

# Hospital-based Versus Freestanding Outpatient Imaging Services

**D**uring the first half of the first decade of the 21st century, freestanding outpatient imaging grew at an accelerated rate, capturing market share from hospital outpatient imaging departments. After years of losses to what were typically more nimble freestanding outpatient providers, hospitals have taken a renewed interest in this service line.

**Introduction:** The first installment in the Imaging Market File is based on data from the National Imaging Network (NIN), an outgrowth of the hospital and radiology-practice consulting work of Regents Health Resources, a medical-imaging consultancy based in Franklin, Tennessee. In 2009, Regents Health Resources began developing the Web-based tools that would constitute the back end of the network and enable members to access their own disparate data easily while comparing their results to national and regional performance benchmarks, as well as to those from similar settings. Fed

by blinded data from 96 of Regents Health Resources' 500 clients, the initial database represents 6.9 million exams acquired in diverse settings from 2008 to the present, including hospital-based outpatient imaging centers and freestanding outpatient imaging centers in 72 communities (in 21 states). Access to the NIN is available through a subscription service to hospitals, imaging-center owners, and physician practices and is designed to provide ongoing active business support and intelligence, including access to referring physician, financial, and clinical data.

**The trend toward hospital-based imaging:** Deep cuts to imaging reimbursement rates in the MPFS have led many imaging centers to exit the business, while others struggle to survive. Meanwhile, hospitals have been acquiring centers in their markets. Eight of last year's top 20 diagnostic imaging center chains were hospital owned, up from five in 2006.<sup>1</sup>

**The drivers:** The migration of outpatient imaging from freestanding to hospital based is being driven by deep cuts to reimbursement for the 7000 CPT® codes paid under the MPFS, by health systems' interest in recouping ground lost to service-oriented outpatient imaging operators over the past decade, and by more favorable reimbursement under the Hospital Outpatient Prospective Payment System (HOPPS).

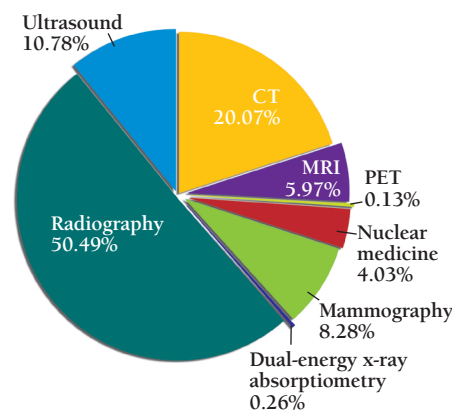
**Exam mix:** According to the NIN database, 63 CPT codes represent 80% of all hospital exam volume, and 56 CPT codes represent 80% of all outpatient imaging company exam volume. MRI exams account for more than 2.5 times the percentage of total volume in the outpatient setting than they do in the hospital setting. Conversely, CT exams represent one-fifth of the volume in the hospital setting, but slightly less than 14% of the volume in the outpatient setting. Mammography represents twice the percentage of total volume in the outpatient setting that it represents in the hospital setting. Advanced imaging (MRI, CT, PET, and nuclear medicine) accounts for roughly the same percentage of total exams in both settings: 29.9% in the outpatient setting and 30.2 in the hospital setting.

**Average Revenue (Blended) per Procedure, Comparing Hospital and Outpatient Imaging Center Technical-component Reimbursement**

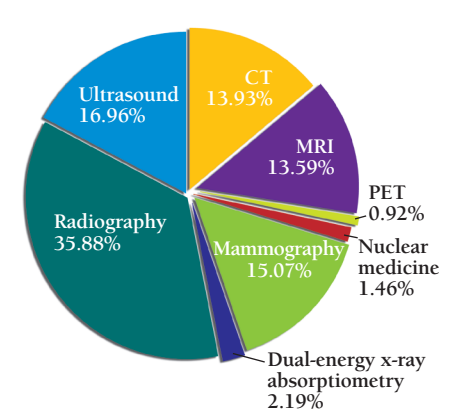
| MODALITY         | HOSPITAL REIMBURSEMENT | OUTPATIENT IMAGING CENTER REIMBURSEMENT | AVERAGE REVENUE DIFFERENTIAL |
|------------------|------------------------|---|------------------------------|
| MRI              | \$832.46               | \$460.95                                | 1.8                          |
| CT               | \$626.66               | \$245.83                                | 2.54                         |
| Ultrasound       | \$241.23               | \$87.01                                 | 2.77                         |
| Radiography      | \$106.45               | \$44.55                                 | 2.39                         |
| Mammography      | \$121.44               | \$78.07                                 | 1.55                         |
| Nuclear medicine | \$634.71               | \$181.72                                | 3.49                         |
| PET/CT           | \$2,898.95             | \$1,243.64                              | 2.33                         |
| Overall average  |                        |   | 2.41                         |

