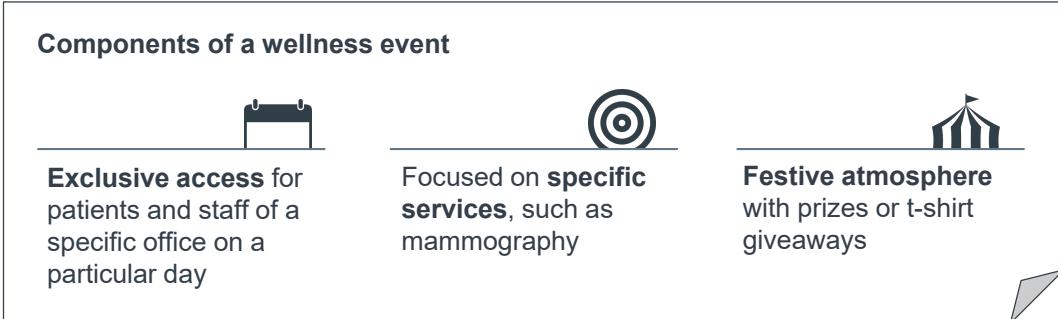
Premier gives referring physicians choices and tries to anticipate their needs. Premier's marketing message is "Have It Your Way." It's focused on making referring physicians feel like valued customers whose preferences are a priority for the imaging provider.

For example, Premier makes scheduling and receiving reports easy for referrers. Premier offers multiple options for the scheduling process. They also create scan protocols and order forms customized to individual referrer offices.

Premier Radiology's "Have It Your Way" approach to physician service



Premier also hosts "wellness events"—days on which patients and staff from a specific physician office get exclusive access for screening services. These offer a few advantages. First, easy scheduling, easy access, and a feeling of exclusivity for patients. Second, encouraging patients to get screened, which helps referring offices meet quality measures. Last but not least, the convenience and personal touch for the referring physician's staff, who play a critical role in directing referrals.



Source: Premier Radiology, Nashville, TN; Imaging Performance Partnership interviews and analysis.

Leverage physician survey to better differentiate

The Radiology Clinic surveys all physicians in market



**CASE
EXAMPLE**

The Radiology Clinic

21-physician independent radiology group • Tuscaloosa, AL

To customize service for referring physicians, imaging programs need to know what is important to them. To that end, many programs use referring physician surveys.

Below is a sample survey used by The Radiology Clinic, a physician group. This survey uses just a few questions that address physicians' potential concerns, as well as asking what makes physicians refer to The Radiology Clinic.

<p>Referring physician satisfaction survey</p> <p>1. How satisfied are you with the following:</p> <ul style="list-style-type: none">a) Ease of ordering studiesb) Ease of scheduling studiesc) Timeliness of reports <p>2. How accessible is our staff by phone when you have a question?</p> <p>3. Why do you refer patients to The Radiology Clinic? Please rank the choices</p> <p>4. Would you recommend The Radiology Clinic's services to other physicians?</p>	<p>Why do you refer patients to The Radiology Clinic? Please rank the choices.</p> <ul style="list-style-type: none">a. Accessibility for patientsb. Patient requestc. Speed of Reportingd. Range of studies offerede. Knowledgeable stafff. Overall quality of services providedg. Open MRIh. Flexible and adaptable staffi. Ease of ordering
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This survey helps The Radiology Clinic find out what is important to the physicians, as well as design a marketing message around those most important things. Based on the survey responses, The Radiology Clinic formulated five differentiating factors, which are now used in all their physician-facing marketing materials.

Five unique differentiators derived from physician survey responses



Knowledgeable and adaptable staff



Patient satisfaction



Convenience



Speed of reporting



Open MRI

Source: The Radiology Clinic, Tuscaloosa, AL; Imaging Performance Partnership interviews and analysis.

Access and scheduling key to growth

The last two pages addressed the first component of effective service described on page 11: tailoring to physician preferences. Here is a case study that addresses the second component—faster service.

Independent operators like Premier Radiology are well positioned to provide rapid scheduling service, since their culture and operations are focused solely on imaging scheduling. However, larger organizations can be successful here as well.



CASE
EXAMPLE

Jamie Health (pseudonym)

Large health system • Southwest

Pseudonymed Jamie Health interviewed affiliated physicians who were referring imaging outside their system—the splitters—and discovered that ease of scheduling was a key sticking point for them. They then focused on improving the scheduling function in three key ways, and achieved meaningful results on scheduling operational metrics, volume growth, and stemming leakage.

Three components of “easy to do business with” strategy



Centralized imaging scheduling for all outpatient sites



Leveraged information technology capabilities to **improve scheduler efficiency** in managing orders



Reduced scheduler turnover and strengthened culture by increasing pay 10%, improving training, and building new support functions

Improving scheduling, growing volumes

80%

Of calls answered in under 30 seconds

90%

Of orders scheduled within 24 hours

10%

Increase in volume for each of the first three years of strategy

50%

Of advanced imaging volume increase tied to capturing former leakage

Source: Imaging Performance Partnership interviews and analysis.

Grow the referral pie by addressing underutilization

Improve care while capturing direct and downstream revenue

Better targeting and improved service are effective for encouraging physicians to refer to one imaging program and away from its competitors. But what about those services for which physicians may simply fail to refer at all? Below are three examples of underutilized imaging services.

