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Radiology Volumes Post-Pandemic: An Analysis of 12.4 Million Imaging Examinations from 197 Radiology Facilities

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Introduction

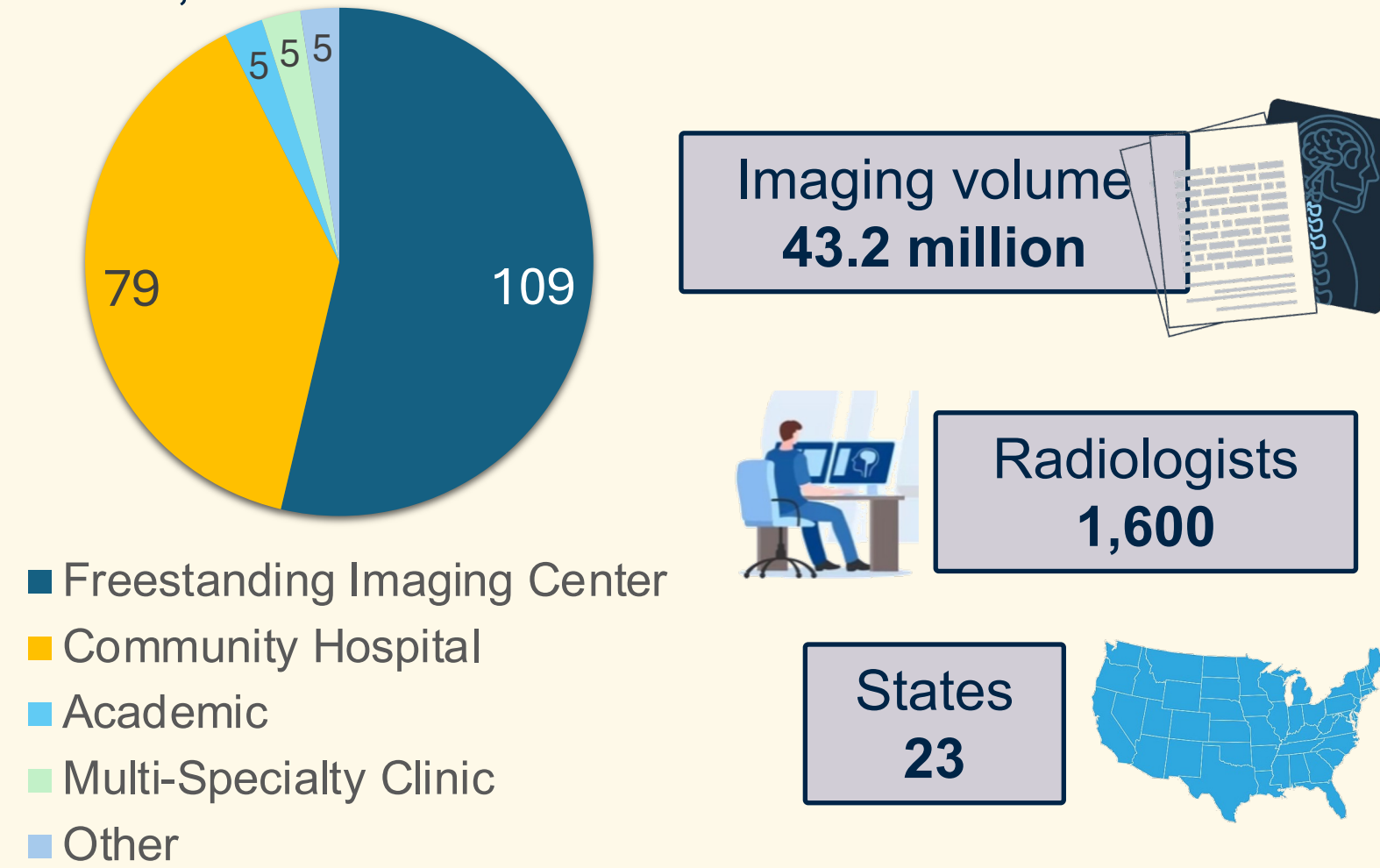
The global impact of the COVID-19 pandemic on healthcare systems has been unprecedented, prompting urgent efforts to understand and address its multifaceted consequences. [1, 2]

The implementation of measures, such as social isolation strategies, has introduced disruptions across diverse sectors, notably within healthcare [3,4]. Radiology departments bore witness to a rapid decline in imaging case volumes, raising critical concerns about the immediate and enduring implications on radiological practices [5].

In this study we aim to determine changes in site- and radiologist-specific imaging volumes before, during and after the COVID-19 pandemic from a large, diverse sample of United States radiology practices. [6, 7]

Methodology

Data analyzed from the American College of Radiology (ACR) General Radiography Improvement Database (GRID) from December 1, 2017 to February 28, 2023, which include baseline, pandemic, and post-pandemic periods, contains:



Analyzed Modalities: Computed Tomography (CT), Mammography, Magnetic Resonance Imaging (MRI), X-ray, Ultrasound, and Positron Emission Tomography (PET)-CT.

National Provider Identifiers (NPIs) were used to track individual radiologists. Changes in workforce number (by NPI), workload (exams/day), NPI attrition, and NPI turnover were calculated by quarter.

Results

Of the 1,600 radiologists in the sample:

- 804 (50%) were present for the entire study period,
- 581 (36%) read at least 100 examinations in an included practice in every quarter.

Mean changes in exams read/day from 2017 to 2023 were modest: +1.4% (49.5/day to 50.9/day) and -0.2% (54/day to 53.8/day), respectively, showing essentially complete recovery following a peak decline of -35%/quarter (2,015,150 to 1,304,748) March-May 2020.

However, the top quartile radiologists by volume experienced dramatic increases in exams/day (+25.4%; 52.3/day baseline vs. 65.6/day in 2022) and clinical days worked/quarter (+24.4%; 37.7 vs. 46.9, respectively) from 2017 to 2022.

Although there was substantial turnover, the number of unique radiologists in the sample increased from 997 (baseline) to 1,144 (2023), and days worked/NPI/quarter remained similar (40 days vs. 39 days).

Conclusion

This study shows that there has been complete recovery of radiology imaging volume since the COVID-19 pandemic. Although the average radiologist reads a similar number of examinations per day pre- vs post-pandemic, high-volume radiologists now read 25% more examinations per day and work 24% more clinical shifts per quarter.

References

Scan the QR code or type in the link below for the list of references:

<https://shorturl.at/airNW>



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