Health Care Market Oversight

Transaction 007
Radia-MRG
30-Day Review Summary Report

March 9, 2023

Oregon Health Authority

About this Report

This report summarizes analyses and findings from Oregon Health Authority's preliminary (30-day) review of the proposed material change transaction of Radia Inc., P.S. and Medford Radiological Group, PC. It accompanies the Findings of Fact, Conclusions of Law, and Final Order ("Preliminary Review Order") issued by Oregon Health Authority on March 9, 2023. For legal requirements related to the proposed transaction, please reference the Preliminary Review Order.

You can get this document in other languages, large print, braille or a format you prefer free of charge. Contact us by email at hcmo.info@oha.oregon.gov or by phone at 503-385-5948. We accept all relay calls.

If you have any questions about this report or would like to request more information, please contact hcmo.info@oha.oregon.gov.

Executive Summary

The Health Care Market Oversight (HCMO) program reviews proposed heath care business deals to make sure they support statewide goals related to cost, equity, access, and quality. After completing a review, the Oregon Health Authority (OHA) issues a decision about whether a business deal, or transaction, involving a health care company should proceed. On January 31, 2023 OHA acknowledged receipt of a complete Notice of Material Change Transaction ("notice") from Radia Inc, P.S. ("Radia"), a physician-owned radiology practice group based in the state of Washington.

Proposed Transaction

Through this transaction, Radia will acquire Medford Radiological Group, PC ("MRG"). MRG is a physician-owned radiology practice primarily serving patients in the Medford, Ashland, and Grants Pass areas of southern Oregon. In 2022, MRG provided diagnostic and interventional radiology services for more than 125,000 patients. The transaction will make MRG a direct subsidiary of Radia, and MRG physicians will become Radia employees.

OHA's Review

OHA conducted a preliminary review of the proposed transaction to assess the likely impact of the transaction across four domains: cost, access, quality, and equity. During the review, OHA reviewed documents filed, gathered background information about the companies involved, analyzed claims and other relevant data, and issued requests for additional information from Radia. OHA held a 14-day public comment period but did not receive any public comments.

Key Findings

Cost

This transaction will not lead to any significant consolidation within the market for radiology services in Oregon. However, given Radia's presence in Washington state, OHA has some concerns about potential price increases resulting from consolidation in radiology services across the Oregon and Washington markets. Such price increases are unlikely provided that the combined entity does not contract jointly for services in Washington and Oregon, which the entities stated they do not intend to do. OHA's follow-up reviews will assess any impacts of the transaction on prices for MRG services.

Access

OHA does not have concerns about reductions in access to care resulting from this transaction. Provided that Radia maintains existing MRG contracts with hospitals, CCOs, and thirty-party payers, which the entities stated they intend to do, OHA does not expect the transaction to reduce access to radiology or associated procedures in Oregon. The entities anticipate that the transaction will increase access to radiology services, particularly sub-specialty diagnostic services. OHA will assess in follow-up reviews whether these benefits materialize.

Quality

OHA does not have significant concerns about the impact on quality of care for this transaction. The transaction has the potential to maintain or improve quality of care for radiology patients in Oregon. Both Radia and MRG have a generally positive track record on delivering high quality care. Access to a larger network of specialized radiologists may improve patients' prognoses and clinical outcomes. OHA will monitor key patient experience and other quality indicators in follow-up reviews.

Equity

OHA does not have specific concerns about equity for this transaction. While there may be existing disparities in access to radiology services in the region, the proposed transaction is unlikely to exacerbate any issues and has the potential to improve access to subspecialty radiology services for underserved communities in southern Oregon.

Conclusions and Decision

Based on preliminary review findings, **OHA approved the transaction, with conditions, on March 9, 2023**. (See the Preliminary Review Order and Review Report for more details.) OHA's decision was based on the following criteria:

- **The transaction is unlikely to substantially reduce access to affordable health care in Oregon.** The proposed transaction will not lead to any significant consolidation within the market for radiology services in Oregon, because Radia currently provides very few services to Oregon patients. The entities stated that they do not intend to negotiate joint contracts covering services in both Oregon and Washington and that they expect to maintain MRG's existing contracts with hospitals and third-party payers, including Coordinated Care Organizations. Radia and MRG anticipate that the proposed transaction will increase access to radiology services in southern Oregon.
- **The transaction is not likely to substantially alter the delivery of health care in Oregon.** OHA estimates, based on information provided in the notice, that Radia's services account for less than 1% of radiology services delivered annually to Oregon patients. Most of these services are provided under an agreement with MRG. Residents of MRG's service area in southern Oregon currently access radiology services from more than 25 providers. The entities stated that they intend to retain MRG's existing contracts with hospitals and third-party payers, including Coordinated Care Organizations, and anticipate that all current MRG physicians will continue to practice in MRG's service area.

This transaction is approved subject to the following conditions:

1. The entities will adhere to the representations made in the notice and subsequent filings with OHA, including but not limited to the following:
    a. The entities intend to retain MRG's existing contracts with hospitals and third-party payers, including Coordinated Care Organizations.
    b. The entities do not intend to negotiate joint contracts across the Oregon and Washington markets.
    c. Former MRG physicians will be represented on Radia's board of directors for at least three years following the closing.

2. The entities must submit an annual report to OHA demonstrating compliance with conditions 1a-c. The first such report will be due to OHA 10 months following the close of the transaction. Subsequent reports will be due at 12-month intervals from the date of the first report. Each report must be based on the template provided by OHA as Exhibit A to the Preliminary Review Order.
3. These conditions will remain in effect for five years from the transaction closing date.

OHA will monitor the impact of the transaction and compliance with conditions by conducting follow up analyses one year, two years, and five years after transaction closes. During these reviews, OHA will analyze the impact of the transaction on quality of care, access to care, affordability, and health equity, specifically following up on concerns or observations noted in the Findings & Potential Impacts section of the Review Report.

Introduction

In 2021, the Oregon Legislature passed House Bill 2362, giving the Oregon Health Authority (OHA) the responsibility to review and decide whether some transactions involving health care entities should proceed. In March 2022, OHA launched the Health Care Market Oversight program (HCMO). This program reviews proposed health care transactions such as mergers, acquisitions, and affiliations to ensure they support statewide goals related to cost, equity, access, and quality.

The HCMO program is governed by Oregon Revised Statute 415.500 et seq. and Oregon Administrative Rules 409-070-0000 through -0085.

In the authorizing statute, the Oregon Legislature specified what types of proposed transactions are subject to review and the criteria OHA must use when analyzing a given proposed transaction. The Oregon Legislature also authorized OHA to decide the outcome of a proposed transaction. After reviewing a given proposed transaction, OHA may approve, approve with conditions, or disallow the transaction.

The Health Care Market Oversight program fits within OHA's broader mission of ensuring all people and communities can achieve optimum physical, mental, and social well-being through partnerships, prevention, and access to quality, affordable health care. The program also supports OHA's goal of eliminating health inequities by 2030.

This report describes the proposed transaction, OHA's findings, and its conclusions based on these findings.

About Radiology

What are radiology services?

Radiology uses imaging technology such as x-rays to diagnose injuries or disease and provide treatment. Imaging can involve a variety of technologies, including x-rays, magnetic resonance imaging (MRI), ultrasound, and nuclear isotopes or contrasting agents. Diagnostic radiology involves diagnosing injuries or disease in various parts of the body. Interventional radiology uses imaging to guide instruments as part of minimally invasive surgical procedures that treat conditions such as heart disease, stroke, and cancer.

Diagnostic radiology refers to imaging services provided to diagnose injuries (e.g., fractures) or to diagnose or perform preventive screening for disease (e.g., cancer). Examples of diagnostic radiology services include x-rays, CT (computed tomography) scans, MRI (magnetic resonance imaging) scans, mammograms, ultrasound exams, and PET (positron emission tomography) scans.

Interventional radiology involves using imaging (such as x-rays, CT, and MRI) to guide surgical procedures that diagnose and treat a variety of conditions. Guided by images, doctors make small incisions and use needles and catheters to treat conditions such as heart disease, stroke, and cancer. Examples include angioplasty, stenting, thrombolysis, and biopsies. These procedures typically involve less recovery time, pain, and risk than traditional surgery.

Radiation oncology uses radiation therapy to treat cancer. Radiation therapy kills cancer cells or slows their growth by damaging their genetic material. More than half of people with cancer receive radiation therapy.

Teleradiology occurs when a radiologist receives and interprets images from a remote location, different from the location where the images were generated. Teleradiology can allow hospitals and clinics to have access to a radiologist 24/7 without needing to have one on site.

How are radiology services delivered?

Radiology services are delivered by radiologists, various clinical support staff, and administrative staff. A **radiologist** is a doctor with special training in creating and interpreting images of areas inside the body. Radiologists interpret images, conduct certain procedures, develop reports for referring providers, and consult with other clinicians.

Radiologists and supporting staff work at clinical sites such as hospitals, doctor's offices, laboratories, therapy centers, imaging centers or other outpatient care centers. Most radiologists (68%) in the U.S. work at physician offices, according to 2021 data from the Bureau of Labor Statistics.[1] Radiologists who interpret images may do so from a remote location. They may be employed by a health care facility or by an independent radiology practice group that provides radiology services under contract with a hospital, emergency department, imaging center, clinic, or other physician group.

Radiologists must complete medical school, residency training, and certification by the American Board of Radiology. Most radiologists also have specialized training in radiation oncology, interventional radiology, or a "subspecialty" of diagnostic radiology. Diagnostic radiology sub-specialties include breast imaging (mammograms), cardiovascular radiology (heart and circulatory system), chest radiology (heart and lungs), pediatric radiology (imaging of children), emergency radiology, gastrointestinal radiology (stomach, intestines, and abdomen), and genitourinary radiology (reproductive and urinary systems). [2]

There are several kinds of professionals who work under the leadership of radiologists to provide these services:

- Radiologist assistants lead patient management and assessment. They may conduct other duties under supervision of radiologists.
- Radiologist technologists or technicians perform the imaging and consult with radiologists.
- Radiology nurses help with more complex procedures such as when intravenous medicines are needed.
- Radiation therapists and medical physicists administer radiation therapy safely and accurately.
- A radiologist manager or administrator oversees a radiology service, conducts training, schedules staff, and ensures compliance with policies and laws.
- Clerical and administrative staff ensures the office, patient scheduling and billing are effective.

Generally, a doctor will request patient imaging. After receiving the referral, processing it and confirming insurance eligibility, a radiology service will work with the patient to schedule imaging. For services to be covered by insurance, visits must be preauthorized by the insurer — except for emergencies. During the visit, the radiology team will conduct the exam and the imaging. (See the table below for a summary of common diagnostic imaging types.[3])

Imaging type	What it is	What it can diagnose
X-rays	Quick, painless pictures of structures inside the body. Patients lie, sit, or stand while the x-ray machine takes images using ionizing radiation. The procedure usually takes 10-15 minutes.	Bone fractures Arthritis Osteoporosis Infections Breast cancer Swallowed items Digestive tract problems
CT (computed tomography) scan	A series of x-rays are used to create cross-sectional images of parts of the body, including bones, blood vessels, and soft tissues. Patients lie on a table that slides into an x-ray tube, which rotates to take images. The procedure usually takes 10-15 minutes.	Injuries from trauma Bone fractures Tumors and cancers Vascular disease Heart disease Infections
MRI (magnetic resonance imaging)	Magnetic fields and radio waves are used to create detailed images of organs and tissues in the body. Patients lie on a table that slides into the MRI machine. MRI magnets create loud tapping or thumping noises. The procedure usually takes 45 minutes.	Aneurysms Multiple Sclerosis (MS) Stroke Spinal cord disorders Tumors Blood vessel issues Joint or tendon injuries
Ultrasound exam	Images of structures and organs in the body are created using high-frequency sound waves. A technician applies gel to the patient's skin and presses a small probe against it, moving around to capture images.	Gallbladder disease Breast lumps Genital/prostate issues Joint inflammation Blood flow problems Pregnancy monitoring

Imaging type	What it is	What it can diagnose
PET (positron emission tomography) scans	This procedure uses radioactive drugs ("radiotracers") and a scanning machine to show how the body's tissues or organs are working. The patient swallows or is injected with a tracer and then enters the PET scanner (which looks like a CT scanner). The PET scanner reads the radiation given off by the radiotracer. The procedure takes 1.5-2 hours.	Cancer Heart disease Coronary artery disease Alzheimer's Disease Seizures Epilepsy Parkinson's Disease

Once an image is taken, a radiologist interprets and reports the results. This may involve consulting with other staff and reviewing similar precedents. This can be done onsite or remotely. The radiology staff will assemble the report and imaging and share it with the patient and the referring doctor.

How do radiologists get paid?

Radiology providers contract with insurers (such as commercial insurance companies, Medicare, and Medicaid) to deliver services to medical plan members in exchange for payment. After a service is rendered, the provider files a claim with the relevant insurance plan, including procedure and diagnosis codes that describe the type of procedure, the patient's medical situation, and the reason why the procedure was needed. Additionally, insurers may require the radiologist's report to determine payment on a claim. Patients are responsible for any copays, deductibles, or coinsurance under their medical plan, as well as any amounts not paid by the insurer.

Depending on where the exam is performed (e.g., hospital or independent imaging center), who owns the imaging equipment used, and any contractual relationships with interpreting radiologists, patients may receive two separate bills: one from the owner of the imaging equipment, and one from the radiologist for the professional service. An example of this would be an MRI performed at a hospital-owned imaging center and interpreted by a radiologist belonging to an independent radiology practice group. In this instance, the patient would receive a bill from the hospital reflecting facilities, equipment, and technical staff used ("technical component"), plus a bill from the radiology group for professional interpretation services ("professional component").[4] Many hospitals require radiologists they work with to participate in every contract the hospital has with commercial payers.[5]

Most radiology services are reimbursed under a fee-for-service (FFS) model based on or associated with the Resource-Based Relative Value Scale (RBVS) used by Medicare. RBVS assigns a numerical value (Relative Value Unit or RVU) to each service, determined by the amount of physician work (e.g., time and skill) involved, costs for providing the service (including facilities, equipment, and technical staff), costs associated with operating a practice (such as rent, utilities and administrative costs) and the cost of obtaining professional liability (malpractice) insurance.[6] The Centers for Medicare and Medicaid Services (CMS) determines RVUs for professional medical services, published as part of the Medicare Physician Payment Schedule (MPFS).[7] CMS updates the MPFS on a quarterly basis.