Screening

<2%

Of eligible smokers were screened for lung cancer in 2016

Incidental finding follow-up

46%

Of patients with recommended imaging follow-up over a 13-month period received follow-up¹

Interventional radiology

68 to 1

Ratio of hysterectomies to UFE² procedures from a nationwide inpatient sample

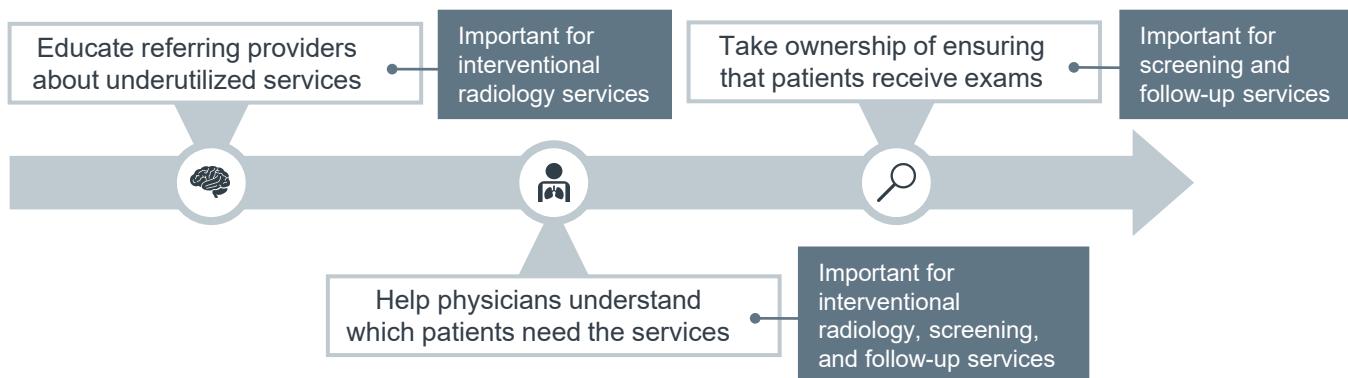
Estimating downstream revenue from underutilized services

Increasing appropriate utilization of screening, interventional radiology, and incidental finding follow-up improves patient care and direct revenue. Another benefit is that it helps a system capture downstream business.

To help imaging leaders estimate this downstream revenue opportunity, the Imaging Performance Partnership is releasing the Downstream Revenue Calculator. This tool leverages claims data and statistical analysis to identify which services are likely to follow a select “trigger”, or initial, service (for example, a lung cancer screening or breast biopsy), and estimate the volume and Medicare reimbursement of these downstream services. Access the tool at advisory.com/ipp/tools.

Touchpoints for working with providers to drive volumes for underutilized services

Imaging programs can encourage better utilization and secure referrals by intervening at three critical touchpoints along the referral stream. These are discussed in the next few pages.



Source: Dangi-Garimella S, "Despite USPSTF recommendations, lung screening rates low among heavy smokers," *American Journal of Managed Care*, May 21, 2018; Wandtke B, Gallagher S, "Reducing delay in diagnosis: Multistage recommendation tracking," *American Journal of Roentgenology*, 209, no. 5 (2017), 970-975; "SIR 2017: Uterine fibroid embolization vastly underutilized, especially in rural US," *Applied Radiology*, Apr. 5, 2017; Imaging Performance Partnership interviews and analysis.

1) According to a study at the University of Rochester.
2) Uterine fibroid embolization.

Physician education should be targeted

Some physician cohorts are more likely to refer to IR than others



**CASE
EXAMPLE**

UCSF Medical Center

1,050-bed academic medical center • San Francisco, CA

Looking to educate referring providers about their suite of IR services, imaging marketers at UCSF Medical Center built a targeted “hit list” of referring physicians. They focused on the following categories:

1



Non-proceduralists

Physicians who need options for their patients and do not compete with IRs, e.g.:

- Medical oncology
- Primary care
- Pediatrics
- Palliative care

2



Proceduralists with sufficient volumes

Providers caring for significant number of patients, not threatened by off-loading cases to interventional radiology

- Unique to each market

3



Provide alternative, but not identical, services

Providers treating patients who may be better served by IR alternatives, e.g.:

- Ob-gyn (for fibroids)
- Pain management (for diagnostics)

Additional considerations UCSF uses when identifying physicians for IR education

► Historic referral data

Leverage liaison knowledge and referral data to understand current referrals for interventional radiology and competing services

► Physician location

Analyze markets to pinpoint possible reach for campaigns

► Service availability

Examine capacity of IR service within each market to determine availability of services

A prioritized list of physicians and relevant services enables UCSF to focus on targeted, effective education. This means leveraging radiologists for physician visits, as well as helping physician liaisons develop niche expertise. UCSF's liaisons prepare extensively for the following key visit moments:

- Explain what patient populations IR can serve
- Describe how IR compares to alternatives
- Focus conversation on patient choice for care and treatment options
- Provide clear directions and guidance for how to reach IR
- Bring materials about relevant IR services offered in their local market
- Address how IR will follow up with referring provider about patient care
- Present IR as a partner in high-quality care delivery
- Educate physicians about newest technology and services

Source: Imaging Performance Partnership interviews and analysis.

Reach physicians outside of the office

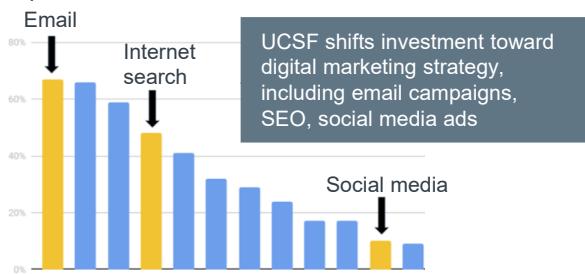
UCSF surveys physicians to understand preferences for obtaining information

After identifying the right targets and creating the right message, an effective education campaign has to find the right channels to reach physicians.

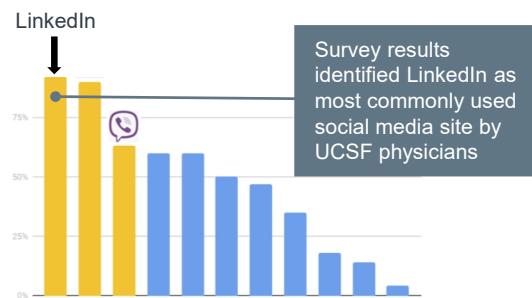
UCSF surveyed referring physicians to find out where they preferred to look for information relevant to their practice. The results are below. The key learning for UCSF was that physicians' number one source of information is their email.

