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IR is an Operational and Financial Hedge for Hospitals during COVID-19



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Editor:

The Coronavirus Disease 2019 (COVID-19) pandemic has created unprecedented operational and financial challenges for US health systems. The US Centers for Disease Control and Prevention directed healthcare facilities to reduce any potential negative effects on hospital bed capacity, and the Centers for Medicare & Medicaid Services followed with the recommendation that all elective surgeries and nonessential medical, surgical, and dental procedures be delayed during the pandemic (1,2). At the same time, the American Hospital Association estimated a sharp reduction in hospital procedures with a year-over-year decrease in inpatient and

outpatient services of 13% and an estimated loss of \$161.4 billion in revenues from March to June 2020 (3).

Under normal circumstances, Interventional Radiology (IR) efficiently cares for both inpatients and outpatients. In response to the COVID-19 pandemic, IR has taken a more prominent role in the hospital, accounting for an increased share of both procedural volumes and gross charges at 2 academic medical centers, the first with a total of 894 beds in Tucson, Arizona, and the second with 811 beds in Chicago, Illinois. This trend countered the observed, and notably opposite, trend toward a relative decrease in contributions from other prominent procedural services (surgery, cardiac catheterization lab, and endoscopy).

This report used aggregated departmental data from the institutions studied and was exempt from institutional review board approval. At both medical centers, procedural volumes across the hospital decreased year over year (35% and 69%, respectively) in April 2020. However, IR procedural volumes decreased by a much smaller amount (22% and 35%, respectively). Meanwhile, procedural volumes in surgery, cardiac catheterization lab, and endoscopy decreased by a much larger proportion (Table 1). At the medical center in Tucson, gross procedural charges for the hospital decreased 40% year over year in April 2020, but IR charges had only decreased 20% (Table 2).

In 2019, most IR procedural volume at both medical centers was comprised of outpatients, whereas most surgery and catheterization lab procedures (56% and 60%, respectively) were performed on inpatients. The COVID-19 pandemic, however, led to suspension of nonessential procedures and diverted resources toward inpatient care. Paradoxically, IR pivoted from a predominantly outpatient-based practice to a service focused on hospital inpatients, whereas services that were predominantly treating inpatients in 2019 decreased their role (Fig).

The data above demonstrate that, whereas other procedural services such as surgery, cardiac catheterization lab, and endoscopy have suffered decreased procedural volume and charges, IR has filled the void. The resultant increased disparity in work performed and charges generated should be recognized by hospital administrations as a source of

Table 1. Year-over-Year Change in Volume of Procedures (%), 2019 to 2020

Medical Center—Tucson	Jan	Feb	Mar	Apr	Total
IR	10%	6%	6%	−22%	0%
Surgery	16%	22%	−14%	−45%	−6%
Cath lab	9%	16%	−6%	−30%	−3%
Endoscopy	43%	16%	−16%	−40%	−1%
Total Hospital Procedures	13%	17%	−8%	−35%	−4%
Medical Center—Chicago	Feb	Mar	Apr	Total	
IR	4%	−14%	−35%	−16%	
Surgery	5%	−30%	−72%	−34%	
Cath lab	2%	−22%	−56%	−26%	
Endoscopy	7%	−37%	−81%	−37%	
Total Hospital Procedures	5%	−29%	−69%	−32%	

Table 2. Year-over-Year Change in Gross Charges (%), 2019 to 2020

Medical Center—Tucson	Jan	Feb	Mar	Apr	Total
IR	29%	4%	4%	−20%	3%
Surgery	19%	30%	−11%	−44%	−2%
Cath lab	11%	14%	−11%	−35%	−5%
Endoscopy	43%	12%	−17%	−43%	−3%
Total Hospital Procedures	21%	23%	−10%	−40%	−2%