Trends in Radiology

Reimbursement

A recent peer-reviewed study estimated that Medicare payments for diagnostic radiology had declined more than 40% over ten years, adjusted for inflation.[8] CMS' changes to the MPFS in 2023 were estimated to reduce reimbursement for radiology services by 2% and interventional radiology by 3%.[9] This continued a longer-term downward trend in Medicare FFS reimbursement for radiology services.[10]

National data on commercial insurer reimbursement for radiology services data is not publicly available, although trends in commercial reimbursement for physician services generally follow Medicare.[11] Commercial payment levels for radiology services are significantly higher; approximately 180% of Medicare FFS rates according to one study.[12] An analysis of commercial and Medicare prices for common outpatient diagnostic imaging services in Oregon in 2019 found that the commercial median prices ranged from 170% of Medicare prices for spinal x-rays to 775% of Medicare prices for chest MRIs.[13]

Like other medical services, reimbursement for radiology services is increasingly shifting from the FFS model (where providers get paid for each service rendered, e.g., exam, visit, or procedure) to a value-based payment model that considers patient outcomes, quality of care, and cost efficiency.

Surprise Billing and the No Surprises Act

In the past, some patients receiving radiology and other types of medical services received costly out-of-pocket bills, even though the consumer accessed care at a facility that was in their health insurer's network. However, starting January 1, 2022, the federal No Surprises Act began. This new law banned what are called *surprise bills*. Surprise billing is when an individual goes to an in-network facility, such as a hospital, and unknowingly sees a provider who is out-of-network. In the past, a consumer could receive a bill for the cost of care provided by the out-of-network physician. CMS summarizes the consumer protections of the No Surprises Act and specifically mentions radiological services:

> *[The new rules relating to the No Surprises Act] ban out-of-network charges and balance bills for supplemental care (like anesthesiology or radiology) by out-of-network providers who work at certain in-network facilities (like a hospital or ambulatory surgical center).*[14]

Surprise billing from out-of-network radiologists practicing in in-network facilities should no longer be as much of a concern for patients.

Consolidation

The national landscape of radiology providers is diverse and fragmented, ranging from regional radiology group practices to large publicly traded companies that serve patients across the country. Like other health care sectors, radiology has seen a significant amount of consolidation in recent years, with radiology practices being acquired by larger providers, including hospitals and health systems.[15] Investment by private equity firms in radiology has helped to drive this trend. Private equity firms often rely on acquisitions, funded by debt, to achieve short-term revenue growth. Industry analysts point to the growth of

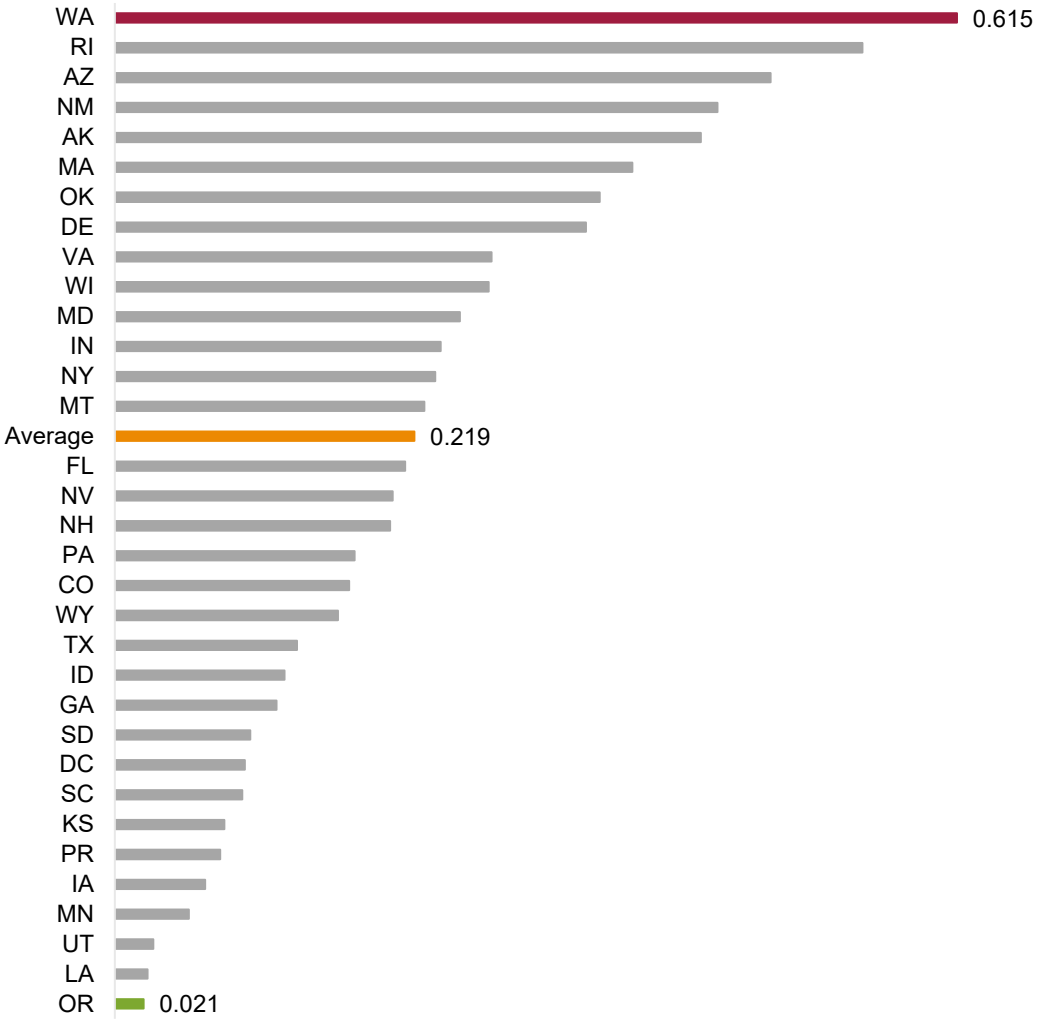
A **private equity (PE)** firm is a private company that invests in or acquires other private companies.
PE firms raise funds from third-party investors such as retirement funds, pension funds, wealthy individuals, and endowments. They usually hold a "portfolio company" for 3-7 years before selling or taking the company public.

value-based care and need to increase negotiating leverage with payers as additional factors driving consolidation. Larger radiology groups may be able to negotiate higher rates with large commercial payers.

Labor Shortages

Many radiology groups, particularly smaller practices in rural or remote areas, struggle to find qualified radiology professionals. Interest in radiology training among medical students has declined in part due to the emergence of Artificial Intelligence (AI) technology, which many predicted would replace some radiologists.[16] In 2021, Oregon had the lowest concentration of radiologists of any state for which data were available, at 0.02 radiologists per 1,000 jobs. This figure was one-tenth of the national average. Washington state ranked highest in the nation.

Oregon has 0.021 radiologists per 1,000 jobs, fewer than any other state for which data are available. **Washington** has the highest rate of radiologist employment.



Data as of May 2021 from Bureau of Labor Statistics

Proposed Transaction

On January 31, 2023 OHA confirmed receipt of a Notice of Material Change Transaction ("notice") from Radia Inc, P.S., a radiology practice group. This notice describes a proposed transaction where Radia plans to acquire Medford Radiological Group.

OHA reviewed the notice and determined, based on the facts in the notice, that the transaction is subject to review. The entities party to the transaction meet the revenue thresholds specified in OAR 409-070-0015(1) and the proposed transaction is otherwise covered by the program in accordance with OAR 409-070-0010. After receipt of the complete notice of material change transaction, OHA began a preliminary review of the proposed transaction. Preliminary reviews must be completed within 30 days of OHA's confirmation of receipt of a complete notice, unless extended in accordance with applicable statutes and administrative rules.

The information below is taken from Radia's filings to date and publicly available sources as identified in the "References" section at the end of this report. OHA has not independently verified the information and takes no position on the accuracy of the public statements made by the entities identified below.

Entities Involved

The main entities involved in this transaction are Radia Inc, P.S., and Medford Radiological Group, PC.

Radia

Radia Inc, P.S. (Radia) is a for-profit physician group practice providing professional radiology services to patients at hospitals, health systems, and imaging centers. Radia was created in 1997 through a merger between Puget Sound Radiology and Radiology Associates.[17] Radia is organized as a Washington State professional corporation and is headquartered in Lynnwood, Washington. Radia promotes itself as one of the largest physician-owned radiology groups in the nation.[18] According to its website, Radia:[19]

- Employs 339 staff, including 228 physicians
- Provides more than 3 million services to 1.55 million patients annually
- Provides services to more than 50 hospital and specialty clinic partners
- Operates four outpatient imaging centers in Washington State

While most of Radia's services are located in Washington State, the company also provides some services in Alaska, Arkansas, California, Idaho, and Oregon.

	AK	AR	CA	ID	OR	WA
Teleradiology	●	●	●	●	●	●
Management services			●			●
In-person radiological services						●

Radia currently has an agreement with MRG to provide teleradiology services to patients in Oregon, including interpretation of radiology images and preparing reports on MRG's behalf. These services are provided by Radia's Oregon-licensed radiologists.

Mergers, acquisitions & partnerships

Radia maintains partnerships to provide on-site radiological services with major health systems in Washington State, including Legacy Health, MultiCare, PeaceHealth, Providence St. Joseph Health, and Swedish Health Services.[20]

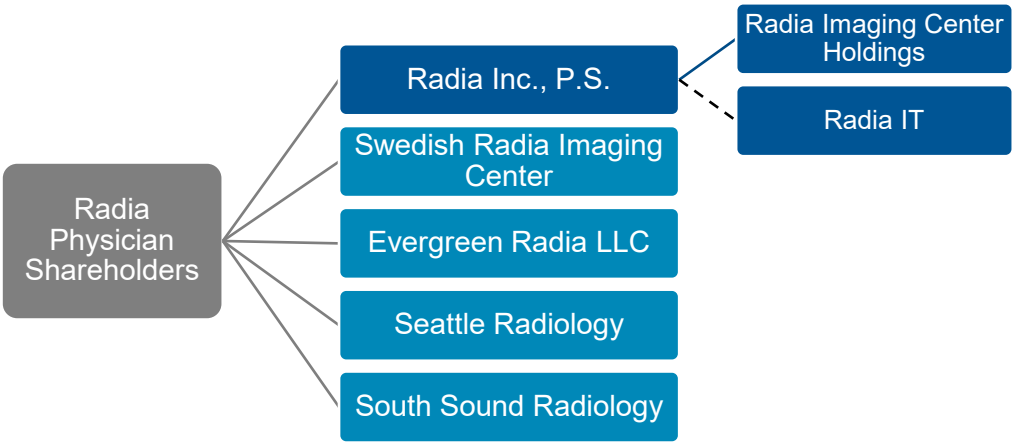
The company has also grown in recent years by combining with other radiology groups. The table below provides a summary of these activities.

Company	Description	Year
Vancouver Radiologists[21]	Added nine radiologists and two imaging centers	2020
Columbia Imaging Group[22]	Added 17 radiologists	2018
South Sound Radiology[23]	Added 30+ radiologists	2018

Governance & structure

Radia is a physician-owned and operated professional corporation organized under the laws of Washington State. Radia is governed by a board of directors elected by its physician shareholders, and all board members are physicians.

The Radia Group consists of five separate entities: Radia Inc., P.S., and four outpatient imaging centers: Evergreen Radia LLC, Swedish Radia Imaging Center at Edmonds LLC, Seattle Radiology, and South Sound Radiology.[24] Radia Inc., P.S. provides image interpretation and radiation oncology services to the imaging centers. Radia Imaging Center Holdings is a wholly owned subsidiary that provides technical imaging services at centers in Western Washington. Radia IT is an affiliate of Radia and provides post-processing services to hospitals and health systems. The diagram below shows the relationships between the business entities.



Medford Radiological Group

Founded in 1948, Medford Radiological Group (MRG) is a physician group serving southern Oregon and northern California.[i] The company employs 15 physicians and four physician assistants to provide diagnostic and interventional radiology services.

In 2022, MRG provided:

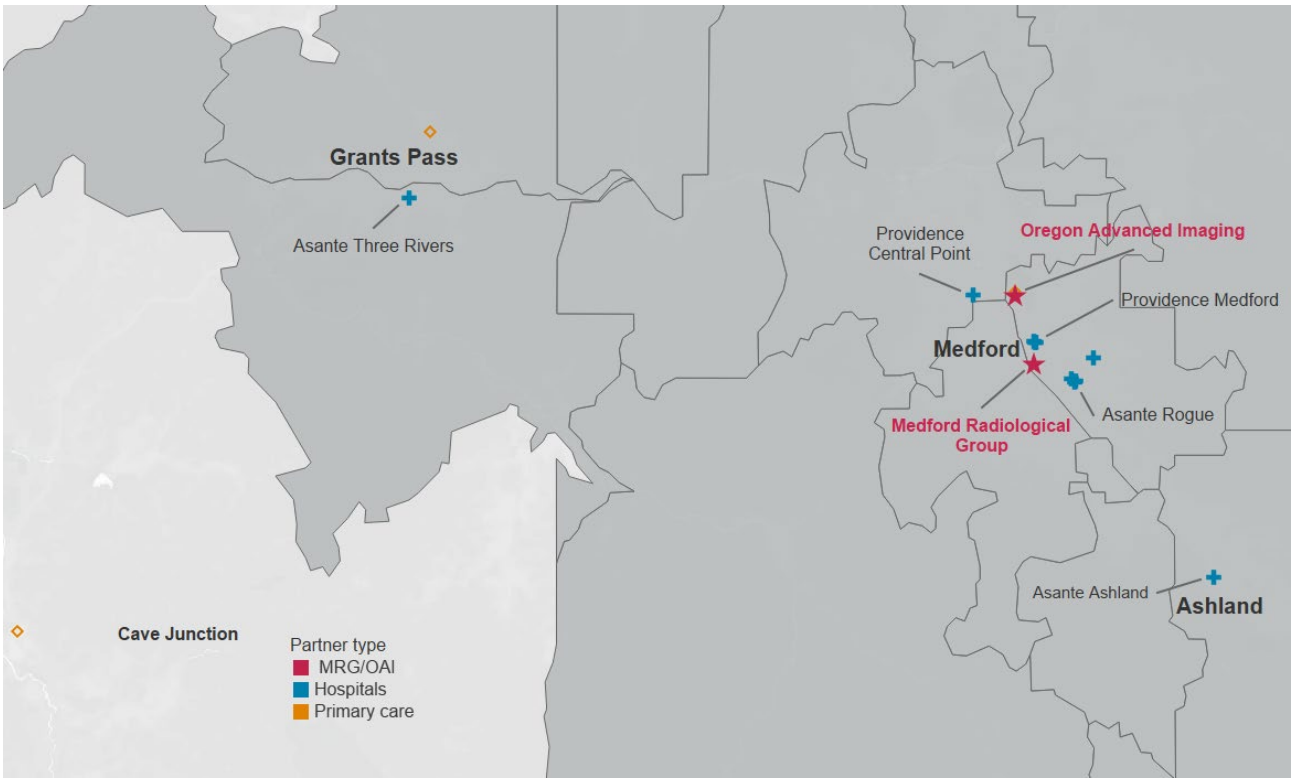
- 13,000 interventional radiology services
- 270,000 diagnostic imaging services
- Services for more than 125,000 patients

MRG staff are located at clinics, hospitals, and imaging centers to provide imaging services, such as x-rays, MRIs, and CT scans, to patients. MRG staff can also remotely interpret images from other sites. MRG operates an interventional outpatient clinic that provides minimally invasive image guided procedures, such as needle biopsies.[25]

MRG is wholly physician-owned. Physician-owners elect a governing board of directors every two years.