In addition, the survey double-clicked into physicians' social media preferences. It turned out that physicians favor LinkedIn.

Where do you look for information relevant to your practice?



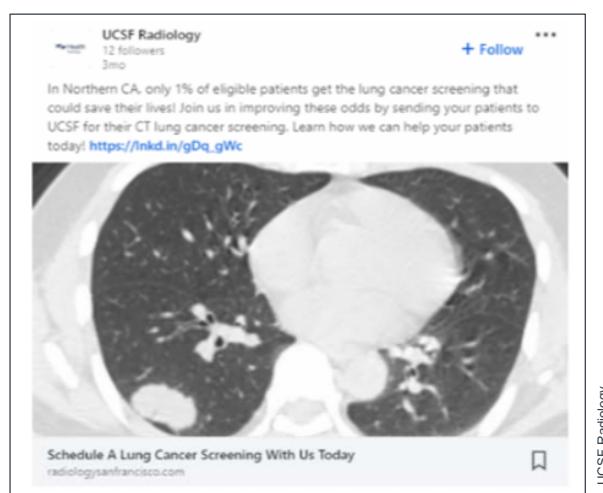
Which social media platforms do you use?



UCSF then built an education campaign around interventional radiology as well as lung screening that directed emails and LinkedIn ads toward a handpicked target list of referrers. This campaign helped UCSF double their lung cancer screening volumes.

Sample LinkedIn lung screening ad

Targeted at physicians



Results

2x

Growth in lung cancer screening volume following digital marketing campaign

44,983

Total impressions across three LinkedIn ads

Source: UCSF, San Francisco, CA; Imaging Performance Partnership interviews and analysis.

Provide step-by-step guidance for referrals

Offer physicians a mammography care process map

Even when physicians are well educated clinically about services such as screening and IR, they may struggle with the actual referral process. For example, they may not be able to identify quickly which patients need a particular service, or whether they should order the service directly or send the patient for a consult first. Given how busy physicians are, this lack of clarity can cause them to delay or forgo ordering as they move on to other tasks.



**CASE
EXAMPLE**

Tyrion Medical Center (pseudonym)
Medium-sized academic medical center • Southeast

Pseudonymed Tyrion Medical Center's imaging leaders found that their referring physicians lacked clarity on appropriate mammography follow-up. As a result, follow-up often took too long or didn't happen at all.

Tyrion Medical Center created a flowchart that lays out the full post-mammography care pathway and clearly shows next steps the referrer needs to take, as well as recommended time frame. This reference tool is distributed to all referring physicians as a brief laminated document that they can easily and quickly consult.

Tyrion Medical Center's mammography care process map

Key features

- Shows entire care pathway from initial screening to chemotherapy
- Guides physicians through ordering process
- Provides guidance on timing in which steps should occur to ensure process moves efficiently (e.g., surgical consult should occur less than seven days after a positive biopsy)

Benefits of care guide



Ensures patient receives most appropriate care



Speeds up ordering process for physicians



Eliminates unnecessary care steps

2 weeks to 7 days

Reduction in diagnostic-to-biopsy time after education, as physicians stop ordering surgical consult before biopsy

Drive screening growth by identifying eligible patients



CASE
EXAMPLE

New Hanover Regional Medical Center

Two-hospital system • Wilmington, NC

In 2015, abdominal aortic aneurysm (AAA) screening in New Hanover's market was low despite a high eligibility rate. In fact, they screened only 17 patients at their main campus that year. Imaging leaders recognized that, while physicians understood the importance of AAA screening, they often struggled to identify eligible patients in the moment.

New Hanover turned this around by developing an EHR alert that fires when a patient's record suggests he or she is eligible for the one-time screening *and* has not previously been screened. The alert is actionable, allowing physician to click to order the exam.

New Hanover Regional Medical Center creates physician alert for AAA screening



Creation of EHR alert

- Vascular surgeons led efforts to identify protocols to use in building alert
- Alert considers problem list, past medical history, smoking history of patient
- Actionable alert allows physicians to immediately order AAA screening
- Only ambulatory physicians receive alert



Marketing plan to drive awareness

- Developed communication plan including mission statement, main messages, background information, Q&As, fact sheets
- Created marketing materials targeted at both patients and physicians
- Included information about the Society for Vascular Surgeons criteria to educate physicians about screening beyond USPSTF¹ guidelines



1,026

AAA screenings performed February-June 2016¹ compared to just 17 at main campus in 2015

41

Positive findings of aneurysms equal or greater than 3 cm

3

Operable aneurysms referred to non-invasive, life-saving procedure

1) US Preventive Services Task Force.

2) Includes screenings performed 2 affiliated NHRMC hospitals and in New Hanover Medical Group offices

Source: New Hanover Regional Medical Center, Wilmington, NC; Imaging Performance Partnership interviews and analysis.

Ensure patients are scheduled for follow-up exams

As the case studies above demonstrate, educating physicians about important but underutilized imaging services, guiding them through the referral process, and helping them identify eligible patients can meaningfully increase appropriate referrals. But in some areas, this may not be enough—most notably in incidental finding follow-up, which is notoriously under-referred.



