How to Address Radiology Workforce Needs: Rethinking Your Recruitment

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Disclosures

• Bender: No financial disclosures
• Jimenez: No financial disclosures
• Oppe: No financial disclosures
Learning Objectives

• Identify workforce trends that impact recruiting and retention
• Develop recruitment strategies to boost the appeal of difficult to fill positions
• Successfully integrate new hires into your practice through a robust onboarding structure to maximize success and retention
• Consider unique generational needs and trends to create engagement and satisfaction among workers of all ages.
ACR Workforce Survey Results
2019 ACR Workforce Survey

• Conducted by Sage Computing on behalf of American College of Radiology

• May 2019
Preface

- We would like to thank all those who participated in this year’s survey, and look forward to a further enhancing participation in the future

- Claire E. Bender, MD FACR
- Jan T Cox, PHR
- Angelica Vergel de Dios
- Jo Tarrant
- Sage Computing
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Methodology

• The questionnaire, comprised largely of closed ended responses, was developed when the Workforce Survey commenced in 2012

• The questionnaire was streamlined for this wave to help to alleviate fatigue among respondents and to reduce the average time to complete the survey

• A sample of Radiology practices was derived using ACR’s Personify and PRED databases.

• Data collection occurred from during the first quarter of 2019

• A total of 247 practices participated (about 14% of total), and among the practices, the following respondent types completed the interview:
  • 5,329 radiologists (16% of all radiologists)
  • 446 mid-level practitioners

• 1,768 groups are represented in the 2019 survey compared to 1,588 in 2018
  • There was no difference in the regional distribution of survey responses and ACR membership data (p value = 0.79).
Methodology - Testing for data reliability

A series of chi-squared tests were performed for the 2018 and 2019 survey. The results from these tests indicate that:

- Sample construction: **no statistical difference** between last year’s sample and this year’s sample (comparison by region, age, and type).

- Response/Non Response bias: **no statistical difference** between the responding practices and the practices that were sent the survey implying that the survey results are representative of all radiology practices.

- Deviation between expected and actual: **no statistical difference** between the projected number of hires for 2018 (2018 survey) and the actual number hired in 2018 (2019 survey) P-value= 0.92.

*The Workforce Survey results therefore can be used for predicting and are reliable.*
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Workforce Trends by Practice Type Consistent over Time

- Where **radiologists** work is stable, with about one-half (49%) indicating they work in private practice.

- About two in ten (17%) mention they work in either an academic university or in a hospital setting; whereas one in ten (12%) work in an MSO.
  - For hospital groups, 78% reported they were led by radiologists, 5% had a business manager employed by the radiologists, and 17% reported being led by a business manager employed by the hospital.

- Less than one in twenty (5%) indicate they are a corporate employee.

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Note: The percentage of workforce that are Government (VA or Military) continues to be small. The numbers are: 2012: 1,435 (4%), 2013: 296 (1%), 2014: 6 (0.0%), 2015: 77 (0.3%), 2016: 5 (0.0%), 2017: 24 (0.0%), 2018: 127 (1%), 2019: 28 (1%).

Changes in distribution from 2012 to 2019 is not significant (P-value = 1.00).
Age distribution trend of Workforce stable

- The overall distribution trends have been consistent from 2012 through 2019
  - About four in ten 45 or under
  - Approximately 50% between the ages of 46 and 65
- Based upon this distribution, the average age is about 50 years *

*Note: Average age of Radiologists and Members appears to be slightly higher at 54 years via 2017 membership tracking study
Gender trends also consistent in the workforce

- Overall, about one-quarter of radiologists are women (23%) according to this year’s survey, which is consistent with the gender information from the 2017 member tracking study, in which two in ten (21%) were female.
- Trends in Male/Female split are consistent from 2018: Female representation is inversely related to age, with women’s contribution to the total workforce greater among the younger age groups.