Partnerships

MRG maintains many partnerships in the region. MRG operates five imaging reading rooms and has staff located at area hospitals.[26] The company has contracts with three Coordinated Care Organizations (CCOs): Advanced Health, AllCare, and Jackson Care Connect. The map below shows locations and facilities where MRG's services are offered, including hospitals, primary care providers, and specialty clinics.



[i] MRG is sometimes referred to as Medford Radiology Group.

MRG shareholders hold an interest in two joint ventures in which MRG participates:

- Cardiovascular Institute of Southern Oregon (CVISO) is a joint venture with Asante Health System and Southern Oregon Cardiologists that provides cardiac and interventional radiology services to patients at Asante Rogue Regional Medical Center.
- Oregon Advanced Imaging (OAI) is a joint venture with Providence Health System that provides diagnostic imaging to patients. This joint venture began in 2002 and previously included Asante Health System. Providence acquired Asante's share in 2010.[27]

Mergers & acquisitions

In 2003, Asante Health System purchased MRG's building and equipment.[28] MRG retained ownership of the radiology practice itself. The entities stated the reason for the purchase was to allow MRG physicians to focus less on business operations and more on practicing medicine.

MRG provides radiological interpretation for these provider organizations:

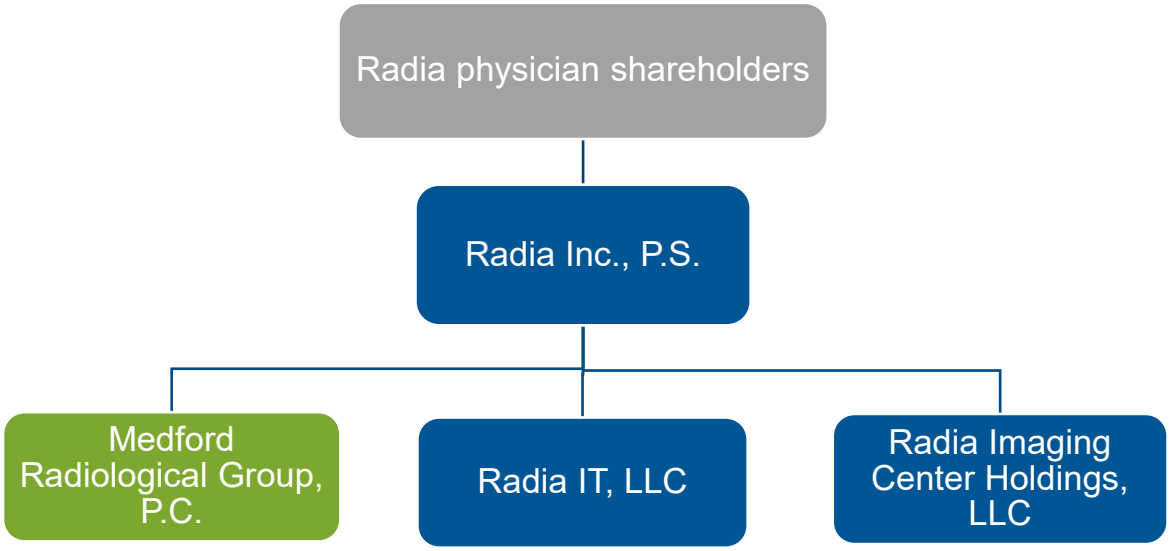
- Asante Ashland Community Hospital
- Asante Imaging
- Asante Physician Partners
- Asante Rogue Regional Medical Center
- Hematology Oncology Associates
- Oregon Advanced Imaging*
- Provident Leila J. Eisenstein Breast Center
- Providence Medford Medical Center
- Rheumatology Clinic
- Rogue Valley Physicians
- Siskiyou Community Health Center
- South Coast Orthopedic Associates
- Southern Oregon Orthopedics
- Valley Family Practice

Transaction Terms

The following summary of transaction terms is based on Radia's filings to date. Under the proposed transaction, Radia would acquire MRG under following terms:

- Radia will acquire all outstanding shares of MRG in exchange for shares in Radia through a reorganization under Section 368 of the Internal Revenue Code.[29]
- MRG will become a direct subsidiary of Radia.
- MRG physicians will become Radia employees and will have the option to immediately become shareholders of Radia.
- Upon becoming shareholders in Radia, former MRG physicians will be entitled to receive interests in Radia IT, LLC.
- Radia and MRG will continue to be physician-owned group practices.
- Former MRG physicians will be represented on Radia's board of directors for at least three years following the transaction's close.
- MRG's existing joint ventures with Asante Health System (Cardiovascular Institute of Southern Oregon, LLC) and Providence Health System (Oregon Advanced Imaging, LLC) would not be part of the acquisition. MRG's physician shareholders may retain their ownership interests in the joint venture, but Radia will not purchase any such interest.
- Services attributed to MRG sites of service will continue to be billed separately under the MRG Tax ID number.
- Compensation for former Medford-based physicians will be structured separately from that of current Radia physicians.

The diagram below shows the basic organizational structure of the combined entity following close of the proposed transaction.



Rationale for the Transaction

Radia has identified the following main objectives of the proposed transaction:[30]

(a) Improve access to sub-specialty professional radiology services for patients in southern Oregon by expanding the panel of physicians who can perform or consult on these services
(b) Better serve the needs of hospitals and health systems in southern Oregon through improved efficiency and availability of radiology services.
(c) Enhance quality of care by reducing turn-around times of imaging reads (especially emergency or critical interpretations) and expanding availability of Radia's sub-specialists
(d) Implementing proprietary technology, and business methods currently used by Radia, as well as clinical protocols that are established with the input of subspecialists across Radia.

Radia and MRG also believe the transaction will improve their ability to recruit and retain physicians to provide radiology services to patients in Oregon. As part of a larger organization, MRG will be able to offer more attractive compensation and benefits packages. They anticipate the transaction will further enhance recruitment and retention by giving MRG radiologists access to support (e.g., remote reading and interpretation) from Radia's sub-specialists, reducing the risk of burnout.

Radia maintains that it would be difficult for MRG to gain access to the technology and specialists needed to achieve these objectives without the proposed transaction, particularly given cuts in Medicare reimbursement for radiology services.

Post-Transaction Plans

After the close of the transaction, Radia plans to have MRG physicians adopt Radia's proprietary physician workflow application for reading images, which it argues will reduce turn-around times. Radia will also implement clinical protocols developed by its sub-specialty radiologists. Former MRG radiologists will also have remote support from Radia's Oregon-licensed sub-specialists for reading and interpretation of images.

Radia will provide centralized support services to its Oregon employees and locations, including financial, legal, IT, scheduling, and human resource functions. Professional services performed at MRG sites will continue to be billed and collected separately under MRG's Tax ID number. As Radia employees, Medford-based physicians will have access to Radia's benefit program, though their compensation will be determined separately from Radia's existing physicians. Radia will manage quality improvement activities, including data collection and peer-review for Medford-based physicians, who will be invited to participate on Radia's peer review and other quality committees

The entities estimate that the combined practice will represent less than 5% of professional radiology services provided annually in Oregon, as measured by the amount of physician work. Radia expects to expand the range of diagnostic radiology services offered by the combined practice to patients in southern Oregon, including breast MRI, cardiac MRI, screening mammography, and prostate imaging. Radia intends to maintain MRG's current contracts with hospitals and third-party payers, including CCOs.

The Findings & Potential Impacts section presents additional statements from Radia's filings describing how the transaction is expected to impact quality, access, and affordability of radiology services in southern Oregon.

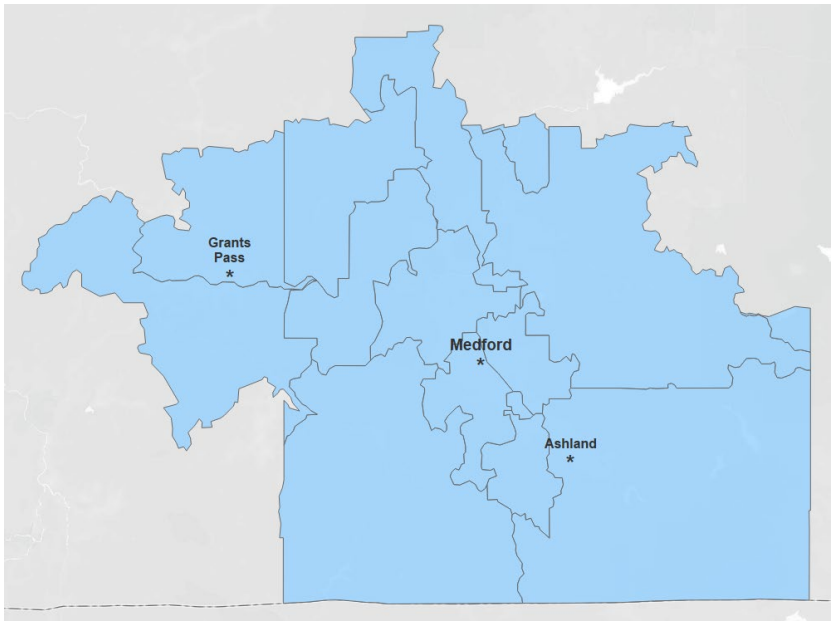
Findings & Potential Impacts

OHA compiled available data and information to understand and examine the potential impacts of the transaction across four domains: access, cost, quality, and equity. To assess the potential impacts of the proposed transaction on Oregon residents' equitable access to affordable care, OHA considered transaction terms, characteristics of the market for radiology services, statements by the entities, claims data, and other publicly available data, research, and reports. For claims data analyses, OHA used claims for the years 2018-2020 from Oregon's All Payer All Claims (APAC) database. Further details on OHA's approach are provided in Appendix A.

Overview

MRG Service Area

MRG primarily serves patients in southern Oregon. Based on APAC claims for the years 2018 through 2020, approximately 75% of MRG's services were for patients living in the Medford, Ashland, and Grants Pass areas, shaded in blue in the map. The primary service area includes rural and urban parts of Jackson and Josephine counties.



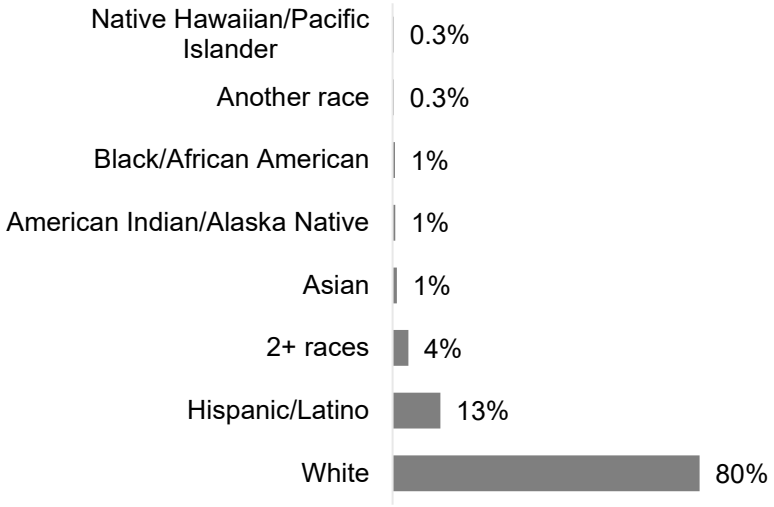
Outside of its primary service area, MRG also provides some services to residents of Coos Bay, Bend, Redmond, Brookings, and Klamath Falls.

Data from the American Community Survey (ACS) 2020 five-year population estimates suggest that approximately 290,000 people reside in MRG's primary service area. Almost half (47%) of residents live in zip codes classified as rural for census purposes.

Race and spoken languages

Persons identifying as Hispanic or Latino are the second largest racial/ethnic group, representing 13% of the population. About 20% of the population are people of color and 3% reported speaking English less than very well.

13% of service area residents are Hispanic/Latinx. The majority (80%) of residents are white.

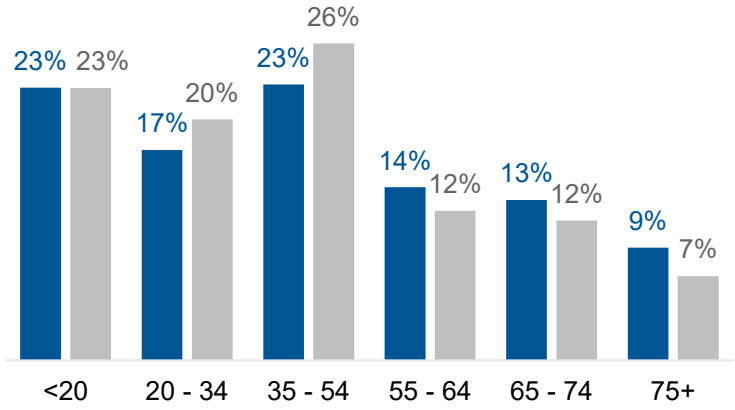


The percentage not speaking English very well was higher in urban zip codes around Medford and Ashland. In 97053 (White City), 10% of residents reported speaking English less than very well.

Age groups

The service area has a sizeable population of older adults, with 23% of residents aged 65 and up. Approximately 55% of the population are working age adults (aged 20-64).