**CASE
EXAMPLE**

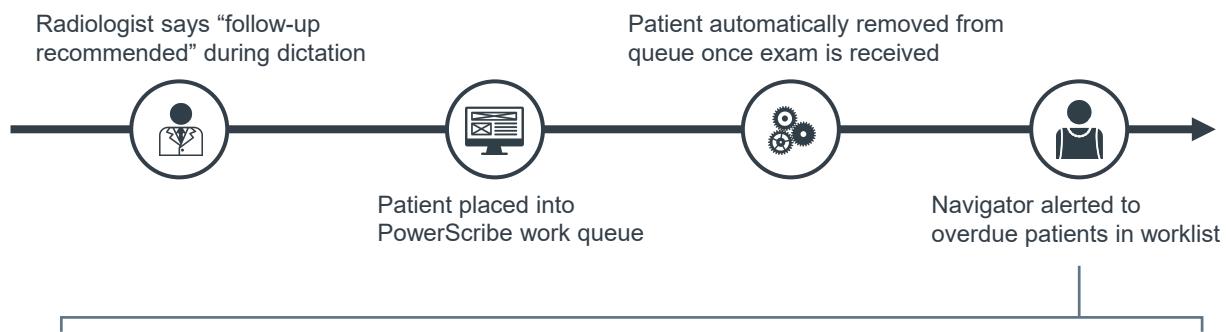
Carle Foundation

413-bed regional hospital • Urbana, IL

Carle Foundation imaging tried to make it as easy as possible for referrers to order incidental finding follow-up by creating a new workflow.

Patients with a finding that requires follow-up are placed in a PowerScribe work queue, which is then managed by a dedicated navigator. The navigator's dedicated effort and, most importantly, personalized approach to both in-network and outside physicians, have resulted in a much higher rate of recommended exam completion.

Carle Foundation's new workflow for patients who require follow-up exams



Steps navigator takes for overdue exams

- 1 Confirms system correctly removed exams that have been received
- 2 Looks at physician notes for referral outside of Carle, insurance denial, or patient refusal
- 3 Sends personalized message to provider highlighting findings and necessary follow-up exam
- 4 Contacts nurse navigators at other provider facilities to see if patient was referred outside the system or chose to go elsewhere

400

Exams per month worked by navigator

30%

Of cases where navigator sends letter to provider result in imaging at Carle Foundation

Source: Carle Foundation, Urbana, IL; Imaging Performance Partnership interviews and analysis.

Enable direct scheduling to ensure follow-up occurs



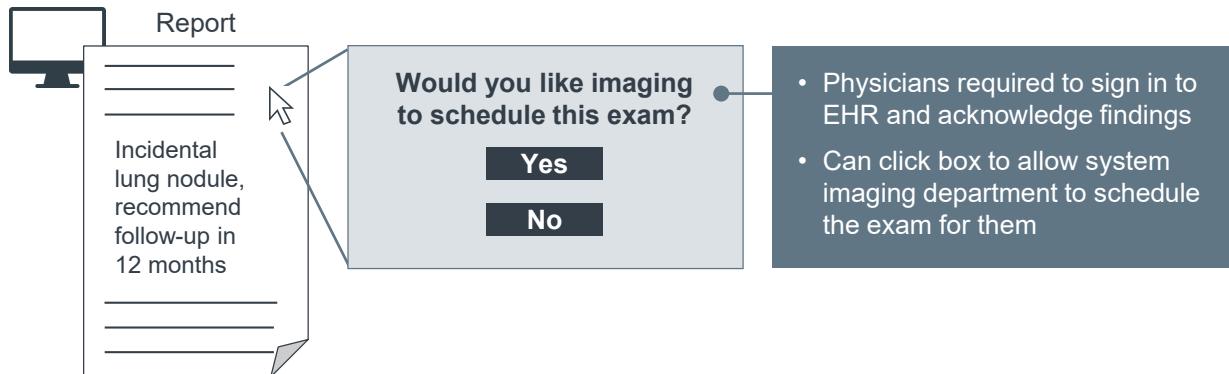
**CASE
EXAMPLE**

Tywin Hospital (pseudonym)

Large academic medical center • Northwest

At pseudonymed Tywin Hospital, imaging has gone even further to ensure incidental finding follow-up. They recently launched a software program that will ping referring physicians and require them to acknowledge incidental findings, while offering the option of authorizing the imaging program to schedule recommended follow-up.

Tywin Hospital's incidental finding alert enables referrer to delegate responsibility to imaging



Although this effort is in its early stages, the opportunity is significant. Tywin's leaders estimate that if it enables them to schedule all recommended follow-up, it would be worth \$600,000 annually in imaging revenue – not to mention obvious benefits to patient care.

Source: Imaging Performance Partnership interviews and analysis.

Survey patients to identify what matters most to them

The Radiology Clinic's patient preference survey

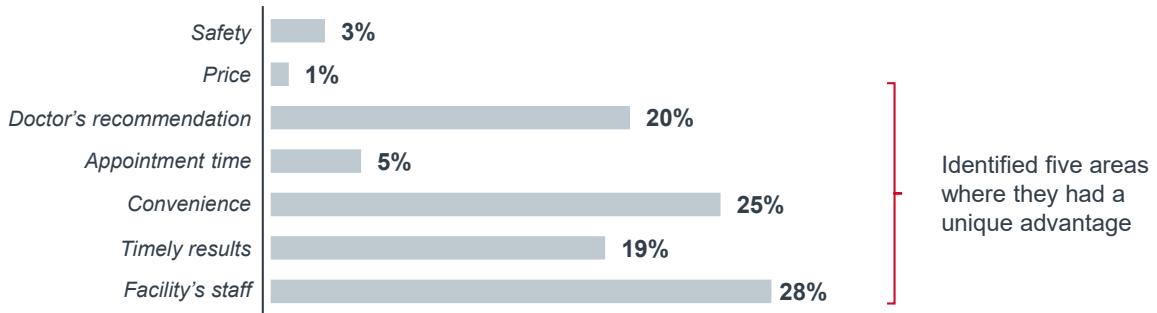
The previous three lessons suggest ways of winning business by improving outreach and support for referring physicians. Now we turn to strategies for appealing to patients as a way to influence their referring physicians' decisions.