![Male/Female Split by Age Group](chart.png)
Full-Time Workforce Dynamics:
The vast majority (84%) of Radiologists are employed full-time

- Women Radiologists account for about one-quarter of the younger and older full-time workforce
- About one-quarter of practices (27%) reported that at least one radiologist went from full-time to part-time status during 2018
Part-time Workforce Dynamics

- Two thirds (68%) of practices reported employing at least one part-time radiologist.
- The proportion of part-time radiologists (16%) has remained consistent since 2014.
- The 3 most common part-time subspecialties were Breast Imaging, Body Imaging (GI, GU), & Neuroradiology.
Equivalent proportions of those retiring and those returning to work

- About one in seven practices (14%) reported at least one retirement in their practice during 2018, resulting in 150 – 200 retirements overall
- Conversely, about the same number of groups (15%) reported previously retired radiologists being employed in some capacity
Consistent trends in Workforce within Subspecialty

- Body Imaging, being a Generalist, Neuroradiology and IR were the most commonly cited subspecialties.
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2018 Projected & Actual Hiring by Subspecialty

- Actual hires in 2018 were typically lower than expected hiring

<table>
<thead>
<tr>
<th>Subspecialty</th>
<th>Planned to hire in 2018</th>
<th>Actual Hires in 2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroradiology</td>
<td>213</td>
<td>147</td>
<td>↓</td>
</tr>
<tr>
<td>Body Imaging (GI, GU)</td>
<td>162</td>
<td>130</td>
<td>↓</td>
</tr>
<tr>
<td>Interventional (General)</td>
<td>200</td>
<td>117</td>
<td>↓</td>
</tr>
<tr>
<td>Breast Imaging</td>
<td>270</td>
<td>115</td>
<td>↓</td>
</tr>
<tr>
<td>Generalist</td>
<td>60</td>
<td>92</td>
<td>↑</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>113</td>
<td>86</td>
<td>↓</td>
</tr>
<tr>
<td>After-hours</td>
<td>190</td>
<td>64</td>
<td>↓</td>
</tr>
<tr>
<td>MRI</td>
<td>13</td>
<td>39</td>
<td>↑</td>
</tr>
<tr>
<td>Cardiothoracic</td>
<td>88</td>
<td>37</td>
<td>↓</td>
</tr>
<tr>
<td>Women’s Imaging</td>
<td>67</td>
<td>34</td>
<td>↓</td>
</tr>
<tr>
<td>Emergency/Trauma</td>
<td>57</td>
<td>34</td>
<td>↓</td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td>47</td>
<td>29</td>
<td>↓</td>
</tr>
<tr>
<td>Interventional (Neuro)</td>
<td>27</td>
<td>20</td>
<td>↓</td>
</tr>
<tr>
<td>Basic Research</td>
<td>23</td>
<td>20</td>
<td>↓</td>
</tr>
<tr>
<td>Radiation Oncology</td>
<td>23</td>
<td>12</td>
<td>↓</td>
</tr>
<tr>
<td>Quality and Safety</td>
<td>0</td>
<td>8</td>
<td>↑</td>
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<tr>
<td>Ultrasound</td>
<td>10</td>
<td>5</td>
<td>↓</td>
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<tr>
<td>Informatics</td>
<td>0</td>
<td>3</td>
<td>↑</td>
</tr>
<tr>
<td>Health Services Research</td>
<td>0</td>
<td>0</td>
<td>↔</td>
</tr>
<tr>
<td><strong>Projected Total</strong></td>
<td><strong>1,563 (1,338 - 1,737)</strong></td>
<td><strong>993 (722- 1,592)</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: The range was calculated using estimated counts of 28,821 to 37,399 radiologists in the country obtained from Harvey L Neiman Health Policy Institute.
Characteristics of Newly Hired Radiologists

• Sourcing of new Radiologists:
  • One-quarter (26%) of the newly hired radiologists moved from another job
  • One in four (39%) of newly hired radiologists were first time hires after training

• Incidence of Fellowship Training:
  • Of the first time hires post training, less than one in ten (7%) had no fellowship training
  • Of the newly hired radiologists who moved from another job, the same proportion (7%) as first time hires had no fellowship training
Hiring Expectations by Sub-Specialty Consistent with Prior Years

- Practices reported hiring 720 to 1,590 radiologists in 2018
- Expectations for 2019 include hiring between 830 and 1,830 radiologists