In MRG's **service area**, 23% of the population are 65 or older, compared to 19% **statewide**.



Income & poverty

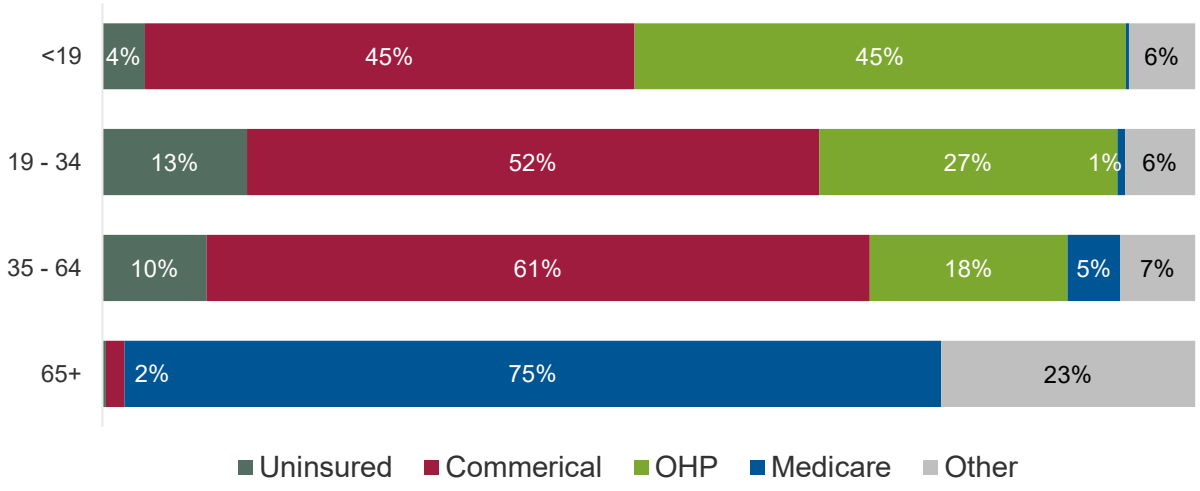
Median household incomes in the region are lower than the Oregon median. ACS median income estimates were $61,020 for Jackson County and $51,733 for Josephine County, compared to $70,084 statewide.

In 2021, 17% of Josephine County residents were estimated to be living below the federal poverty level and 25% of households were receiving food stamps, well above statewide rates (12% and 16%, respectively). Like most parts of the state, the region is affected by high housing costs relative to median income.

Insurance coverage

The majority of residents in the service area (93%) have health insurance. Rates of uninsurance are highest in the 19-34 age group at 13%. Approximately 45% of persons under age 19 are enrolled in the Oregon Health Plan (Oregon's Medicaid program, or OHP). Working age adults are most likely to have commercial insurance, whereas Medicare is the most common form of insurance for persons aged over 65.

Commercial insurance is the most common coverage type in the MRG service area, followed by **OHP** and **Medicare**. **Uninsurance** rates are highest in the 19-34 age group at 13%.



Health care access

Low-income communities across MRG's service area are federally designated as Health Professional Shortage Areas (HPSAs) for primary care, dental care, and behavioral health care. Jackson county is also a HPSA for its migrant and seasonal farm worker (MSFW) population.[31] Service area counties also have designations as Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs).[32]

Designation	County in MRG Service Area			
	Jackson	Josephine	Curry	Coos
HPSA (Primary Care)	Low income, MSFW	Low income	Low income	Medicaid eligible
HPSA (Mental Health Care)	Low income, MSFW	Low income	Geographic	Geographic
HPSA (Dental Care)	Low income, MSFW	Low income	Low income	Low income
MUA/P	MUP	MUA	MUA	MUP

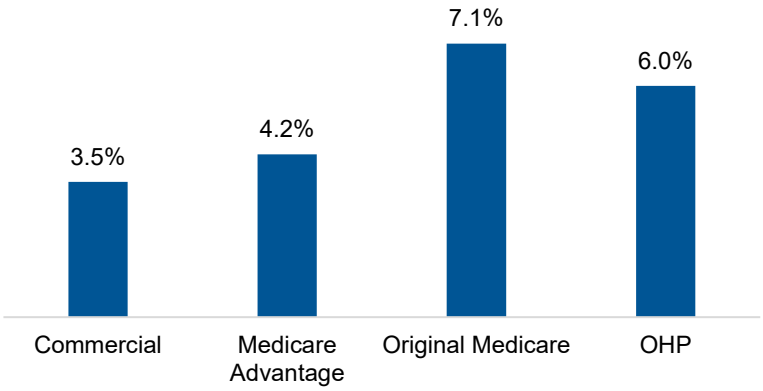
Market Share & Consolidation

Market share

OHA assessed market share at both the service area and state levels based on claims for radiology procedures reported to APAC for the years 2018-2020.

In 2018-2020, MRG accounted for 5.2% of all radiology procedures provided to Oregon patients. MRG's statewide market share was smaller among commercially insured patients (3.5%) and Medicare Advantage (4.2%) compared to Original Medicare (7.1%) and OHP (6%).

MRG's share of radiology procedures statewide was smaller among commercially insured patients and Medicare Advantage compared to original Medicare and OHP.



MRG, including its OAI joint venture, is the largest provider of radiology services for patients living in the service area. MRG provided approximately one third of radiology services to patients residing in the service area. OHA's analysis found that service area residents accessed radiology services from a large number (25+) of radiology service providers. Although OHA was unable to accurately determine market shares of other radiology providers serving the area, a few large providers accounted for the majority of procedures, with many individual clinics and practices also offering services in much smaller volumes. Other large radiology providers included various providers affiliated with Asante health system (including Asante Rogue Medical Center and Asante Three Rivers Hospital) and Providence Medford Medical Center.

Consolidation

In the notice, Radia states it does not have a "meaningful presence" in MRG's service area and estimates that the combined practice will represent less than 5% of professional radiology services provided annually in Oregon, as measured by the amount of physician work. Radia's services for patients in Oregon reportedly account for 1% of its 3.12 million total patient care. Based on these figures, OHA estimates that Radia's services account for less than 1% of radiology services delivered annually to Oregon patients. Radia further states that "virtually all" of these services are performed under an agreement with MRG. Per Radia's filings, these services include interpretation of radiology images and preparing reports. OHA was unable to identify these services in APAC, presumably because they are billed through MRG, and claims do not indicate when third-party radiologists performed interpretation. Most (99%) of the Radia services OHA identified in APAC claims for 2018-2020 were for patients residing outside of MRG's service area.

Due to the limited volume of radiology services Radia currently provides to patients in Oregon, this transaction would not lead to any significant horizontal consolidation in Oregon's market for radiology services. Most of Radia's services are for patients in other states, i.e., Washington, California, Idaho, Arkansas, and Alaska. The acquisition of MRG represents consolidation across state lines, or "cross-market" consolidation in radiology services. The Cost section below discusses potential impacts of cross-market consolidation of providers on prices for health care services.

Access

Access refers to a person's ability to get health care services from a qualified provider when they need it. MRG's services are accessed in two main ways:

- Patients receive imaging services and interpretation at partnering clinics and hospitals
- MRG staff provide teleradiology and remote image interpretation for partner clinics and hospitals

Current Performance

To understand current access to care, OHA analyzed MRG's volume of services, payer mix, and patient demographics using APAC claims data for 2018-2020.

Service volume

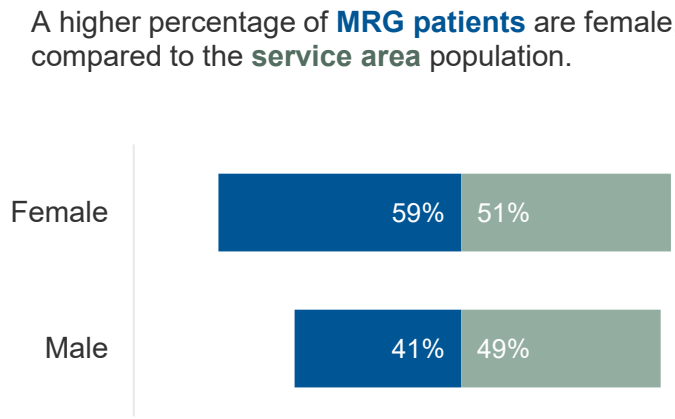
MRG provided more than 1 million services to patients in 2018-2020. The bulk of MRG's services are radiology services (78%). Medical procedures and services are the next largest category (14%), which includes office visits and procedures involving radiological guidance.

Type of procedure	Procedure volume	Percent
Radiology services	789,424	78%
Medical procedures & services	139,594	14%
Surgery	55,001	5%
Medical supplies & materials	11,463	1%
Pathology & laboratory	8,406	1%
Drug administration	5,406	1%
Total	**1,016,194**	**100%**

Among radiology services, the most common procedures are chest x-rays, mammography, CT scans of the abdomen and pelvis, and CT scans of the head and brain.

Patient demographics

OHA compared demographic characteristics of MRG patients to service area population data from 2020 ACS five-year estimates. Compared to the service area population, MRG patients are more likely to be female and over age 65. While most MRG patients are White, a smaller percentage of patients are Hispanic/Latinx than the service area population.

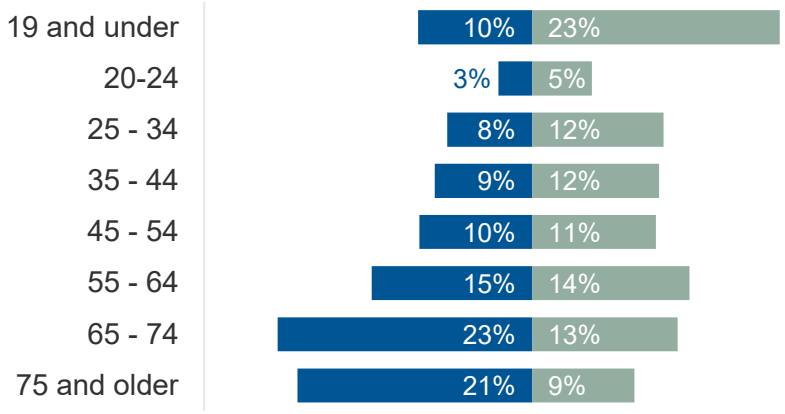


By Age

Nearly half of MRG's patient population is 65 and older (45%).

This is consistent with broader trends in radiology; older adults tend to receive more imaging services than younger people.[33]

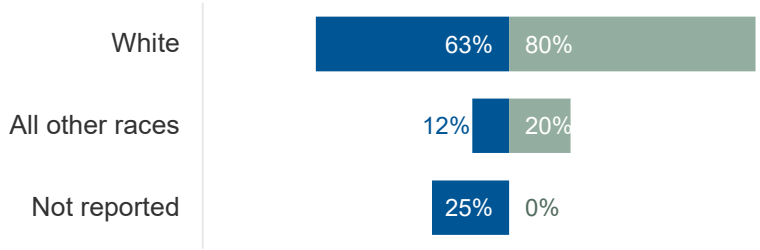
MRG patients tend to be older than the **service area** population.



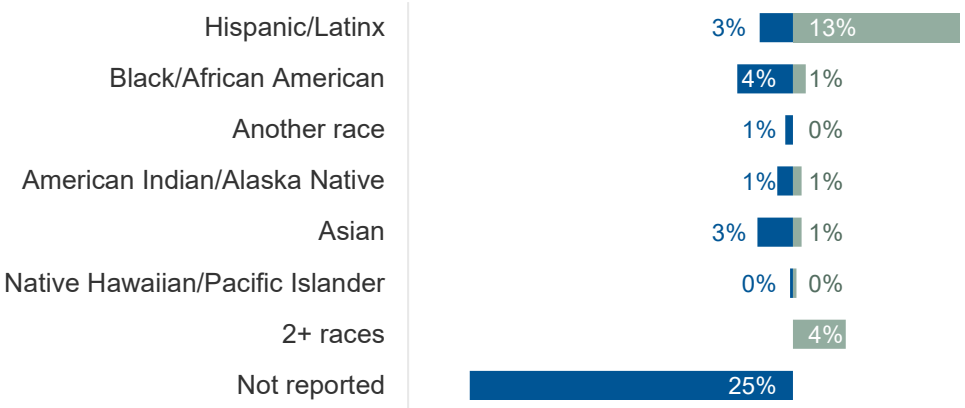
By Race/Ethnicity

OHA also looked at MRG's patient population by race and ethnicity groups. Race and ethnicity information is not consistently reported to Oregon's APAC database. Where race and ethnicity data are not available, OHA includes the percentage of individuals for whom data were not reported. Race and ethnicity information is not available for 25% of MRG patients.

The majority of **MRG patients** and **service area** residents identify as White.



A smaller percentage of **MRG patients** identify as Hispanic/Latinx than the overall **service area** population.



Race and ethnicity categories are consistent with federal OMB (Office of Management and Budget) standards and do not comply with Oregon's REALD (race, ethnicity, language, and disability) and SOGI (sexual orientation and gender identity) standards.

Payer mix

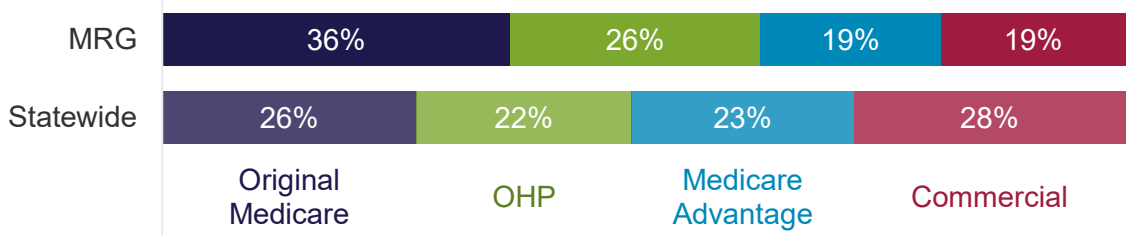
MRG accepts patients with Medicare, OHP, and commercial coverage – including most commercial insurance carriers operating in Oregon. Payer mix looks at the share of services covered by Medicare (original and Medicare Advantage), OHP, or commercial plans. OHA used 2018-2020 claims data from Oregon's APAC database to calculate payer mix for MRG.

Original Medicare covers the largest share of MRG procedures (41%).

The most common insurance type for MRG procedures is original Medicare (41%). When including Medicare Advantage, the majority (59%) of MRG's procedures are covered by Medicare, which is consistent with the age distribution of MRG's patients.