**Note:** Rates are blended and include all commercial and government payors for each provider, excluding professional revenues. Outpatient imaging center global revenue was reduced by estimated professional percentages using the following reductions: MRI, 18%; CT, 19%; ultrasound, 20%; radiography, 30%; mammography, 30%; nuclear medicine, 19%; and PET/CT, 18%.

**Hospitals**



**Outpatient Imaging Centers**



**Exam mix, by modality and percentage of total, in hospitals and outpatient imaging centers.**

1. Kyes K. The top 20 imaging-center chains. *Radiology Business Journal*. 2010;4:30-35.



**Comparison:** The top 10 CPT codes by volume for hospitals and outpatient imaging centers were compared, representing 1.9 million exams out of the 6.9 million in the NIN database, collected from 2008 through 2010. To illustrate the differences, MPFS and HOPPS reimbursement rates for the state of Maryland were used from 2010 and 2011. HOPPS rates show a 1.7% to 177% premium over the MPFS. In the cases in which the rates are higher for the MPFS (mainly MRI), the procedure is reimbursed at the lower HOPPS rate. The two codes for the exams performed most frequently in the hospital setting are associated with radiography. Significantly, those codes display the greatest variance between HOPPS and MPFS reimbursement.

**Top 10 CPT Codes by Volume, Hospital Outpatient**

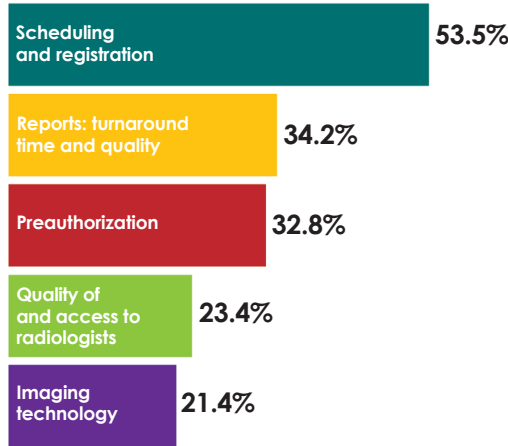
| CPT   | DESCRIPTION                    | PERCENTAGE OF TOTAL | 2010 MPFS (\$) | 2011 MPFS (\$) | 2010 HOPPS (\$) | 2011 HOPPS (\$) | 2011 HOPPS/MPFS VARIANCE |
|-------|--------------------------------|---------------------|----------------|----------------|-----------------|-----------------|--------------------------|
| 71020 | CHEST X-RAY                    | 8.9%                | 20.23          | 22.12          | 44.79           | 45.04           | 103.6%                   |
| 71010 | CHEST X-RAY                    | 8%                  | 14.89          | 16.23          | 44.79           | 45.04           | 177.5%                   |
| 70450 | CT HEAD/BRAIN W/O CONTRAST     | 3.1%                | 158.3          | 168.34         | 194.6           | 193.85          | 15.2%                    |
| G0202 | SCREENING MAMMOGRAPHY, DIGITAL | 2.4%                | 99.56          | 114.2          | 99.56           | 114.2           | 0%                       |
| 72193 | CT PELVIS W/CONTRAST           | 2.1%                | 241.06         | 257.47         | 296.3           | 299.81          | 16.4%                    |
| 74160 | CT ABDOMEN W/CONTRAST          | 2.1%                | 274.25         | 294.66         | 296.3           | 299.81          | 1.7%                     |
| 74000 | X-RAY EXAM OF ABDOMEN          | 1.4%                | 16.41          | 17.7           | 44.79           | 45.04           | 154.5%                   |
| 76700 | US EXAM, ABDOMEN, COMPLETE     | 1.2%                | 97.27          | 109.78         | 97.06           | 96.28           | -12.3%                   |
| 72192 | CT PELVIS W/O CONTRAST         | 1.1%                | 194.15         | 205.9          | 194.6           | 193.85          | -5.9%                    |
| 74150 | CT ABDOMEN W/O CONTRAST        | 1%                  | 192.62         | 204.43         | 194.6           | 193.85          | -5.2%                    |