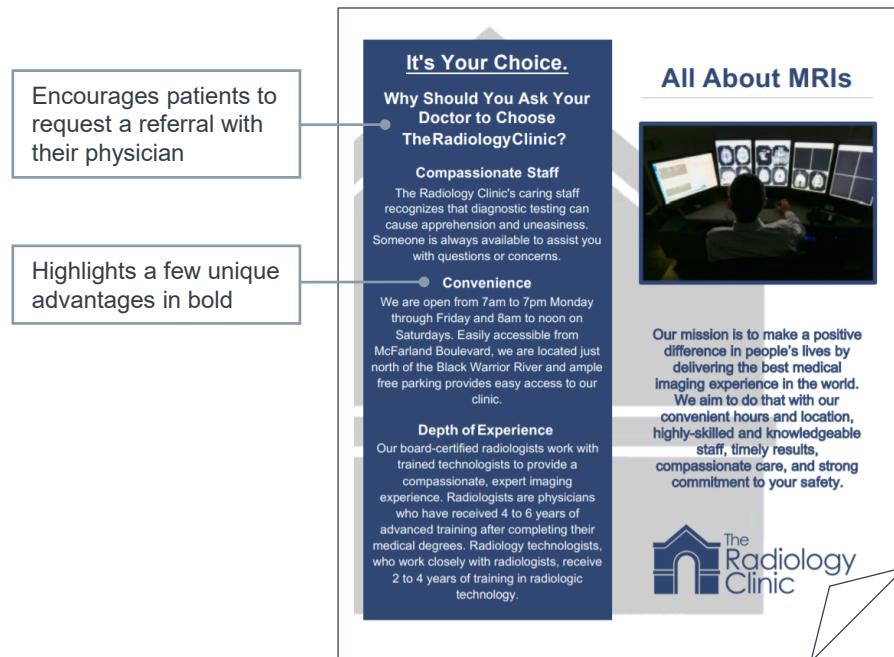
To understand patient preferences in their market, the Radiology Clinic ran a short, five-question patient survey. They distributed it to patients after their imaging appointment via automated text. To reach individuals who were not current patients, they also gave it out at community health fairs.

One of the questions asked what mattered most to patients in choosing an imaging center. Based on the responses, The Radiology Clinic created a variety of patient-facing communications that highlighted their center's unique advantages and encouraged patients to ask their physicians for a referral.

“What matters most to you when choosing where to go for imaging?”



Survey-based patient-facing marketing materials



Encourages patients to request a referral with their physician

Highlights a few unique advantages in bold

It's Your Choice.

Why Should You Ask Your Doctor to Choose The Radiology Clinic?

Compassionate Staff

The Radiology Clinic's caring staff recognizes that diagnostic testing can cause apprehension and uneasiness. Someone is always available to assist you with questions or concerns.

Convenience

We are open from 7am to 7pm Monday through Friday and 8am to noon on Saturdays. Easily accessible from McFarland Boulevard, we are located just north of the Black Warrior River and ample free parking provides easy access to our clinic.

Depth of Experience

Our board-certified radiologists work with trained technologists to provide a compassionate, expert imaging experience. Radiologists are physicians who have received 4 to 6 years of advanced training after completing their medical degrees. Radiology technologists, who work closely with radiologists, receive 2 to 4 years of training in radiologic technology.

All About MRIs

Our mission is to make a positive difference in people's lives by delivering the best medical imaging experience in the world. We aim to do that with our convenient hours and location, highly-skilled and knowledgeable staff, timely results, compassionate care, and strong commitment to your safety.

The Radiology Clinic

Source: The Radiology Clinic, Tuscaloosa, AL; Imaging Performance Partnership interviews and analysis.

Reach patients at the physician's office



CASE
EXAMPLE

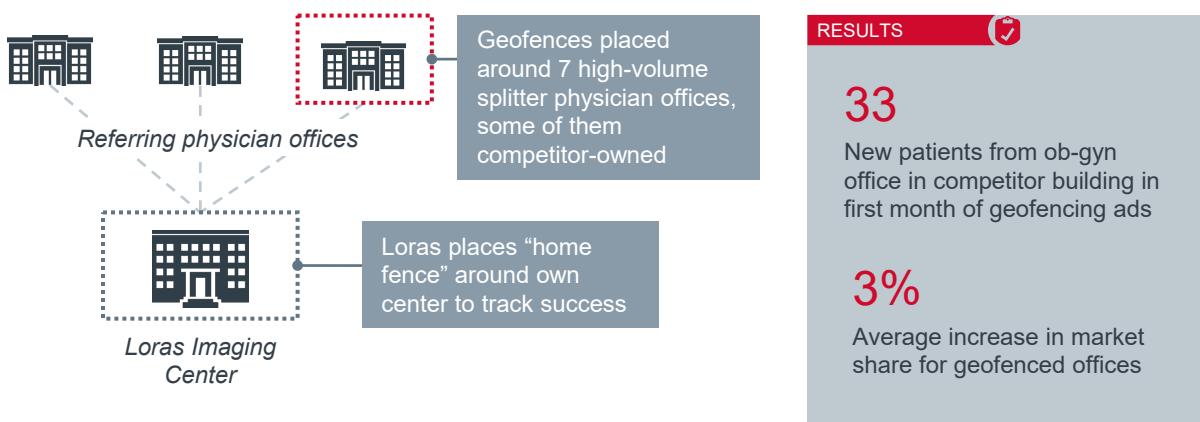
Loras Radiology (pseudonym)

Large radiology group • Midwest

Pseudonymed Loras Radiology wanted to influence conversations between patients and referring physicians by connecting with patients at the time they were most likely to speak with their provider.

Loras used geofencing, a technology that allows the user to target advertisements to mobile devices located in a specific geographic area. They created geofences around physician offices where they saw opportunity to grow referrals—several of them owned by competitor hospitals. Patients using mobile devices while at those offices now saw ads promoting Loras' imaging center. They also created a home fence around their own imaging center, which allowed them to detect patients carrying a device that had received their ads. This enabled Loras to quantify the effectiveness of their new marketing approach.