When looking only at radiology procedures, the percentage covered by original Medicare is higher for MRG (36%) than statewide (26%). The percentage of radiology procedures with commercial coverage is lower for MRG (19%) than it is statewide (28%).

MRG radiology procedures are more likely to be covered by **original Medicare** and less likely to be covered by **commercial**, compared to statewide.



Entity Statements on Access

The entities state that improving access is among the goals of the transaction. In the notice, they state:

> *[The] Purpose of combining their respective practices is to (a) improve access to sub-specialty professional radiology services for patients in southern Oregon by expanding the panel of physicians who can perform or consult on these services; (b) better serve the needs of hospitals and health systems in southern Oregon through improved efficiency and availability of radiology services…*

Other statements in the notice relevant to access include:

> *At the closing of the transaction, the parties anticipate that all the existing MRG shareholders will continue to practice in the current MRG service area.*
>
> *The parties intend to retain MRG's existing contracts with hospitals and third party [sic] payers, including Coordinated Care Organizations.*

The parties also believe that the combination of their practices will increase their capacity to deliver high-quality, timely, and cost-effective professional radiology services to patients in southern Oregon through expansion of diagnostic radiology service lines such as breast MRI, cardiac MRI, screening mammography, and prostate imaging.

The parties believe that the transaction will improve their ability to recruit and retain physicians to serve patients in MRG's service area.

Potential Impacts

The entities describe several ways the proposed transaction could improve access to radiology services for patients in southern Oregon, including:

- Medford-based radiologists will be able to serve Oregon patients more efficiently and at greater scale by tapping Radia's network of Oregon-licensed radiologists for remote interpretation/consultation on diagnostic services.
- Thanks to Radia's expertise in various radiological sub-specialties, the combined practice will be able to offer sub-specialty diagnostic radiology services not currently available from MRG, such as pediatric radiology, cardiac MRI, breast/prostate MRI, and mammography.
- The combined practice will be able to recruit and retain more radiologists to serve southern Oregon by providing more attractive compensation, benefits, and educational opportunities.

OHA will assess in follow-up reviews whether these anticipated benefits materialize. Access to remote support from Radia's broader network of radiologists may free up time of existing MRG physicians to perform more in-person radiological procedures, which may be the more limiting factor in a geographically broad region with limited facilities. Such benefits may be constrained by Radia's own capacity; Radia has not provided any information on whether its current radiologist capacity would be sufficient to meet additional demand for services from Medford-based radiologists.

OHA's review also considered how the divestiture of MRG's stake in the CVISO and OAI joint ventures may affect availability of radiology services from these locations. Through the transaction, the joint venture imaging centers will become separate entities and will no longer be part of MRG's practice. In response to OHA's follow-up questions, Radia and MRG stated that following the divestitures, they expect to maintain agreements to provide professional radiology services and an onsite presence at CVISO and OAI locations and do not anticipate any "material reduction" in radiology services.

OHA's analysis of APAC claims showed that OAI accounted for 2% of MRG's procedures in 2018-2020. Radiology procedures delivered by OAI represented less than 1% of total radiology procedures for patients in MRG's service area. Therefore, any disruption to services resulting from this transaction (which the entities claim would be minimal) would be unlikely to significantly impact access to radiology services for residents of southern Oregon.

OHA does not have concerns about reductions in access to care resulting from this transaction.

Provided that Radia maintains existing MRG contracts with hospitals, CCOs, and thirty-party payers, which it intends to do, OHA does not expect the transaction to reduce access to radiology or associated procedures in Oregon. The entities anticipate that the transaction will increase access to radiology services, particularly sub-specialty diagnostic services. OHA will assess in follow-up reviews whether these benefits materialize.

Cost

HCMO reviews consider how transactions may affect prices for health care services in Oregon, particularly any impacts on prices paid by patients and consumers. OHA also considers potential effects on total spending on health care services by insurers, employers, and government payers as well as impacts on the financial condition of the health care companies involved.

Current Performance

To assess costs to payers and patients for MRG's services, OHA analyzed median professional fee payments and patient cost-sharing amounts using 2018-2020 APAC claims. See Appendix B for details on OHA's methodology.

MRG's professional fees

OHA assessed the cost of the most common radiology services provided by MRG, by insurance type, and compared with services provided elsewhere in the service area and at the state level.

This assessment focused on a comparison of radiology *professional fees*, which may include the cost of technician supervision, interpretation of imaging results, and writing reports but do not include the cost of running diagnostic imaging machines or purchasing associated supplies.[34] Analysis of APAC data for MRG found that professional fees comprised the vast majority (~93%) of MRG claims, which aligns with MRG's business strategy. OHA measured professional fees as the total amounts paid to MRG for a given procedure, based on claims data.

For most health care services, prices negotiated between commercial insurers and providers are generally higher than those paid by government payers such as Medicare and Medicaid, which are constrained by federal and state reimbursement regulations and policies. As would be expected, OHA's analysis showed that median professional fees for radiology procedures (statewide, in the service area, and for MRG) were highest in the commercial market. OHA further compared MRG's commercial fees to statewide and service area commercial fees for radiology procedures. This analysis found that MRG's median commercial fees were 110% of the service area median and 121% of the statewide median in 2018-2020.

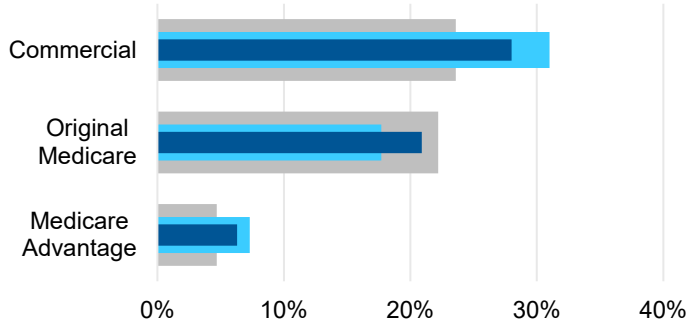
Patient cost-sharing

Patient cost-sharing (or out-of-pocket costs) for radiology procedures may include copays, deductibles, and co-insurance. The amount and type of patient cost-sharing depends on the patient's insurance type, insurance plan features, and reimbursement rates contracted between payers and providers. Other factors such as whether a procedure is being performed in or out of network and whether a patient has met their yearly deductible also come into play when determining what share of the total cost of a given procedure – if any – must be covered by the patient. OHA used APAC claims for 2018-2020 to compare patient costs for MRG procedures to costs incurred by patients statewide and in the service area for similar services.

Cost-sharing was most common for MRG procedures paid by original Medicare (82% of procedures involved a patient cost), followed by commercially paid (46%) and Medicare Advantage (21%). OHP patients do not pay any out-of-pocket costs. Among MRG procedures involving a patient cost, OHA's analysis found that median patient costs for MRG's commercially insured and Medicare Advantage patients were higher than the statewide medians but comparable to other providers in the service area.

OHA also analyzed the median "rate" of patient cost-sharing as a percentage of total fees. MRG's commercially insured patients paid approximately 28% of total fees, higher than the statewide rate (24%) but lower compared to other providers in MRG's service area (31%). Similarly, MRG's median cost-sharing rate for Medicare Advantage, while significantly lower (6%), was higher than statewide (5%) but lower than other service area providers (7%).

MRG's median rate of patient cost sharing for commercial insurance and Medicare Advantage was higher than the **statewide** median but lower than other **service area** providers.



The higher burden of patient cost-sharing for MRG patients with commercial insurance, compared to commercially insured patients statewide, may be related to the types of commercial plans available in the area, as rates of cost-sharing for other providers in MRG's service area were similarly high. For both commercially insured MRG patients and for commercial patients utilizing other providers in its service area, a larger proportion of patient cost-sharing was made up of deductibles (instead of copays or coinsurance) when compared to statewide. Additional factors such as the proportion of patients in the MRG service area using out-of-network providers may also play a role but were not identifiable in the data available.

Entity Statements on Cost

The entities do not anticipate that the transaction will negatively affect health care spending, affordability of radiology services in Oregon or the financial stability of Radia or MRG. The notice includes the following statements on anticipated cost impacts of the transaction:

> *The transaction offers the potential to successfully reduce southern Oregon patients' health care costs by (1) expanding access to radiology services in the local community, which decreases costs associated with travel and out of network services; (2) allowing fuller engagement of radiologists and sub-specialists in clinically integrated networks and accountable care organizations throughout the southern Oregon region; and (3) reducing costs to patients associated with travel and delayed diagnosis by enhancing services available to critical access hospitals on the southern Oregon coast. Prompt interpretation of studies leading to better decision making can result in more efficient emergency department and critical care, greater clarity regarding admissions and interventions and faster, improved quality of clinical care that reduces the need for additional interventions.*
>
> *The parties do not intend to terminate MRG's existing payer contracts or to negotiate joint contracts across the Oregon and Washington markets.*
>
> *Substantial operational efficiencies can be achieved by consolidating legal, scheduling, IT, human resources, and financial services.*
>
> *The parties do not anticipate any adverse effect on the financial stability of either organization as a result of the combination. To the contrary, the parties expect that the transaction will stabilize and edify MRG's business model […].*

Potential Impacts

Cross-market effects

As noted earlier, the proposed transaction represents consolidation of radiology providers that operate in different geographic markets, so-called "cross-market consolidation." Research studies on the effects of cross-market mergers in health care have found that these transactions may lead to price increases when the parties negotiate with common customers across markets.[35]

For example, Radia may be able to obtain higher reimbursement rates for MRG's services in Oregon by negotiating "practice-wide" contracts with commercial payers that offer medical plans in both Washington and Oregon. Payers (or hospital systems) that operate across state lines may be willing to pay more for services in Oregon to ensure that Radia's Washington providers are included in their network.

Under the terms of the proposed transaction, MRG will remain as the contracting party on existing Professional Services Agreements (PSAs) and payer agreements, but Radia will take the lead in negotiating any new PSAs or payer agreements, with MRG's participation. Importantly, the entities have stated they do not plan to negotiate joint contracts across the Oregon and Washington markets. Additionally, the majority of MRG's services are paid for by Medicare and OHP based on a pre-determined fee schedule. Provided that the combined entity refrains from negotiating contracts jointly for services in Washington and Oregon, OHA believes price increases associated with cross-market consolidation are unlikely. OHA's follow-up reviews will assess any impacts of the transaction on prices for MRG services.

Other cost impacts

Radia describes several ways in which the transaction may lead to reduced costs for patients and health care payers. By increasing the availability of specialty radiology services in southern Oregon, the proposed transaction could reduce patients' costs associated with travel, out-of-network services, and delayed diagnoses. The entities also argue that improved access to radiology services and quicker interpretation of imaging studies may lead to cost savings to the health care system overall, for example, by helping to avoid unnecessary interventions or by detecting disease at an earlier stage when it may be less costly to treat.

OHA will assess in follow-up reviews whether the transaction has improved access to radiology services for patients in Oregon. To the extent possible given available data, OHA's follow-up reviews may also explore cost savings for patients or payers associated with any access improvements.

OHA has some concerns about potential price increases resulting from consolidation in radiology services across the Oregon and Washington markets. Such price increases are unlikely provided that the combined entity refrains from negotiating contracts jointly for services in Washington and Oregon. OHA's follow-up reviews will assess any impacts of the transaction on prices for MRG services.

Quality

Quality measures in the field of radiology focus on speed of interpretation, safety protocols that limit radiation exposure for patients and staff, and completeness of reporting that clearly documents findings, recommendations, and process steps. Several radiology-specific measures are captured in group-level Merit-based Incentive Payment System (MIPS) reporting to the Centers for Medicare and Medicaid (CMS).[36] The American College of Radiology (ACR) captures an array of clinical performance data as part of its accreditation program and encourages ongoing quality improvement efforts through use of its Qualified Clinical Data Registry (QCDR)[37], which includes many more measures than those reported to MIPS.

Current Performance

Accreditation

Under provisions of the Medicare Improvements for Patients and Providers Act (MIPPA), passed in 2008, any radiology providers who deliver the technical component of radiology services in an outpatient setting are required to be accredited by a CMS-approved Accreditation Organization to bill services under Medicare Part B (outpatient care).[38] When a practice meets accreditation (or accreditation renewal) requirements, it's an indication that their practice complies with the highest standards for patient safety and quality of care. Practices can apply for accreditation in multiple radiological modalities, including MRI, CT, PET, nuclear medicine, and ultrasound.

All five of Radia's imaging centers are accredited through ACR. Two facilities have earned additional certification as Breast Imaging Centers of Excellence (COEs), indicating they are accredited in all five breast imaging modalities (mammography, stereotactic breast biopsy, breast ultrasound, ultrasound-guided breast biopsy, and breast MRI).[39] Radia's website mentions data collection to support accreditation standards from The Joint Commission (TJC) as well, but accreditation status with TJC (another CMS-approved Accreditation Organization) could not be verified on their publicly accessible websites.[40]

Since MRG providers are primarily delivering interpretation or reading of radiology images (the professional component), and do not own or operate equipment at their office location in Medford, they do not quality for accreditation. However, Oregon Advanced Imaging (OAI), the joint venture between MRG and Providence Health System, has received ACR accreditation, and one location is also a Breast Imaging COE. Nearly all the qualifying clinical partners listed on MRG's website have also received ACR accreditation, and several are also designated as Breast Imaging, Diagnostic Imaging or Lung Cancer Screening Centers of Excellence. The in-person imaging services and remote interpretation and reporting services delivered by MRG providers at partner locations contribute to these facilities' ability to meet accreditation standards.