### Hiring Expectations in 2019

<table>
<thead>
<tr>
<th>Sub-Specialty</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Imaging</td>
<td>17%</td>
</tr>
<tr>
<td>Neuroradiology</td>
<td>13%</td>
</tr>
<tr>
<td>Interventional (General)</td>
<td>12%</td>
</tr>
<tr>
<td>After-hours Radiologist</td>
<td>12%</td>
</tr>
<tr>
<td>Body Imaging (GI, GU)</td>
<td>10%</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>7%</td>
</tr>
<tr>
<td>Cardiothoracic</td>
<td>5%</td>
</tr>
<tr>
<td>Women’s Imaging</td>
<td>4%</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>4%</td>
</tr>
<tr>
<td>General Radiologist</td>
<td>4%</td>
</tr>
<tr>
<td>Emergency/Trauma</td>
<td>3%</td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td>3%</td>
</tr>
<tr>
<td>Interventional (Neuro)</td>
<td>2%</td>
</tr>
<tr>
<td>Radiation Oncology</td>
<td>1%</td>
</tr>
<tr>
<td>Basic Research</td>
<td>1%</td>
</tr>
<tr>
<td>MRI</td>
<td>1%</td>
</tr>
<tr>
<td>Ultrasound</td>
<td>1%</td>
</tr>
</tbody>
</table>

**NOTE:** Insufficient data to report out on Health Services Research, Informatics, and Quality & Safety
Consistent Hiring Trends by Region

### Hired in 2018 by region
- South – 30%
- Midwest – 20%
- Southwest – 13%
- West – 11%
- Mid-Atlantic – 18%
- New England – 7%

- Most job openings are in the South, Midwest and Mid-Atlantic

### Plan to hire in 2019 by region
- South - 32%
- Midwest - 22%
- Southwest - 14%
- West - 8%
- Mid-Atlantic - 16%
- New England - 8%
Consistent hiring within Private Practice; less hiring anticipated in Universities and more hiring within Corporate

Hired in 2018
- Private Practice - 45%
- Academic University - 32%
- Hospital - 14%
- Multispecialty Clinic - 6%
- Corporate Employee - 1%
- Government - 1%

Plan to hire in 2019
- Private Practice - 48%
- Academic University - 17%
- Hospital - 14%
- Multispecialty Clinic - 9%
- Corporate Employee - 10%
- Government - 2%
Most Important Subspecialty Needs among Radiology Groups

• The subspecialties listed most frequently as a ‘top 3 need’ included:
  • Breast Imaging (16% listed it as a top-3 need)
  • Neuroradiology (13%)
  • General Interventional Radiology (12%)
  • Musculoskeletal (11%)
High Importance of Fellowship training for Musculoskeletal, general IR, Neuroradiology, and Breast Imaging among New Hires

- Fellowship training for Stereotactic Radiation, Brachytherapy or Proton therapy deemed not as important as other subspecialties
Summary Insights

• Hiring Trends
  • There was no statistical difference between the actual 2018 and projected hiring for 2018 is not statistically significant. Therefore, we predict a range of 829 – 1,828 openings in Radiology in 2019
  • The projected number to be hired in 2019 represents a 13% increase from hiring in 2018

• Demographics:
  • Workforce needs may change depending on retirement of senior group members: 8% (or 700) of workforce are over 65 years old, and 22% (or 2,003) between the ages of 56 and 65
  • Women appear to be making inroads into radiology, as evidenced by the growing percentage of younger women in the field
Summary Insights – Practices who reported FMLA

• About one-quarter (24%) of responding practices reported at least one radiologist who took FMLA, which is a consistent trend from 2016, during which 15%* reported at least one instance of FMLA utilization

• Coverage for FMLA: most made no changes in staffing

* Not significant (p-value = 0.45)
Summary Insights – Physician leads

• The overwhelming majority of current physician leads are male (94%)
• The average age of a physician lead is 51 years; the age distribution of physician leads is as follows:
  • Under 35 years = 3%
  • 35 to 45 years = 24%
  • 46 to 55 years = 39%
  • 56 to 65 years = 27%
  • 66 years or older = 7%
Reported Private Practice Model Changes

• Four in ten private practices (41%) overall reported discussing a model change or indeed having a change in practice model during the past three years

• Practice size appeared to significantly impact the degree to which a model change was introduced or discussed. **Both small and large-sized** groups appeared to embrace a practice model change significantly more so than mid-sized groups:
  - 45% of groups with less than 10 radiologists reported a practice model change
  - 19% of groups with 11-20 radiologists reported a practice model change
  - 36% of groups with more than 20 radiologists reported a practice model change