Loras Radiology's geofencing strategy



TECHNOLOGY IN BRIEF: GEO-FENCING

- Allows user to target advertisements on certain mobile device apps within hyper-specific geographic areas
- User can also create a “home fence” to receive alerts when any consumer who saw an ad enters their home fence
- Can exclude individuals at location based on multiple factors, including time at location or demographics; for example, individuals spending more than 6 hours at a location were assumed to be staff and not targeted

Loras noticed that, in just one month, they saw 33 new mammography patients from an ob-gyn office located in the same building as a hospital competitor's facility. The doctors sent them to Loras rather than down the hall—because patients asked to go there after seeing the geofencing ads.

Source: Imaging Performance Partnership interviews and analysis.

Identify and win price-sensitive referrals

Identify precise price point needed to stem leakage

When The Radiology Clinic surveyed patients in the Tuscaloosa market (page 22), they were surprised to learn that price was at the bottom of the list of patient preferences. However, as both high-deductible plans and payer steerage have become more common, many imaging programs find that physician referral decisions are strongly influenced by price concerns.

How should imaging programs respond? Rather than either ignoring the issue or rushing into a wholesale price reduction, imaging programs can benefit from understanding the precise dynamics of how price concerns inform physician referrals and developing customized pricing strategies to address them.



CASE
EXAMPLE

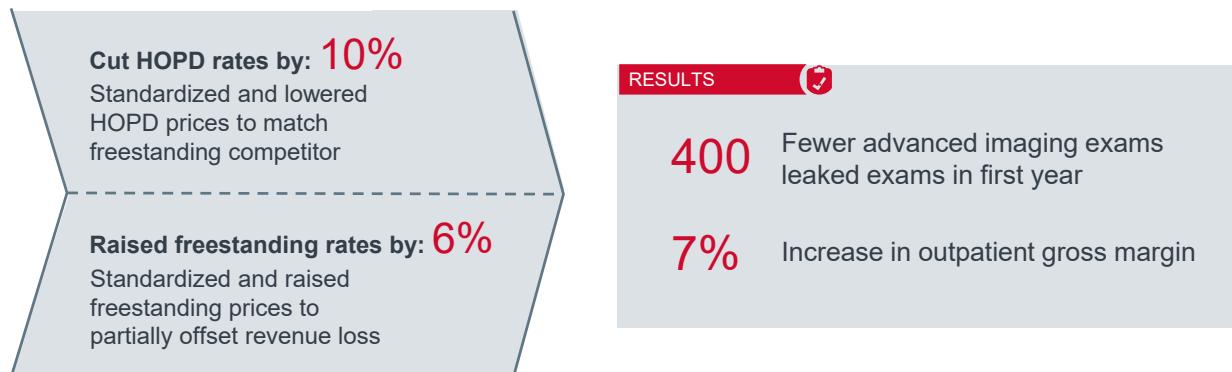
Olenna Health System (pseudonym)

Large health system • Southeast

Pseudonymed Olenna Health System wanted to reduce their imaging referral leakage rate. When they spoke to employed physicians, they learned that referrers were sending patients to a freestanding competitor because patients wanted more affordable imaging.

The competitor was not the least expensive in the market, so Olenna realized they did not need to compete on price across the board. Instead, they lowered their HOPD prices to match the competitor—ensuring that their combined technical and professional fees did not exceed the competitor's global rate. They also raised prices at some freestanding facilities to offset the revenue loss.

Critically, Olenna then spread the word to referring physicians, comparing the new price side-by-side with the freestanding competitor and providing financial details and talking points to encourage physicians to direct price-sensitive patients back to Olenna's facilities.



Source: Northwest Radiology, Indianapolis, IN; Imaging Performance Partnership interviews and analysis.

Capture referrals with a new price message

Northwest Radiology wins volumes by publicizing a simple and accurate price

While Olenna's approach was specifically designed to stem price-related referral leakage from employed physicians, Northwest Radiology pursued a broader and more public approach. Their goal was to reach all referring physicians in their market—as well as patients and payers—by addressing a clear patient desire for price transparency and predictability.