Facility name	Location	Accreditation Status
Radia Imaging Facilities		
Evergreen Radia	Kirkland, WA	Accredited CT, MRI, PET, US
Evergreen Radia - Redmond	Redmond, WA	Accredited CT, MRI, US
Seattle Radiology	Seattle, WA	Accredited, Breast Imaging COE
South Sound Radiology	Olympia, WA	Accredited, Breast Imaging COE

Facility name	Location	Accreditation Status
Swedish Edmonds Radia	Edmonds, WA	Accredited CT, MRI, NM, PET, US
Oregon Advanced Imaging Facilities		
OAI - Crater Lake Avenue	Medford, OR	Accredited Breast MRI, MRI
OAI - O'Hare Parkway	Medford, OR	Accredited, Breast Imaging COE
OAI - Front Street	Central Point, OR	Accredited MRI
MRG Partner Locations		
Asante Ashland Community Hospital	Ashland, OR	Accredited Breast MRI, CT, MRI
Asante Imaging	Medford, OR	Accredited, Breast Imaging COE
Asante Rogue Medical Center	Medford, OR	Accredited CT, NM, US
Providence Medical Group Medford Medical Clinic	Medford, OR	Accredited CT, Lung Cancer Screening Center
Providence Medford Medical Center Leila J. Eisenstein Breast Center	Medford, OR	Accredited, Breast Imaging & Diagnostic Imaging COE
Providence Medford Medical Center	Medford, OR	Accredited, Diagnostic Imaging COE
Rogue Valley Physicians	Medford, OR	Accredited CT, Lung Cancer Screening Center
South Coast Orthopaedic Associates	Coos Bay, OR	Accredited MRI
Southern Oregon Orthopedics	Medford, OR	Accredited MRI

Quality measure reporting

Radia, Radia Imaging Center Holdings (RICH), MRG and OAI all report data to CMS through the MIPS program at the group level. A set of measures related to Improvement Activities (including patient engagement, communication, and assessment of patient experience) apply to a broad array of provider types, but these radiology providers do not appear to submit data for these measures.

Seven MIPS measures focus on specific aspects of radiology services, related to patient safety and quality of care. Completeness of reported data on these measures varies by provider group and year. For purposes of this analysis, publicly available MIPS data reported for Radia and RICH for calendar years 2018 – 2020 were combined and compared to MRG data, national performance rates, and combined performance from two other radiology provider groups in the southern Oregon region. MRG data for all measures is missing from the files reflecting 2019 calendar year performance. OAI has records in the MIPS files for these three years, but no data are provided for any measures.

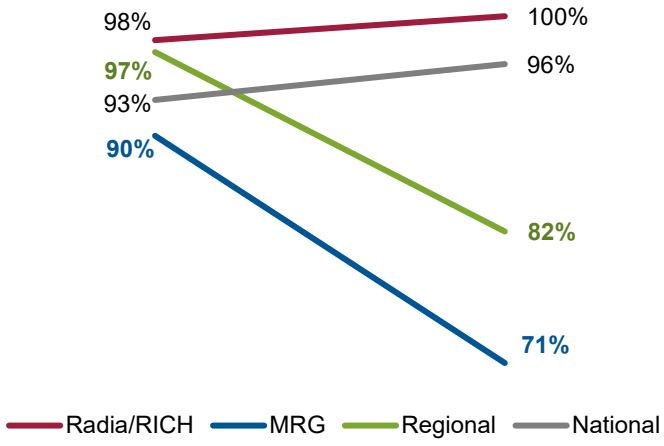
Four core radiology MIPS measures were most consistently reported across the selected provider groups during this period. For three measures, MRG and Radia performance over the three-year period was equal to or better than regional and national rates.

MIPS Radiology Measure	Radia/RICH	MRG	Regional	National
Inappropriate use of 'Probably Benign' assessment category in screening mammograms (lower is better)	0%	0%	0%	0.1 - 0.2%
Stenosis measurement in carotid imaging reports	100%	98 -99%	99 – 100%	99%
Reminder system for screening mammograms	100%	100%	100%	99%

For one core radiology measure, MRG's performance was notably lower than rates for Radia/RICH, the region and nationally. Measure 145 assesses how frequently reports from fluoroscopy procedures include indications of patient exposure to radiation. This can include the measured dose of radiation, or the time of exposure and number of images taken.

While Radia's performance and national rates increased slightly from 2018 to 2020, MRG's rate dropped significantly (nearly 20 percentage points), which followed a similar trend seen for other provider groups regionally (97% falling to 82%).

MRG's documentation of fluoroscopy dose exposure dropped almost 20 percentage points from 2018 to 2020.



Fluoroscopy is a procedure that takes a real-time video image of the body using x-rays. Prolonged exposure to x-rays can increase the risk of developing cancer, so protocols exist to limit patient exposure for diagnostic procedures. When writing the report on the fluoroscopy procedure, providers are required to include information about the dose of radiation to which a patient was exposed, or the time a patient was exposed to x-rays and the number of images taken. Studies have shown that provider compliance with documentation requirements is correlated to shorter exposure times for their patients, helping mitigate the potential risks of routine radiology procedures and making this documentation measure a useful indicator of patient safety and quality of care for the practice.[41]

A lower score in this measure does not necessarily mean that patients were exposed to higher doses of radiation, but that the providers failed to document what level of exposure patients had in a greater number of reports. These indices of radiation exposure must be documented by the technician and included with the transmitted image as specifically structured data for MRG providers to incorporate this information in their reports. There are no clear exclusion criteria in this MIPS measure for reports generated for radiological images that do not include this information, so it's unclear from this data whether the performance decrease is being driven by missing image content or report content. One possible explanation is that on-site technicians at MRG's partner

organizations may be less likely to pay attention to exposure levels when reporting is handled by a remote radiologist. That other regional providers also saw a notable decline in performance for this measure in 2020 may suggest interoperability disruptions between remote radiologists and technical facilities in the area, possibly due to changes or upgrades to imaging equipment or data transmission technology. Clear connections between tools and appropriately structured data are key elements to capturing and transmitting exposure indices across organizations.[42]

Given the limited public access to clinical quality data for radiology, and importance of this measure as a patient safety indicator, OHA will continue to monitor MRG's performance in this area in future transaction follow-up reports. If interoperability disruptions were in fact the root cause of decreased performance, we would expect resolution and improvement to be reflected in future publicly available MIPS data files. Radia also has exemplary performance for this measure and could address any issues specific to MRG provider performance through their continuous quality improvement activities. The notice indicates that

> *[Q]uality improvement activities, including data collection and peer review for Medford-based physicians will be managed through the Radia quality processes, and Medford-based physicians will be invited to participate on Radia PS peer review and other quality committees.*

OHA would therefore expect to see further improvements in MRG's quality measure performance post-transaction.

Patient experience

Many provider types administer standard survey tools to gather information on patient satisfaction and experience of care. The most widely used tool in health care is the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey, which is frequently reported as part of the MIPS program. Radia, RICH, MRG and OAI did not attest to the MIPS measure around regular assessment of patient experience through surveys, advisory councils, or other mechanisms, nor did they have data in the publicly available MIPS CAHPS file.

Some information about patient experience with providers and their administrative processes is available through the Better Business Bureau (BBB) website. Neither Radia nor MRG are BBB accredited, but they have A and A+ ratings, respectively, and both have a 100% response rate to complaints lodged through the BBB platform.

Radia patients have filed 35 complaints with BBB in the last three years, nearly all relating to billing issues.[43] Radia contracts with a medical billing management company (name redacted from posted complaints), which most frequently provided initial responses to patient complaints. Links to online payment portals on the Radia website indicate they contract with Zotec Partners, a large provider of medical billing and practice management services based in Indiana.[44] Most complaints describe the absence of any notification of payment due for services before receiving final notice that the account is being sent to collections. Patients describe difficulty contacting or getting assistance from billing representatives, long timeframes to resolve the issue, and frustrations about damage to their credit ratings resulting from involvement with collections. Several complaints describe miscommunication about charity care and difficulty receiving reduced pricing for uninsured patients.

Only one complaint has been filed against MRG with the BBB in the last three years, also related to a billing issue. This complaint describes the confusion of receiving a service at a local partner hospital, getting a bill from MRG, then seeing a billing address in Seattle, WA. The complaint was

from the period when MRG utilized ImaginePay to process online payments (prior to November 2022). MRG's current payment portal is hosted by MSN Healthcare Solutions, a billing services and practice management company based in Georgia.[45]

In the notice, the entities describe the potential efficiencies gained from incorporating MRG's practice into Radia's administrative processes, specifically citing that "[l]egal, scheduling, IT and financial activities will be assumed or supplemented by Radia PS's staff [… and] the entities expect that the transaction will stabilize and edify MRG's business model by scaling IT, clinical services, and back-office services."

It is unclear from this description whether MRG will also contract with Zotec Partners for medical billing services as a result of this transaction, or if they will continue their relationship with MSN Healthcare Solutions. The publicly available consumer complaint data suggest a transition to Zotec Partners has the potential to negatively impact the experience of Medford-area patients, specifically around billing issues. OHA will continue to monitor this area in future transaction follow-up reviews.

Entity Statements on Quality

Radia expects the transaction to enhance the quality of care provided to patients in Oregon by reducing turn-around times of imaging reads and expanding availability of Radia's sub-specialists.

They state in the notice:

> *Radia PS currently maintains average turn-around times that are materially faster than national industry averages. Faster turnaround times, coupled with greater access to sub-specialists, ultimately results in better information to support treatment decisions […]. This efficiency has particularly significant impacts in the treatment of strokes, cardiovascular disease and emergency medicine where delayed interpretations or missed diagnoses can foreclose treatment options and adversely affect a patient's chances of recovery or even survival.*
>
> *MRG does not offer pediatric sub-specialty radiology which impacts more complicated cases seen in the Neonatal ICU and in the Pediatric Unit. Similarly, the absence of subspecialists in cardiac MRI studies affects how local cardiologists diagnose and treat their patients.*

OHA considered each of these claims as part of preliminary review. Potential implications for the quality of radiology services offered to patients in southern Oregon are discussed below.

Potential Impacts

Report turnaround time

Report turnaround time (RTAT) has become a significant measure for radiology practices in recent years, with many studies focusing on ways to reduce average turnaround time through prioritization, process streamlining and technological tools.[46] Faster availability of radiology reports has been shown to have significant impact in clinical outcomes, particularly in emergency medicine[47] and treatment of stroke.[48]

Turnaround time measures are frequently included in Qualified Clinical Data Registries that radiology practices can access to assess their own performance against industry standards and drive quality improvement efforts. These data are not publicly available, so OHA cannot

corroborate the claim that Radia has faster than average turnaround times for reading images and returning reports to referring physicians.

Concerns have been raised about prioritizing RTAT over other quality of care indicators, including the accuracy of the diagnosis and quality of the radiology report.[49] A recent literature review found little concrete correlation between faster turnaround times and interpretation errors, but did highlight other factors that can impact quality of diagnosis and reporting, including long work hours, shift schedules, and expectations of productivity.[50] Certain studies suggest that other non-interpretative tasks performed by radiologists add clinical value even if they increase RTAT, including clear communication with other providers and referring physicians.[51]

While timeliness of reporting is one important factor in quality of radiology services, OHA will monitor an array of quality indicators in future transaction follow-up reports to ensure the drive toward lowest possible report turnaround times does not result in loss of other aspects of safety and quality.

Patient outcomes

The entities note that granting MRG's providers access to Radia's physicians specializing in pediatric radiology, cardiac MRI, and screening mammography could improve outcomes for neonatal ICU and cardiac patients, respectively, and increase early detection and treatment of breast cancer. Specialization in these areas allows radiologists to tailor the procedures delivered to specific patients and gain significant expertise in interpretation of results.[52]

Burnout and provider shortages, particularly in pediatric radiology[53] and breast imaging[54], have been well documented. Staffing shortages can force some imaging procedures to shift to non-radiologist clinicians who do not have the same training or experience, potentially affecting patient safety and quality of care. Leadership at the American College of Radiology have voiced concerns about alternative staffing models and acknowledged teleradiology as an option for addressing the high demand for radiology services that stresses the existing workforce.[55] Expanding MRG's access to specialized radiologists has the potential to improve quality of care for patients and provided needed relief and support for providers in the Medford region.

OHA does not have significant concerns about the impact on quality of care for this transaction.

The transaction has the potential to maintain or improve quality of care for radiology patients in Oregon. Both Radia and MRG have a generally positive track record on delivering high quality care, and Radia's quality improvement efforts may have a positive impact on MRG's performance. Access to a larger network of specialized radiologists and reduced report turnaround times may improve patients' prognoses and clinical outcomes. OHA will continue to monitor key indicators of patient experience and other quality indicators, including performance on fluoroscopy reporting.

Equity

To assess equity, OHA looked at current practices at Radia and MRG to advance equity and potential impacts of the transaction on health equity. This includes examining existing or potential disparities in access, quality, or cost; and factors that may promote or hinder health equity.

Current Performance

Practices to advance equity

Neither Radia or MRG have any reference to health equity on their websites, nor appear to have any patient facing information related to culturally responsive care or language access. Radia does provide patient facing information about costs, surprise medical bills, and balance billing. See concerns related to patient costs and billing in the Quality section above.

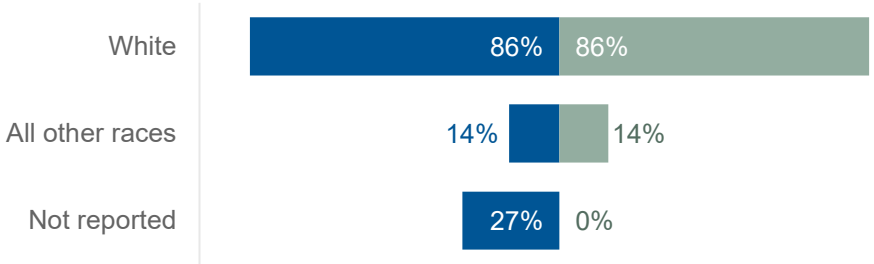
Disparities in access

As described above, compared to the service area population, MRG patients are more likely to be female and over age 65. While race/ethnicity data is missing for 25% of MRG patients, compared to the service area population, MRG may be serving fewer Hispanic/Latinx patients than would be expected for the service area.

There are known disparities in radiology care, including in breast cancer screening, lung cancer screening, colorectal cancer screening, and emergency department imaging, which can lead to lower quality of care, poor patient outcomes, and higher costs.[56] Rural populations often have decreased access to imaging services, resulting in below average utilization of specific screenings. In addition, not all populations may have access to advanced imaging technologies due to cost and other factors, which may worsen existing disparities.[57]

Looking at mammography screening, where there are known disparities in screening rates, women of color represent 14% of female MRG patients receiving mammography services. Women of color aged 35+ represent approximately 14% of the service area population, suggesting that MRG's patient population may be representative of the community it serves, although this may mask population specific concerns. For example, only 3% of MRG's patients receiving mammography services were Hispanic/Latinx, compared to 6% of the service area. In addition, race/ethnicity data is missing for 27% of MRG's patient population.

MRG's mammography patient population may be representative of the **service area** population.



Entity Statements on Equity

The notice provides the opportunity for entities to describe how the proposed transaction may "benefit the public good by rectifying historical and contemporary factors contributing to health

inequities." Radia did not provide any information on how the transaction may impact health equity, instead indicating "not applicable" in response to this question.