• Regional differences in practice model change:
  - Half of **mid-west practices** (51%) indicated they have discussed or changed their model in the past three years, whereas
  - Only one-quarter (25%) of practices in the **Mid-Atlantic** region similarly assessed a model change
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Most of those (48%) who indicated entering into practice model discussion indicated a ‘no change’ outcome to their practice

- About one in six (17%) mentioned merging with another or other groups as a result
- About one in 10 (8%) indicated they either joined an alliance or sold to a corporate structure
Primary Reason for a Practice model change stems from service issues, outside pressures, and financial issues

- One-quarter indicated the primary reason was service-issue related, whereas about a third (33%) mentioned outside pressures from either hospitals/health systems or other radiology groups
Effects of Model Change – a majority indicated no impact on key dimensions

- **Benefits, Job security, and development** were seen as having been impacted most positively
- **Stress / burnout, workload, and autonomy** were viewed as worsened since the change in practice model

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Worsened somewhat or significantly</th>
<th>No change</th>
<th>Improved somewhat or significantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits</td>
<td>11%</td>
<td>55%</td>
<td>35%</td>
</tr>
<tr>
<td>Job Security</td>
<td>8%</td>
<td>58%</td>
<td>34%</td>
</tr>
<tr>
<td>Development</td>
<td>5%</td>
<td>66%</td>
<td>29%</td>
</tr>
<tr>
<td>Workload</td>
<td>17%</td>
<td>58%</td>
<td>25%</td>
</tr>
<tr>
<td>Salary</td>
<td>8%</td>
<td>68%</td>
<td>24%</td>
</tr>
<tr>
<td>Stress / Burnout</td>
<td>27%</td>
<td>53%</td>
<td>21%</td>
</tr>
<tr>
<td>Career Path / Career</td>
<td>5%</td>
<td>76%</td>
<td>19%</td>
</tr>
<tr>
<td>Autonomy</td>
<td>19%</td>
<td>68%</td>
<td>13%</td>
</tr>
</tbody>
</table>
Burnout continues to be a significant issue among the workforce

- Three quarters of respondents identify burnout as an issue
  - One-quarter (27%) of respondents reported that burnout was a big problem (e.g., *extremely* or *very significant*)
  - An additional four in ten (44%) reported that burnout was a ‘*significant problem*’
Key Drivers of Burnout

• Workflow and work processes, as well as workforce issues contribute significantly to radiologist burnout
Less than half of respondents indicate they have mechanisms in place to assess burnout and employee wellness

- One-quarter (26%) of respondents said they had mechanisms to assess physician burnout
- One in three (30%) respondents said they had methods to gauge employee wellness

One third of respondents (34%) said they were extremely/very effective in addressing physician burnout

About four in ten respondents (38%) said they were extremely/very effective in addressing employee wellness
Respondents are most likely to agree that their organization is “taking wellbeing and burnout seriously”

- Opportunities exist for providing education materials and providing a formal curriculum on well-being
Providing coverage for Rural and/or critical access and small hospitals

• 56% of groups provide coverage for rural and/or critical access and/or small hospitals

• Coverage is provided primarily via:
  ➢ 21% teleradiology
  ➢ 27% on-site
  ➢ 46% both on-site and teleradiology
  ➢ 6% other
Recruiting Challenges: Our Experience at Carle Foundation Hospital
About Carle

Carle is the leading healthcare system in east central Illinois serving a patient base of more than 1.5 million. Carle is committed to creating a culture of health by empowering people through quality care, research and education.
About us...

Carle Foundation Integrated Health System

**OUR MISSION:**
We serve people through high quality care, medical research and education.

**OUR VISION:**
Improve the health of the people we serve by providing world-class, accessible care through an integrated delivery system.

A critical differentiating factor of Carle Foundation is its integration of care providers, both hospital and physician, along with a provider owned payor plan.
Significance of Rural to Carle

- >50% of Carle patients come to Carle from outside of the local area.
- Of the 1.3 Million population in Carle’s service area, >90% live in designated rural counties.