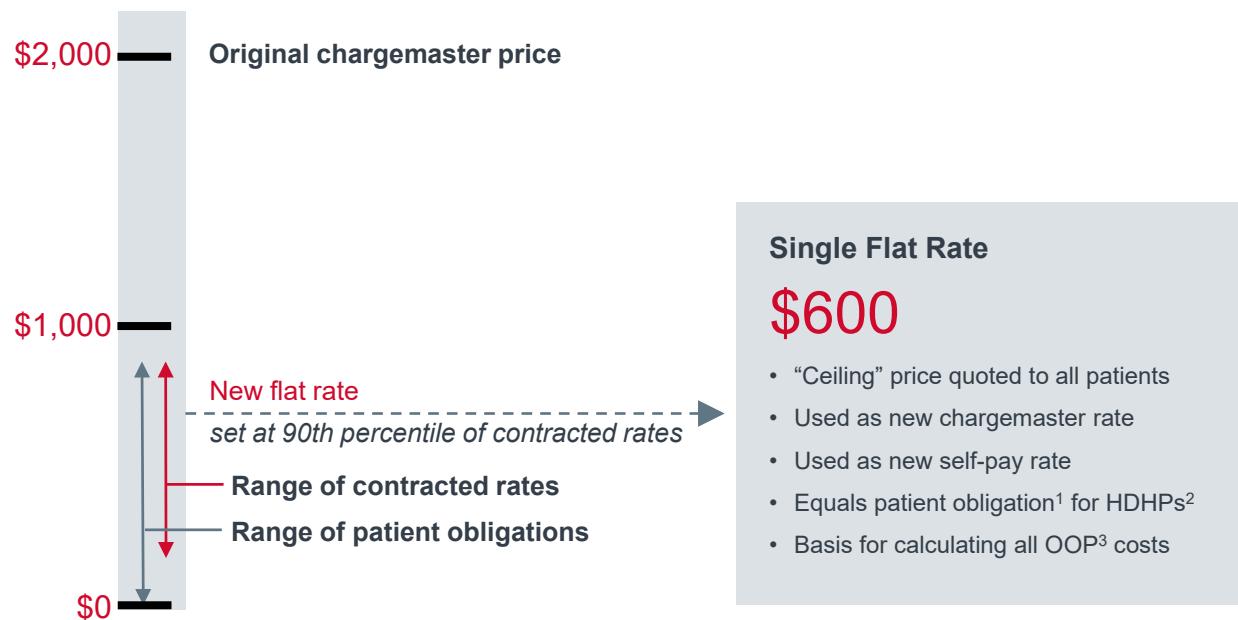
**CASE
EXAMPLE**

Northwest Radiology

55-physician independent radiology group • Indianapolis, IN

Several years ago, Northwest Radiology chose a unique strategy for responding to their high volume of patient and physician requests for price estimates. Northwest discontinued use of their chargemaster. Instead, they looked at contracted rates and set a flat rate for each service at roughly the 90th percentile of commercial reimbursement. This flat rate is quoted as a maximum price to all patients.

Setting a flat rate for a sample imaging service



Northwest initially focused on educating referring providers about the flat rate. The enthusiastic response they received encouraged them to launch a comprehensive marketing strategy. They spread the word to employers, patients, and physicians throughout their market, using their website, social media, and a variety of other marketing strategies. This resulted in significant volume growth.

RESULTS



2X Growth in patient-directed volumes

48% Overall volume growth over first two years of marketing

¹ Unless patient has met deductible, or patient's deductible is lower than the flat rate because the payer's contracted rate is below the 90th percentile for all Northwest contracts.

² High-deductible health plan.

³ Out-of-pocket.

Source: Northwest Radiology, Indianapolis, IN; Imaging Performance Partnership interviews and analysis.

Price transparency is critical to success

Transparent flat rate pricing satisfies patients, poses challenge for competitors

Northwest feels strongly that the key to their success was price transparency, rather than low price. They did not reduce their prices, but simply informed their market about what their prices really were. The flat rate provided a way to do so that was simple, accessible to all constituencies, and did not require revealing confidential payer agreements.

“At the end of the day, the patient is still paying the same as they were before we introduced flat rate pricing. This is really about price transparency.”

*Karen Elliot, Marketing Manager
Northwest Radiology*

This transparency also put their competitors at a disadvantage. On Northwest's webpage, their flat rates are compared, side by side, to the chargemaster rates at hospital competitors—the only rates visible to the public. This comparison would be far less damaging to the hospitals if they were able to publicize and defend their true prices.

Northwest Radiology's website today

NWR NorthwestRadiology TRUSTED IMAGING SINCE 1967	AVERAGE COMPETITOR	NWR FLAT RATE	AVERAGE SAVINGS
General X-Ray	\$550	\$75	86%
CT <i>without contrast</i>	\$1,200	\$500	58%
CT <i>with contrast</i>	\$1,350	\$600	56%
CT <i>with & without contrast</i>	\$1,500	\$700	53%

Northwest Radiology.

Northwest's experience, as well as other research, suggests that marketing on price transparency can benefit all imaging programs. It can help lower-priced facilities draw price-sensitive consumers, while enabling more expensive hospital programs to compare more favorably and satisfy patients' known preference for clarity and predictability in health care pricing.

Source: Northwest Radiology, Indianapolis, IN; Imaging Performance Partnership interviews and analysis.

Summary of lessons and profiled case studies

Lesson 1: Identify physicians for targeted marketing

Summary: Imaging programs can realize significant volume and market share growth by leveraging robust leakage analytics to target outreach and support for referring providers.



UCLA Health

170-location health care system • Los Angeles, CA

For the full case,
see **pages 7-9**

- Developed system to gather better data on affiliated referring providers and use that data for business decisions and to help physician liaisons
- Requires ordering physicians to enter all orders through EHR, even those going outside of the system
- Pulls this order data, along with physician office data, into Salesforce to provide access to liaisons
 - Data uploaded weekly, process takes roughly 15 minutes for one FTE¹
- Feeds Salesforce data into Tableau to generate heat maps for business development usage that enables multiple views:
 - Overall volumes by provider and patient home location
 - Leakage by provider
- System has helped UCLA Health Radiology gain over \$30 million in revenue from growth initiatives

¹) Full time equivalent

Summary of lessons and profiled case studies

Lesson 2: Differentiate on customization and ease of use

Summary: Faster scheduling and customization of access, protocol, and reporting options—based on a deep understanding of referrer preferences—can transform referral patterns in a market



Premier Radiology

50-physician independent radiology group • Nashville, TN

For the full case,
see **pages 11-12**

- Formed joint venture JV with Saint Thomas Health combining multiple outpatient sites under Premier's management
- JV includes all outpatient volumes, including those performed in the hospital, to encourage scheduling of imaging in freestanding space
- Grew JV to 15 freestanding centers with a 400% increase in volumes
- Success stemmed from excellent service and improved access:
 - Reduced scheduling time from 22 minutes to 1.5 minutes
 - Customized interactions with referring physicians based on their needs
 - Exclusive access to physician groups via wellness parties



The Radiology Clinic

21-physician independent radiology group • Tuscaloosa, AL

For the full case,
see **pages 13
and 22**

- Sought to better understand physician and patient preferences
- Surveyed referring physicians via email and in-person liaison discussions
- Surveyed recent patients via automated text, non-patients by distributing survey at local health fairs; received 639 patient responses
- Used surveys to identify key factors that differentiated The Radiology Clinic to physicians and patients
- Simplified Medical Management LLC manages The Radiology Clinic, providing multiple operational functions including survey