Potential Impacts

The entities have not proposed any plans to focus on specific communities or geographic areas that are known to be underserved across southern Oregon and have indicated their intent to retain existing contracts with hospitals and third-party payers, including CCOs, suggesting no changes in access resulting from the transaction.

MRG currently accepts patients with Medicare, OHP and commercial coverage. Provided that existing contracts with hospitals and third-party payers are maintained, OHA would not expect any changes in payer mix resulting from the transaction. Any changes to acceptance of Medicare and OHP would disproportionately impact older adults and low-income populations in the region, respectively. OHA will continue to monitor payer mix in follow-up reviews.

Given the demographics of MRG's patient population compared to the service area, continuing or expanding business as usual after the transaction may exacerbate existing inequities in access, particularly for the Hispanic/Latinx community. Research has indicated several practices that can help close these gaps, including increased collaboration with primary care providers and reducing turnaround times of imaging reads.[58] While the entities did not suggest any efforts to increase collaboration with primary care providers, it is possible that anticipated improvements in turnaround times of imaging reads resulting from this transaction may have a positive impact. See Quality section above for additional concerns related to turnaround times.

OHA does not have specific concerns about equity for this transaction.
While there may be existing disparities in access to radiology services in the region, the proposed transaction is unlikely to exacerbate any issues and may result in some improvements in access to subspecialty radiology services for underserved communities in southern Oregon.

Conclusions

Based on preliminary review findings, **OHA approved the transaction on March 9, 2023, subject to the conditions listed below.** See Preliminary Review Order in the Matter of the Proposed Material Change Transaction of Radia Inc., P.S. and Medford Radiological Group, PC, dated March 9, 2023.

The transaction was approved, per ORS 415.501(6)(b), because OHA determined the transaction is unlikely to have a significant impact on Oregon's health care system. Specifically, the transaction meets the following criterion under OAR 409-070-0055(2):

1. The material change transaction is unlikely to substantially reduce access to affordable health care in Oregon.
2. The material change transaction is not likely to substantially alter the delivery of health care in Oregon.

These criteria are specified in administrative rules for the Health Care Market Oversight Program and are consistent with Oregon law. Below is a summary of the main reasons, based on the findings described in this report, why OHA considers each criterion satisfied.

Approval Criteria

The material change transaction is unlikely to substantially reduce access to affordable health care in Oregon.

The proposed transaction will not lead to any significant consolidation within the market for radiology services in Oregon, because Radia currently provides very few services to Oregon patients. The entities stated that they do not intend to negotiate joint contracts covering services in both Oregon and Washington and that they expect to maintain MRG's existing contracts with hospitals and third-party payers, including Coordinated Care Organizations. Radia and MRG anticipate that the proposed transaction will increase access to radiology services in southern Oregon.

The material change transaction is not likely to substantially alter the delivery of health care in Oregon.

OHA estimates, based on information provided in the notice, that Radia's services account for less than 1% of radiology services delivered annually to Oregon patients. Most of these services are provided under an agreement with MRG. Residents of MRG's service area in southern Oregon currently access radiology services from more than 25 providers. The entities intend to retain MRG's existing contracts with hospitals and third-party payers, including CCOs, and anticipate that all current MRG physicians will continue to practice in MRG's service area.

Approval Conditions

Per ORS 415.501(6) and OAR 409-070-0065, OHA may place conditions on approving a material change transaction. OHA has applied the conditions listed below to approval of the planned Radia and MRG transaction.

1. The entities will adhere to the representations made in the notice and subsequent filings with OHA, including but not limited to the following:

a. The entities intend to retain MRG's existing contracts with hospitals and third-party payers, including CCOs.

b. The entities do not intend to negotiate joint contracts across the Oregon and Washington markets.

c. Former MRG physicians will be represented on Radia's board of directors for at least three years following the closing.

2. The entities must submit an annual report to OHA demonstrating compliance with conditions 1a-c. The first such report will be due to OHA 10 months following the close of the transaction. Subsequent reports will be due at 12-month intervals from the date of the first report. Each report must be based on the template provided by OHA as Exhibit A to the Preliminary Review Order.

3. These conditions will remain in effect for five years from the transaction closing date.

Once OHA receives notification from the entities that the transaction has closed, OHA will provide a timeline for submitting annual reports. OHA may use data provided by the entities in future public reporting.

OHA reserves the right to enforce each of these conditions to the fullest extent provided by law. In addition to civil penalties and any legal remedies, OHA will be entitled to specific performance, injunctive relief, and such other equitable remedies as a court may deem appropriate for breach of any of these conditions.

Post-Transaction Monitoring

As required by ORS 415.501(19) and (20), OHA will conduct follow-up analyses one, two, and five years after the transaction is complete. OHA's monitoring will assess compliance with approval conditions and whether the entities keep the commitments included in the notice, including commitments that:

- The transaction is expected to increase access to diagnostic radiology services in southern Oregon, including specialized services such as breast MRI, cardiac MRI, screening mammography, and prostate imaging.
- The combined practice will be better able to serve the needs of hospitals and health systems in southern Oregon through improved efficiency and availability of radiology services.
- The transaction will facilitate access to remote Oregon-licensed radiologists located in multiple jurisdictions at improved scale and availability.
- The transaction will enhance the combined practice's capacity to provide high-quality, timely, and cost-effective radiology services.

More broadly, OHA will monitor changes to cost, quality, access, and equity, and may also assess other measures relevant to each domain. As part of the required monitoring activities, OHA may request additional information from the entities. OHA is required to publicly publish findings and conclusions from follow-up analyses and include them in its annual health care cost and spending trend report under ORS 442.386(6).

Acronyms & Glossary

Acronyms & Abbreviations

ACS	American Community Survey
ACR	American College of Radiology
APAC	Oregon's All Payer All Claims database
BBB	Better Business Bureau
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CMS	Centers for Medicare and Medicaid Services
CCO	Coordinated Care Organization
COE	Center of Excellence
CT	Computed Tomography
CVISO	Cardiovascular Institute of Southern Oregon
DCBS	Department of Consumer and Business Services
DSO	Dental Support Organization
FFS	Fee-for-service
HCMO	Health Care Market Oversight
HPSA	Health Professional Shortage Area
MRG	Medford Radiological Group
MIPS	Merit-based Incentive Payment System
MPFS	Medicare Physician Payment Schedule
MRI	Magnetic Resonance Imaging
OHA	Oregon Health Authority
OHP	Oregon Health Plan
OAI	Oregon Advanced Imaging
PE	Private Equity
PET	Positron Emission Tomography
PSA	Primary Service Area
MIPPA	Medicare Improvements for Patients and Providers Act
MPFS	Medicare Physician Fee Schedule
MSFW	Migrant and Seasonal Farm Worker
MUA	Medically Underserved Area
MUP	Medically Underserved Population
QCDR	Qualified Clinical Data Registry
REALD	Race, Ethnicity, Language, and Disability
RICH	Radia Imaging Center Holdings
RBVS	Resource-Based Relative Value Scale
RTAT	Report Turnaround Time
RVU	Relative Value Unit
SOGI	Sexual Orientation & Gender Identity
TJC	The Joint Commission

Glossary

Competition: A situation in a market in which firms or sellers independently strive to attract buyers for their products or services by varying prices, product characteristics, promotion strategies, and distribution channels.

Concentration: A measure of the degree of competition in the market; highly concentrated markets are generally characterized by a smaller number of firms and higher market shares for individual firms.

Consolidation: The combination of two or business units or companies into a single, larger organization. Consolidation may occur through a merger, acquisition, joint venture, affiliation agreement, etc.

Cross-market consolidation: Combinations of companies or organizations across geographic markets. The of an Oregon hospital by an out-of-state hospital system would be considered cross-market consolidation.

Health equity: OHA defines health equity as follows:

Oregon will have established a health system that creates health equity when all people can reach their full health potential and well-being and are not disadvantaged by their race, ethnicity, language, disability, age, gender, gender identity, sexual orientation, social class, intersections among these communities or identities, or other socially determined circumstances. Achieving health equity requires the ongoing collaboration of all regions and sectors of the state, including tribal governments to address:

- The equitable distribution or redistribution of resources and power; and
- Recognizing, reconciling, and rectifying historical and contemporary injustices.

Horizontal consolidation: The combination of two or more business units or companies that formerly competed with one another in the same geographic market. In health care, the combination of two hospitals or two insurers would be considered horizontal consolidation.

Value-based care: Traditionally, health care is paid on a per-service basis (e.g., for a given procedure, the health insurance company pays the doctor a set dollar amount). Value-based care is different because it could include quality metrics or health outcomes as a factor in payment amount. Some value-based care allows for more flexibility and incentives for health care providers to deliver patient-centered, whole person care.

Vertical consolidation: The combination of two companies or organizations in different lines of work or operating at different levels of the supply chain. In health care, the acquisition of an physician practice by a hospital or the merger of a health plan with a hospital system would be considered vertical consolidation.

Appendix A: OHA's Review

OHA performed a preliminary review of the transaction to assess its potential impact on Oregon's health care delivery system. The review explored impacts in four areas (domains): cost, access, quality, and equity. OHA's analysis followed the guidelines and methods set out in the HCMO Analytic Framework published October 2022.[59] The framework is grounded in the goals, standards and criteria for transaction review and approval outlined in OAR 409-070-0000 through OAR 409-070-0085.

Background Research and Literature Review

OHA conducted background research on the entities involved in the transaction to understand more about the proposed transaction, the entities involved, and the delivery system for radiology services. OHA consulted publicly available sources, including media reports; entity websites; state agency, professional association, and third-party entity reports; reports commissioned by local, state, and federal government; and other relevant material.

OHA also considered articles and research reports about reimbursement for radiology services, quality indicators, the radiology workforce, and disparities in cancer diagnosis and treatment rates. These materials are listed in the "References" section below.

Public Input

OHA solicited public comments on the proposed transaction during the preliminary review. On January 31, 2023, OHA posted a notice to the Transaction Notices and Reviews page of the HCMO website and emailed subscribers to HCMO program updates to inform them about the opportunity to provide comment. OHA accepted comments through February 14, 2023, via email to hcmo.info@oha.oregon.gov. OHA did not receive any public comments.

Analysis

OHA's analysis assessed the current state of the entities involved in the transaction, related industry trends, and the likely impact of the proposed transaction on the delivery of radiology services in Oregon. The table below describes the types of analysis OHA typically performs in each domain.

Domain	Analysis
Cost	Analyses under the cost domain explore how the transaction may affect the prices patients and payers (e.g., insurers, employers, and governments) pay for radiological services in Oregon and overall spending on radiological services for Oregonians. Prices and spending for these services may be affected by the degree of competition between providers offering similar services within a service area. For this review, OHA assessed median prices for radiology services, by procedure category and most frequent individual procedures. The analysis compared median prices of the entities (where data was fully available) to state means to determine existing price variation. OHA also assessed patient cost-sharing for radiology services.
Access	Consolidation and change of ownership in the health care market can impact the range and type of services offered in the service area. Analyses under the access domain explore how the transaction may affect the range of services available in the market, types of providers and provider-patient ratios, characteristics of the patient population, and any barriers to access,

Domain	Analysis
	including transportation burdens and limitations by insurance type. For this review, OHA assessed the level of representation of the regional demographics among the entities' patient population by comparing patient demographic and insurance coverage data from APAC records to regional demographic and insurance figures calculated using ACS data (2020 5-year estimates).
Quality	Analyses in the quality domain explore how the transaction may affect patient outcomes and the experience of care. Consolidations and ownership changes in health care can impact clinical practice, including staffing ratios, time spent or number of visits with patients, timeliness of care, and the patient's experience of care, all of which can have adverse effects on patient outcomes. Analyses in the quality domain consider current indicators of quality and assess potential impacts of the transaction on quality of care. For this review, OHA leveraged publicly available quality metric data from the CMS website that was submitted by the entities as part of the MIPS program. The analysis also reviewed complaint information posted by the Better Business Bureau as a proxy for patient experience and satisfaction with care.
Equity	Analyses in the equity domain explore how the transaction may affect the Entity's ability to assess for and equitably meet the needs of the population it serves. Consolidations and ownership changes in health care can disproportionately impact availability of health services for populations who already experience health inequities, including people of color, low-income families, and residents of rural areas. Equity-focused analysis considers the entities' ability to serve a patient population that is representative of the community in which they operate. OHA also looks for evidence that the Entity is actively identifying and addressing inequities in access to or quality of care across their patient population. For this review, OHA considered the entities' patient facing materials related to language access and culturally responsive services, race/ethnicity of MRG's patients compared to the service area population, and literature on disparities in radiology care.

Appendix B: Methodology

Radiology Services

For this analysis, OHA utilized procedure code definitions and categorization for radiology procedures presented by the American Academy of Professional Coders[60], which includes CPT codes ranging from 70010 - 79999. Categories include:

Diagnostic Radiology (70010 – 76499)
Diagnostic Ultrasound (76506 – 76999)
Radiologic Guidance (77001 – 77022)
Breast, Mammography (77046 – 77067)
Bone/Joint Studies (77071 – 77092)
Radiation Oncology Treatment (77261 – 77799)
Nuclear Medicine (78012 – 79999)

For services in the Radiation Oncology Treatment category, claim volume is extremely low for MRG and this service is not listed on MRG's website, so this category was excluded from calculations of total volume of radiological services and median cost per procedure at the entity and statewide level.

Service Area Calculation

OHA determines the volume of services delivered by the entity per zip code of patient residence, then defines the service area as the set of geographically contiguous zip codes surrounding the entitiy's location that accounts for 75% of total services.

For this transaction, OHA assessed all APAC claims from MRG providers from 2018 – 2020 and included all services rendered, not just the radiological services identified above. This captured additional clinical procedures and services delivered in support of the radiological procedures.

Frequently, OHA uses a count of claims to determine service volume by patient zip code for PSA determination. For this analysis the count of individual procedures was used, since a single claim may encompass many procedures.