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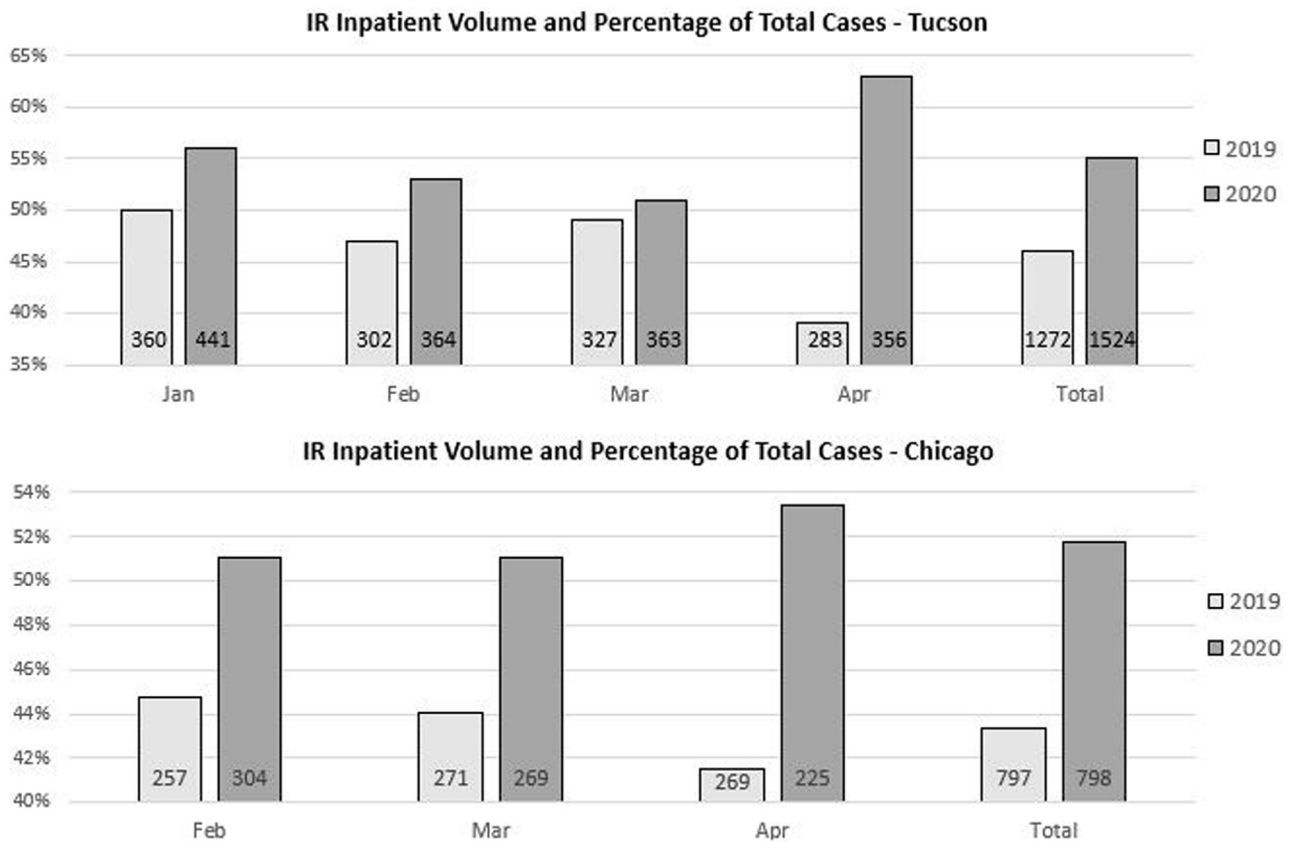


Figure. IR inpatient volume and percentage of total cases, 2019 and 2020. Case volumes at the base of each bar and bar height representing percentage of total case volume.

procedural revenue that is relatively spared. Furthermore, the work performed by IR during the pandemic likely provides value by contributing to patient discharges and length-of-stay metrics; however, the authors acknowledge that this would be difficult to quantify.

IR's adaptation to the operational shocks of the COVID-19 pandemic was largely the result of 2 factors: efficiency in reconfiguring workflows and availability to treat patients. First, at both medical centers included in this report, IR departments promptly prepared for handling of patients with COVID-19 by adding negative-pressure air handling for IR suites, clearly assigning duties and personal protective equipment for staff, and establishing clear protocols on potentially aerosolizing procedures requiring extra precautions. Notably, these changes took effect in IR before they were implemented in the operating rooms. This finding has also been noted at other large medical center where IR departments have rapidly reconfigured workflows to accommodate patients with COVID-19 (4). Second, the interventional radiologists at both institutions noted an increased number of consult requests for procedures that are traditionally areas of considerable overlap in scope of practice (central venous access, gastrostomy, nephrostomies, biopsies, and venous thromboembolism intervention). In many cases, other procedural services had rejected these consultations

for lack of medical urgency, and IR was available and ready to treat these patients during the COVID-19 pandemic. Similarly, IR physicians at other institutions have made themselves available to facilitate critical care services with multidisciplinary support (5).