Jamie Health (pseudonym)

Large health system • Southwest

For the full case,
see **page 14**

- To reduce referral leakage, worked proactively with physicians to understand their needs
- Increased volumes by 10% by deploying “easy to do business with” strategy:
 - Centralized scheduling for all of outpatient imaging to ensure an exceptional customer experience
 - Leveraged information technology capabilities to improve scheduler efficiency in managing electronic orders
 - Increased scheduler pay and created competency support program

Summary of lessons and profiled case studies

Lesson 3: Integrate into referrer workflow to capture underutilized services

Summary: To secure referrals for screening, IR, and incidental finding follow-up, progressive imaging programs are creating deeply targeted physician education and providing **hands-on support at all stages of the referrer's clinical workflow.**



UCSF Medical Center

1,050-bed academic medical center • San Francisco, CA

For the full case,
see **pages 16-17**

- Marketing director of radiology at UCSF launched physician marketing campaign utilizing multiple digital mediums
- Surveyed of physicians to understand where they received information
 - Identified email, internet search, and social media as key opportunities for digital marketing
- Survey physicians on social media habits identified that LinkedIn was the most commonly used platform
 - Launched a LinkedIn and email marketing campaign focused on educating physicians on lung cancer screening
 - Doubled the number of orders after launch of campaign
 - LinkedIn ads received a total of 44,983 impressions



Tyron Medical Center (pseudonym)

Medium-sized academic medical center • Southeast

For the full case,
see **page 18**

- Realized breast cancer screening patients were not receiving most appropriate care in follow-up leading to unnecessary care and delayed treatment
 - Diagnostic-to-biopsy time was often over two weeks
- Developed flowchart to guide physicians through the follow-up process
 - Flowchart helps referrers understand the results of the screening and what these results mean in terms of future care
- Provided new flowchart to physicians over email and via in-person meetings
 - Reduced diagnostic-to-biopsy time to less than seven days, as physicians avoid ordering a surgical consult before biopsy.

Summary of lessons and profiled case studies

Lesson 3 (cont.): Integrate into referrer workflow to capture underutilized services



CASE EXAMPLE

New Hanover Regional Medical Center

Two-hospital system • Wilmington, NC

For the full case,
see [page 19](#)

- Offers imaging screening services in seven locations across market
- Decided to focus on increasing AAA screenings organization-wide, including collaboration with the affiliated, employed medical group
 - In 2015, only 17 AAA ultrasounds were conducted at the main hospital campus
- Leveraged relationship with vascular surgeons to get support for initiative
- Created health maintenance process in Epic that identifies qualifying patients and prompts physicians to discuss and schedule screening
- Created a multipronged marketing campaign including social media, patient materials, and physician outreach



CASE EXAMPLE

Carle Foundation

413-bed regional hospital • Urbana, IL

For the full case,
see [page 20](#)

- Developed system to better track imaging exams needing follow-up
- Utilizes worklist product from PowerScribe by Nuance to track findings
 - Radiologists must dictate “follow-up recommended” for exam to be placed in worklist
 - Completed exams are automatically removed from worklist when navigator manages recommendations marked “overdue” on the worklist
 - Navigator checks to ensure exam was not received and missed by system
 - Navigator sends personalized message to provider highlighting finding and recommended follow-up exam
 - Navigator reaches out to nurse navigators at other institutions to identify if patients received care outside of system
- Navigator currently works 400 overdue exams each month



CASE EXAMPLE

Tywin Hospital (pseudonym)

Large academic medical center • Northwest

For the full case,
see [page 21](#)

- Uses M*Modal Fluency software to alert physicians of findings, needed follow-up; software requires physicians to log in and acknowledge the finding
- Adding in option to allow physicians to request imaging department to own the scheduling of any necessary follow-up exams
- Analysis of potential additional revenue from capturing follow-up imaging suggested overall annual revenue opportunity of \$600,000

Summary of lessons and profiled case studies

Lesson 4: Engage referrers by appealing to patients

Summary: As consumerism advances, **meeting patients' needs and winning their attention** is an important opportunity to gain referrals by influencing patient-physician conversations



**CASE
EXAMPLE**

Loras Radiology (pseudonym)

Large radiology group • Midwest

For the full case,
see [page 23](#)

- Geofenced seven physician offices presenting opportunity to grow volumes; offices were a mix of independent physicians and competitor-affiliated physicians
- Created a “home fence” around their imaging center to detect when a patient who had seen an ad entered their facility
- Saw a 3% average increase in market share for the geofenced offices, including from an office located in a competing hospital’s building



**CASE
EXAMPLE**

Olenna Health System (pseudonym)

Large health system • Southeast

For the full case,
see [page 24](#)

- Physician ordering patterns revealed that Olenna Health System was losing volumes to a freestanding competitor in market
 - Physician conversations confirmed that price was a key factor in leakage
- Evaluated pricing structure across system
 - Lowered HOPD prices on average by 10% across system to align with freestanding competitor rates
 - Raised freestanding prices on average by 6% across system to offset revenue loss from HOPD price reductions
- Communicated competitive prices to referring physicians to ensure that price-sensitive patients were aware that they were same price as competitors



**CASE
EXAMPLE**

Northwest Radiology

55-physician independent radiology group • Indianapolis, IN

For the full case,
see [page 25](#)

- Developed flat-rate pricing structure in response to price sensitivity in market and frequent patient calls asking for price estimates
- Created price ceiling by adjusting chargemaster rates down to the 90th percentile of all contracted rates
- Communicated new price transparency to referring providers; later, worked to reach other stakeholders through extensive marketing
- Saw the number of patients who self-directed double in two years
- Overall, volumes grew by 48% after two years of marketing new flat rate

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