Cost Calculations

OHA used the following approach for calculating median professional fees and patient cost-sharing for MRG services:

- A "procedure" was defined as a unique combination of unique personID, procedure code and service start date.
- Analysis was limited to lines with procedure code modifier "26," which designates professional fees (image interpretation, physician oversight, etc.), excluding any claims for which there was a null procedure code (assumption in this case is that the professional fees and technical fees are rolled into one) or claims with any other procedure code. About 93% of the procedures for MRG only had lines with modifier code 26.
- The total cost of a given procedure was calculated by summing all claim lines for a given unique person, service date and procedure code combination with modifier 26.
- Coordination of benefits claim lines were excluded. This included claim lines that were marked by the payer as a coordination of benefit claim (indicating that the payment was

from a secondary payer). It also included Medicaid claim lines for any procedures that had lines from another payer in a different line of business, because Medicaid is always the secondary payer. Approximately 50,153 lines (out of ~21 million) were removed because they were associated with procedures having payers across more than one line of business but where it was not possible to discern which was the primary payer. Only information on total paid and patient paid from the primary payer was included for claims with lines for both a secondary and primary payer.

- Procedures with a total of <=$0 paid by the payer across all procedure claim lines were excluded.
- Only procedures for Oregon residents were included in the summary of amounts paid and patient cost share.

References

[1] See Occupational Employment and Wages 29-1224 Radiologists, available at https://www.bls.gov/oes/current/oes291224.htm (accessed 2/24/23).
[2] "What is a Radiologist," American College of Radiology, available at https://www.acr.org/Practice-Management-Quality-Informatics/Practice-Toolkit/Patient-Resources/About-Radiology (accessed February 12, 2023).
[3] Adapted from UVA Health Inside View Blog, "Different Imaging Tests, Explained," available at https://blog.radiology.virginia.edu/different-imaging-tests-explained/ (accessed 2/12/23).
[4] For further details, see for example, Diana Lam and Jonathan Medverd, "How Radiologists Get Paid: Resource-Based Relative Value Scale and the Revenue Cycle," American Journal of Roentgenology, Volume 201, Number 5 (November 2013), available at https://www.ajronline.org/doi/10.2214/AJR.12.9715#:~:text=Once%20a%20radiologist%20has%20interpreted,this%20is%20recorded%20as%20cash.
[5] "Consolidation and Change in Radiology: Where's This Train Headed?," Healthcare Innovation, November 22, 2022, available at https://www.hcinnovationgroup.com/imaging/radiology/article/21283200/consolidation-and-change-in-radiology-wheres-this-train-headed (accessed 2/10/23).
[6] For further details, see for example, Diana Lam and Jonathan Medverd, "How Radiologists Get Paid: Resource-Based Relative Value Scale and the Revenue Cycle," American Journal of Roentgenology, Volume 201, Number 5 (November 2013), available at https://www.ajronline.org/doi/10.2214/AJR.12.9715#:~:text=Once%20a%20radiologist%20has%20interpreted,this%20is%20recorded%20as%20cash.
[7] For more information, see CMS, Calendar Year (CY) 2023 Medicare Physician Fee Schedule Final Rule, https://www.cms.gov/newsroom/fact-sheets/calendar-year-cy-2023-medicare-physician-fee-schedule-final-rule (accessed 2/12/23).
[8] Schartz, Emily, Manganaro, Mark, and Schartz, Derrek, "Declining Medicare Reimbursement for Diagnostic Radiology: a 10-Year Analysis Across 50 Imaging Studies," *Current Problems in Diagnostic Radiology*, Vol. 51, Issue 5 (September-October 2022), available at https://www.sciencedirect.com/science/article/pii/S0363018822000081#!.
[9] Centers for Medicare & Medicaid Services, Final Rule – Revisions to Payment Policies under the Medicare Physician Fee Schedule Quality Payment Program and Other Revisions to Part B for CY 2023 (CMS-1770-F), available at https://www.cms.gov/medicaremedicare-fee-service-paymentphysicianfeeschedpfs-federal-regulation-notices/cms-1770-f . See also, "Final 2023 physician fee schedule out from CMS; early reactions register exasperation, resolve," Radiology Business, November 3, 2022, available at https://radiologybusiness.com/topics/healthcare-management/radiologist-salary/final-2023-physician-fee-schedule-out-cms-early (accessed 2/10/23).
[10] "Consolidation and Change in Radiology: Where's This Train Headed?," Healthcare Innovation, November 22, 2022, available at https://www.hcinnovationgroup.com/imaging/radiology/article/21283200/consolidation-and-change-in-radiology-wheres-this-train-headed (accessed 2/10/2023).
[11] Clemens, J. and J.D. Gottlieb, "In the Shadow of a Giant: Medicare's Influence on Private Physician Payments," Journal of Political Economy. 2017; 125(1). Doi: 10.1086/689772.
[12] McMorrow, S., Berenson, A., and J. Holahan, "Commercial Health Insurance Markups over Medicare Prices for Physician Services Vary Widely by Specialty, " Urban Institute, October 2021, available at https://www.urban.org/sites/default/files/publication/104945/commercial-health-insurance-markups-over-medicare-prices-for-physician-services-vary-widely-by-specialty_0.pdf (accessed 2/27/23).
[13] Oregon Health Authority. Relative Hospital Prices: A comparison of Medicare and Commercial prices for common hospital procedures in Oregon, 2019. Portland, Oregon. March 2022, available at https://www.oregon.gov/oha/HPA/ANALYTICS/HospitalReporting/Relative-Hospital-Price-Comparisons-Report-2019.pdf (accessed 3/3/23).
[14] New Protections for You – Frequently Asked Questions about the No Surprises Act. CMS. https://www.cms.gov/nosurprises/consumers/new-protections-for-you (accessed 2/17/23).
[15] "Consolidation and Change in Radiology: Where's This Train Headed?," Healthcare Innovation, November 22, 2022, available at https://www.hcinnovationgroup.com/imaging/radiology/article/21283200/consolidation-and-change-in-radiology-wheres-this-train-headed (accessed 2/10/23).
[16] Ibid.

[17] Radia website, available at: https://radiax.com/About-Us/In-the-News (accessed 2/13/23)
[18] Radia website, available at: https://radiax.com/About-Us (accessed 2/10/23)
[19] Ibid.
[20] Radia website, available at: https://radiax.com/Locations/List-of-All-Locations (accessed 2/13/23)
[21] "We've merged!" Radia website, Jul 2020, available at: https://radiax.com/About-Us/In-the-News (accessed 2/14/23)
[22] "Radia Merges with South Sound Radiology &Columbia Imaging Group," Radia website, Jan 2018, available at: https://radiax.com/About-Us/In-the-News (accessed 2/14/23)
[23] "South Sound Radiology Announces Merger with Radia Inc., PS," Thurston Talk, available at: https://www.thurstontalk.com/2018/02/07/south-sound-radiology-announces-merger-with-radia-inc-ps/ (accessed 2/14/23)
[24] Radia website, available at: https://radiax.com/About-Us (accessed 2/10/23)
[25] Medford Radiology Group Interventional Clinic website, available at: https://oiradiology.com/about-us/ (accessed 2/15/23)
[26] Medford Radiology Group website, available at: https://medfordradiology.com/ (accessed 2/13/23)
[27] "Medford hospitals solve legal dispute," The Columbian, Apr 2010, available at: https://www.columbian.com/news/2010/apr/28/medford-hospitals-solve-legal-dispute/ (accessed 2/15/23)
[28] "RVMC will take over imaging center," Mail Tribune, Sep 2003, available at: https://www.mailtribune.com/business/2003/09/30/rvmc-will-take-over-imaging-center/ (accessed 2/15/23)
[29] See Code of Federal Regulations, §1.368-1 Purpose and scope of exception of reorganization changes, available at https://www.ecfr.gov/current/title-26/chapter-I/subchapter-A/part-1/subject-group-ECFR8273f1baff2c569 (accessed 3/1/23).
[30] Radia Inc., P.S., Notice of Material Change Transaction filed with the Oregon Health Authority, available at https://www.oregon.gov/oha/HPA/HP/HCMOPageDocs/2023-1-31-007-Radia-MRG-HCMO-Notice.pdf (accessed February 10, 2023).
[31] See "Health Professional Shortage Area Designation," Oregon Health Authority, available at https://www.oregon.gov/oha/HPA/HP-PCO/Pages/HPSA-Designation.aspx (accessed 2/10/23).
[32] Map of Oregon Medically Underserved Areas/Populations, Oregon Office of Rural Health, available at https://www.ohsu.edu/media/921 (accessed 2/20/23).
[33] Smith-Bindman R, Kwan ML, Marlow EC, et al. Trends in Use of Medical Imaging in US Health Care Systems and in Ontario, Canada, 2000-2016. JAMA. 2019;322(9):843–856. doi:10.1001/jama.2019.11456
[34] See https://www.medicalbillersandcoders.com/blog/appropriate-use-of-modifier-26-and-modifier-tc/ (accessed 2/24/23).
[35] See for example, Brand, K., and T. Rosenbaum. "A Review of the Economic Literature on Cross-Market Health Care Mergers." Antitrust Law Journal. 2019; 82(18); Dafny, L., Ho, K., and R. Lee. "The Price Effects of Cross-Market Hospital Mergers." NBER Working Paper. 2016; doi:10.3386/w22106; Fulton, B.D., D.R. Arnold, J.S. King, A.D. Montague, T.L. Greaney, and R.M. Scheffler. "The Rise of Cross-Market Hospital Systems and Their Market Power in the US." Health Affairs. 2022; 41(11): 1652–60. doi:10.1377/hlthaff.2022.00337.
[36] ACR 2022 MIPS measures info sheet, available at: https://www.acr.org/-/media/ACR/Files/Registries/QCDR/2022-MIPS-Measures-Supported.pdf (accessed 02/21/23)
[37] ACR Qualified Clinical Data Registry website, available at: https://www.acr.org/Practice-Management-Quality-Informatics/Registries/Qualified-Clinical-Data-Registry (accessed 02/21/23)
[38] CMS Medicare Quality, Safety & Oversight website, Accreditation of Advanced Diagnostic Imaging Suppliers, available at: https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Accreditation-of-Advanced-Diagnostic-Imaging-Suppliers (accessed 02/21/23)
[39] ACR Breast Imaging Center of Excellence website, available at: https://www.acraccreditation.org/Centers-of-Excellence/Breast-Imaging-Center-of-Excellence (accessed 02/21/23)
[40] Radia, Quality & Compliance website, available at: https://radiax.com/About-Us/Quality-Compliance (accessed 02/21/23)
[41] Darling et al, Physician documentation of fluoroscopy time in voiding cystourethrography reports correlates with lower fluoroscopy times: a surrogate marker of patient radiation exposure, American Journal of Roentgenology, 2011 June; 196(6): W777-80; available at: https://pubmed.ncbi.nlm.nih.gov/21606268/ (accessed 02/21/23)

[42] Jones et al, A diagnostic medical physicist's guide to the American College of Radiology Fluoroscopy Dose Index Registry, Journal of Applied Clinical Medical Physics, 2021 Apr; 22(4): 8 – 14, available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8035558/ (accessed 02/22/23)
[43] Better Business Bureau Radia Inc PS website, available at: https://www.bbb.org/us/wa/lynnwood/profile/health/radia-inc-ps-1296-28025352/complaints (accessed 02/22/23)
[44] Zotec Partners website, available at: https://zotecpartners.com/ (accessed 02/22/23)
[45] MSN Healthcare Solutions website, available at: https://msnllc.com/ (accessed 02/22/23)
[46] GE Healthcare, Evolving Best Practices to Help with Faster Radiology Report Turnaround (Nov 4, 2021), available at: https://www.gehealthcare.com/insights/article/evolving-best-practices-to-help-with-faster-radiology-report-turnaround (accessed 02/22/23)
[47] Beth Bohlander, Study links timeliness on radiology reporting with improved outcomes for acute abdomen, OSU College of Medicine (Feb 22, 2021), available at: https://medicine.osu.edu/news/improved-outcomes-for-acute-abdomen (accessed 02/22/23)
[48] Benitez et al, Imaging in Stroke Diagnosis and Treatment: An Update, Applied Radiology (Sep 10, 2021), available at: https://appliedradiology.com/articles/imaging-in-stroke-diagnosis-and-treatment-an-update (accessed 02/22/23)
[49] Whitney Jackson, In Radiology, Turnaround Time is King, Diagnostic Imaging (Nov 12, 2015), available at: https://www.diagnosticimaging.com/view/radiology-turnaround-time-king (accessed 02/22/23)
[50] Lawrence Muroff and Leonard Berlin, Speed Versus Interpretation Accuracy: Current Thoughts and Literature Review, American Journal of Roentgenology, Sept 2019; 213(3): 490 – 492, available at: https://www.ajronline.org/doi/10.2214/AJR.19.21290 (accessed 02/22/23)
[51] Whitney Palmer, Radiology Turnaround Times: Are They Ever Fast Enough?, Diagnostic Imaging (Nov 16, 2017), available at: https://www.diagnosticimaging.com/view/radiology-turnaround-times-are-they-ever-fast-enough (accessed 02/22/23)
[52] Jeff Zagoudis, Pediatric Imaging Growing Up Fast, Imaging Technology News (June 4, 2015), available at: https://www.itnonline.com/article/pediatric-imaging-growing-fast (accessed 02/22/23)
[53] Michael Walter, 3 ways a pediatric radiology labor shortage could make an impact, Economics (Aug 19, 2019), available at: https://radiologybusiness.com/topics/healthcare-management/healthcare-economics/3-ways-pediatric-radiology-labor-patient-care (accessed 02/22/23)
[54] Parikh et al, What Causes the Most Stress in Breast Radiology Practice? A Survey of Members of the Society of Breast Imaging, Journal of Breast Imaging, 2021 May-Jun; 3(3): 332 – 342, available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8139609/ (accessed 02/22/23)
[55] Howard Fleishon, The Radiology Labor Shortage, ACR Bulletin (Feb 10, 2022), available at: https://www.acr.org/Practice-Management-Quality-Informatics/ACR-Bulletin/Articles/March-2022/The-Radiology-Labor-Shortage (accessed 02/22/23)
[56] DeBenedectis C, Spalluto L et al. Health Care Disparities in Radiology—A Review of the Current Literature, Journal of the American College of Radiology, Volume 19, Issue 1, Part B, 2022.
[57] Ibid.
[58] Ibid.
[59] Oregon Health Authority, Health Care Market Oversight Analytic Framework, October 2022, available at https://www.oregon.gov/oha/HPA/HP/HCMOPageDocs/OHA-HCMO-Analytic-Framework-FINAL.pdf (accessed 2/1/2023).
[60] American Academy of Professional Coders, Radiology Procedures website, available at: https://www.aapc.com/codes/cpt-codes-range/70010-79999/ (accessed 02/23/23)