The flexibility and motivation to accommodate the needs of the hospital are arguably core principles of IR that appear to be common across multiple institutions. During times of stress, these strengths allow IR to serve as an operational and financial hedge for ensuring the continued health of critically ill patients and burdened health systems.

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Medicare Physician Fee Schedule 2020: IR Practice Economic Health and Strategies to Mitigate the Undervaluing of IR Services



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Editor:

The Centers for Medicare & Medicaid Services (CMS) final Medicare Physician Fee Schedule rule for the 2020 calendar year (1) included broad changes to reimbursement for multiple medical specialties leading to substantial payment cuts for certain procedural and clinic visit billings. Decreases in interventional radiology (IR) remuneration are expected and compounded by the drastic decline in hospital and clinic visits amidst the current 2019 novel coronavirus disease (COVID-19) pandemic, potentially jeopardizing patient care. Familiarity with the cause of these expected cuts is crucial to efficiently advocate for our specialty (2). In this letter, we review the primary model of physician payment, discuss current policies affecting IR practice, demonstrate the economic impact on a sample from an outpatient IR clinic, and support effective advocacy strategies to curtail Medicare payment cuts.

Health care reimbursement occurs through private insurance or government programs such as Medicare and Medicaid. CMS establishes payments under the Medicare Physician Fee Schedule based on national uniform relative value units (RVUs) that account for the relative resources used in providing a service. Total RVUs include 3

components: physician work, practice expense, and malpractice expense. Reimbursement is calculated by the total RVUs multiplied by a monetary conversion factor designated to each specialty (3). For 2020, CMS finalized Medicare Physician Fee Schedule with the terms that included redirection and increased reimbursement for primary care and nonprocedural specialties, while negatively impacting procedure-based specialties.

IR will see a 4% reduction in RVUs for physician work and practice expenses devaluing codes for fine-needle aspiration, abdominal aortography, angiography, bone biopsy, lumbar spine puncture, and vascular ultrasound. In addition, IR outpatient clinic visit payments through evaluation and management codes are expected to decrease by at least 2% (Fig 1). Multiple evaluation and management payment reductions were implied to offset redistributed increases in work value, modifications in direct practice costs, and add-on payments for office visits for primary care and patients with serious or complex conditions. The redistributions are significant, increasing family medicine reimbursements by 12% and decreasing payments for many specialties that do not perform office visits by $\geq 7\%$ (1).

Considering the \$432 million allowable Medicare charges for IR, the reimbursement reduction approximates to at least a \$26 million loss. This amount is also underestimated, as it accounts only for self-declared IR practices. Many IR physicians practice within diagnostic radiology groups and bill both IR and DR services, thus enduring closer to an 8% loss. Only a tiny percentage of IR physicians bill $> 50\%$ in IR-only services.

To further assess the economic impact on individual IR clinics, we reviewed billing data in our outpatient practice from January to September 2019. A total of 1,559 clinic visits were billed \$252,000, equating to a mean \$162 per visit. In this setting, reimbursement losses following the Medicare cuts would estimate \$15,118 per 9-month period or \$10 loss per visit.

Substantial reimbursement cuts of at least 6% for IR affect the economic health of IR practices and negatively influence the delivery of IR services to patients. Decreased practice income may cause cuts in salaries of IR physicians, technologists, and supporting staff affecting recruitment. Ensuing financial losses supplemented by longer hours could instigate worsening burnout and decreased ability of physicians to subspecialize in specific diseases causing lower quality of patient care. The practices would have to decrease investment in new equipment or in worst cases close the practices completely. These negative changes will most significantly affect smaller rural outpatient centers (4), further widening the clinical care disparity gap for underserved populations.

To mitigate the payment reductions, the Society of Interventional Radiology (SIR) and several other medical societies and organizations initiated multiple advocacy efforts asking Congress and CMS to lift the existing budget neutrality requirements or to postpone the payment cuts in light of COVID-19. SIR initiated the call to action, which yielded 1,600 letters from 500 SIR members to > 300 congressional offices. Further, during the 2019 Grassroots

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