Counties in extended Carle Service Area

- Urban County
- Rural County
Staffing and Recruiting - Physician

• Currently 22.6 FTEs: 10.6 Body/Gen; 3.7 Breast; 4.3 Neuro; 4.0 Night

• Since 2015
  • 11.5 new hires (includes 2 boomerang hires)
  • 9.7 departures

• Additional 5 FTE VIR not included above

• Current open positions
  • 1.0 FTE Body/general
  • 0.5 FTE General (southern region)
  • 0.5 FTE Neuro (research)

• 4 Radiologists work part-time plus 2 PRN locums

• 300K exams per year; 9300 RVUs/FTE average
What Recruits Want...
What we have...
Actually...”Ex-Urban”

Definition of exurb: a region or settlement that lies outside a city and usually beyond its suburbs and that often is inhabited chiefly by well-to-do families.

“...I live in a small, Midwestern college town...”
# The Good and Bad of Carle Recruiting

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Geography</td>
<td>• Cost of Living</td>
</tr>
<tr>
<td>• Relatively small but subspecialized practice</td>
<td>• Organizational compensation support</td>
</tr>
<tr>
<td>• High Acuity: Level 1 Trauma, Comprehensive Stroke</td>
<td>• Lifestyle</td>
</tr>
<tr>
<td>• Employed Physician Model – No ownership</td>
<td>• Financial Stability</td>
</tr>
<tr>
<td>• Community Demographics - transient</td>
<td>• Physician led organization</td>
</tr>
<tr>
<td></td>
<td>• Administrative Support</td>
</tr>
</tbody>
</table>
Overcoming Barriers: Income/Partnership

• New **Compensation Plan**
  • Shift based pay rather than production
  • Minimum staffing and productivity requirements
  • Allows flexibility to trade and sell shifts
  • Funding for additional FTE when established productivity thresholds met (LCS median)

• **Full Parity** after 2 years

• **Starting Salary**
  • 79% of Full Salary for new trainee

• **Incentives** for experience
  • 83-88% of full salary for experienced candidates to start
Overcoming Barriers: Specialty Practice

- Neuro, Breast and IR practice 100% within their subspecialty
- Body/General radiologists have NO VIR, NO mammo and minimal neuro requirements
- Significant satisfier among referring clinicians who get higher percentage of subspecialty reads on their cases
Overcoming Barriers: Work – Life Balance

• Dedicated night group of 4 radiologists
• Daytime crew works no later than 8pm – staggered shifts
• 3 radiologists cover 75% of the weekend day shifts (by choice)
Work-Life Balance: Flexible Scheduling and Remote Work

- One-fourth of our group lives outside of the community (closest 2 hrs)
- New attitudes about part-time work
  - Mutually beneficial arrangement
  - Group approval
  - Yearly commitment
- Remote Reading – Home workstation provided to all radiologists
  - Night: 50% of overnight shifts and 100% of swing (2-10pm) shifts
  - Daytime radiologists can work one day per week remotely
  - On site backup allows opportunity for additional income for younger members
  - Commitment to remote reading impacts technology purchases – faster PACS
  - Considering a “sabbatical” arrangement for longer term remote reading
- Compressed Schedule
  - Out of state radiologist works Tues-Friday onsite with longer shifts
  - Lessens evening burden for remainder of group
Finding the Right Fit

- Look for Candidates with ties to area
  - Engage the spouse, S.O.
- Behavioral interviews for all professional staff
- Peer interviews for technical staff and managers
- Staff interviews for select professional staff – eg. Proceduralists
Main Barriers to Staff Recruiting/Retention

- Pay
  - Many of the competing hospitals in the area offer similar pay with much less demands

- Shallow Applicant Pool

- High Acuity Care
  - Technical staff have high demands placed on them.
  - Weekend, evening and holiday work
  - Stepping stone for other jobs

- Tech Ladder
  - Opportunity to earn more for additional education, certification and leadership in department

- Establish relationships with tech schools outside of the immediate area
  - Build a sustainable pipeline

- Finding Purpose (important for millennial employees)
  - Sometimes the easier job fails to fulfill professional needs
  - Stress the impact that employees have by providing high quality/high acuity care
  - Personal recognition
Ensuring Success After the Hire

• Mentoring
  • All professional and technical staff paired with specially trained organizational mentor
  • There is also modality/section specific mentoring within the radiology department

• Job Advancement/Leadership – Key Millennial Satisfier
  • Embrace the more up to date knowledge of new physician trainees and engage them to improve the practice
  • Pair new physicians and technical staff to complete PQI projects