**Top 10 CPT Codes by Volume, Outpatient Imaging Center**

| CPT    | DESCRIPTION                    | PERCENTAGE OF TOTAL | 2010 MPFS (\$) | 2011 MPFS (\$) | 2010 HOPPS (\$) | 2011 HOPPS (\$) | 2011 HOPPS/MPFS VARIANCE |
|--------|--------------------------------|---------------------|----------------|----------------|-----------------|-----------------|--------------------------|
| 71020  | CHEST X-RAY                    | 2.5%                | 20.23          | 22.12          | 44.79           | 45.04           | 103.6%                   |
| 71010  | CHEST X-RAY                    | 2%                  | 14.89          | 16.23          | 44.79           | 45.04           | 177.5%                   |
| G0202  | SCREENING MAMMOGRAPHY, DIGITAL | 1.7%                | 99.56          | 114.2          | 99.56           | 114.2           | 0%                       |
| 77057  | MAMMOGRAM, SCREENING           | 0.9%                | 45.4           | 50.11          | 45.4            | 50.11           | 0%                       |
| 76700* | US EXAM, ABDOMEN, COMPLETE     | 0.8%                | 97.27          | 109.78         | 97.05           | 96.28           | -12.3%                   |
| 70450  | CT HEAD/BRAIN W/O CONTRAST     | 0.7%                | 158.3          | 168.34         | 194.6           | 193.85          | 15.2%                    |
| 74160  | CT ABDOMEN W/CONTRAST          | 0.7%                | 274.25         | 294.66         | 296.3           | 299.81          | 1.7%                     |
| 72148* | MRI LUMBAR SPINE W/O CONTRAST  | 0.7%                | 369.6          | 427.62         | 348.68          | 342.93          | -19.8%                   |
| 72193  | CT PELVIS W/CONTRAST           | 0.6%                | 241.06         | 257.47         | 296.3           | 299.81          | 16.4%                    |
| 73562  | X-RAY EXAM OF KNEE, 3          | 0.6%                | 25.18          | 29.12          | 44.79           | 45.04           | 54.7%                    |

\* Because of the lesser-of rule governing MPFS reimbursement, this CPT code is reimbursed at the lower HOPPS rate.

**The prize:** Referring-physician relationships that ensure a steady stream of business are the lifeblood of both hospital radiology departments and radiology practices. The following figures and tables are based on customer-service surveys of more than 1,200 referring-physicians conducted by Regents Health Resources for multiple clients. They identify the top customer-service issues and preferences for imaging provider location.



Top reasons for referring physicians' dissatisfaction.

**Top 10 Reasons to Refer Patients to Specific Imaging Locations**

1. Patient preference ..... 49.8%
2. Location ..... 49.8%
3. Insurance carrier ..... 47.6%
4. Cost to patient ..... 21.3%
5. Technology ..... 19.7%
6. Customer service ..... 19.3%
7. Radiologists ..... 14.4%
8. Patient customer service ..... 8.4%
9. No preauthorization needed ..... 4.6%
10. No insurance verification needed .. 2.2%



**About the sponsor:** Regents Health Resources (www.regentshealth.com) was formed in 1996 to assist hospitals and physicians in the development and management of their medical-imaging and oncology services. The consultancy has served more than 500 clients nationwide with a diverse range of services, from strategic planning and operational assessments to joint-venture planning, valuations, and imaging-center sales and acquisitions.

