

Hospital-Owned and Operated Outpatient Imaging Centers: Strategies for Success

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Dedicated outpatient imaging centers offer hospitals an opportunity to meet stakeholder expectations, maximize market share, and increase revenue. However, because outpatient imaging centers operate according to different business strategies and principles compared with hospital-based operations, many hospitals are challenged to operate outpatient facilities effectively. This article addresses those strategies designed to maximize patient referral and profitability for hospital-owned and operated outpatient imaging centers.

Key Words: Outpatient, imaging centers, computed tomography, magnetic resonance imaging, productivity, marketing, technologist, revenue, business, strategy, market share, competition

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INTRODUCTION

Because of persistent strong demand and favorable reimbursement for outpatient imaging services (particularly computed tomography and magnetic resonance imaging [MRI]) over the past decade, a large and increasing number of outpatient imaging centers (OPICs) have entered the market [1,2]. Private entrepreneurs and some radiologists had been very quick to take advantage of this lucrative market [1-3]. Some hospitals, too, have responded, either opening and operating OPICs on their own or forming joint ventures with radiologists or private entrepreneurs [2,4,5]. However, many hospitals have been relatively slow to respond to this burgeoning market, either because of competing capital requests from other hospital programs or because they have not fully recognized the revenue opportunities [1]. Increasingly, however, hospitals are now realizing that without dedicated imaging center facilities to offer their customers, they risk losing market share and significant revenue, despite the recent partial implementation of the Deficit Reduction Act [6].

Many hospitals are challenged when entering the OPIC market, because they have often failed to recognize that outpatient and inpatient radiologic services are different businesses [1,7]. Independent operators, who usually do understand this premise, have often already ab-

sorbed significant market share by offering patients convenient access to imaging services with high levels of customer service [2-3,8]. Therefore, for hospitals to retain and grow market share in this competitive outpatient market, it is imperative that the fundamental strategies for success are understood. Although many of the initiatives discussed in this article are pertinent to hospital-based operations and independently owned OPICs, I outline for hospitals the key strategies required for the successful operation of a hospital-owned OPIC. The initial discussion focuses on the startup strategies intended to position the OPIC for maximal growth opportunity and success. The key strategies for operational excellence, productivity, and revenue generation once the OPIC is open are then discussed, including those strategies aimed at retaining and growing market share as the business matures.

STARTUP CONSIDERATIONS

A hospital has the choice of owning and operating an OPIC entirely on its own or as a joint venture with radiologists or private entrepreneurs, in the hope of sharing the risk and costs of such a startup [2-5]. Some hospitals consider it prudent to collaborate on such ventures with their existing radiology groups, recognizing that the strategic and financial investment by radiologists will often be integral to the success of both the OPIC and the radiology group itself [3,5].

Whether a new OPIC is to be wholly hospital owned or part of a joint venture, the hospital (or joint venture) must first perform a feasibility study to determine

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whether the OPIC has any realistic chance of financial success. This study entails the development of a business plan after a detailed analysis of competitive services, the referring physician and patient base, the reimbursement assumptions, and equipment, construction, lease costs, among others [9]. Specific focus is given here to consideration of the competition, OPIC location, space planning, equipment purchases, and information systems.

The Competition

Before embarking on building and operating an OPIC, a hospital must evaluate if and why there is competition in the market and whether it has proved successful. The hospital needs to ask the question “What is the competition doing that we are not?” even if the hospital currently considers its own hospital-based service levels satisfactory. Without answers to this question, it may be impossible to match or exceed the criteria on which the competition has built a successful practice, a necessary prerequisite for maintaining and growing one’s own business. There are many reasons why competitive imaging centers can be attractive to their customers, some of which are generic and some local to specific markets. Expedited patient access to major imaging is cited as one of the key stakeholder demands [1,3]. Increasingly, referring physicians are expecting their patients to be scanned as quickly as possible, and prolonged waiting lists for major imaging (computed tomographic and MRI) procedures will often influence a referrer to send patients to a competing facility if that facility offers, as they frequently do, faster patient access [3]. Furthermore, many independent OPICs maintain superior customer service levels compared with hospitals, offering, among other things, free amenities (including parking), dedicated reception staffs, and fast patient throughput and report turnaround, and they are generally willing to accept add-on patients from referring physicians’ offices [2]. For a hospital to compete successfully with these independent OPICs, it will likely need to match, and sometimes exceed, these customer service levels and, ideally, differentiate itself further, whether through the quality and speed of radiology reads, the range and quality of equipment, or by integrating the images and reports into the hospital’s information systems [1,3]. If the hospital cannot satisfy any of these, or other customer service criteria, then the OPIC venture will likely be a challenge and destined to fail.

Operators should also weigh what impact their new outpatient facility might have on their existing hospital-based scanners. Some might consider this a form a competition, albeit internal. However, there are several advantages to both patients and hospitals by offering outpatients the OPIC alternative. From a patient perspective, the OPIC is likely to offer a more convenient service,

with easier commutes and parking and more pleasant ambience. Furthermore, for hospital-based scanners, inpatients and outpatients have to compete with each other for the limited number of available scheduled appointments [1]. Indeed, inpatients are continuously disruptive to outpatient imaging, particularly if both are scanned using the same equipment [1]. An urgent inpatient scan or a patient from the emergency room will usually trump a scheduled outpatient who may have to wait hours while sicker patients are scanned. Therefore, by directing outpatients away from inpatient scanners, hospitals now have an opportunity to accommodate most inpatient scans in a timely fashion, a key stakeholder demand. Because outpatients can now be scanned on one of the hospital’s own outpatient scanners, there should be little risk for losing them to the external competition [1]. There may be a short-term loss of outpatient imaging revenue because of the Deficit Reduction Act, but this should be offset by the longer term benefits of saving inpatient costs (inpatients can be scanned earlier, helping reduce hospital lengths of stay) and the expected increase in outpatient volume at the OPIC.

Location

For traditional businesses, much is said about location being the key to success, and this is just as true for the OPIC market. Ideally, the location corresponds to the demographic area of the hospital’s referral base, so the bulk of the expected customers will not have far to travel [9]. However, placing an OPIC close to major highways (particularly highway intersections) will often encourage patients to travel from farther afield, particularly if it avoids other inconveniences (driving downtown, difficulties parking or finding hospital radiology departments). Alternatively, the OPIC could be located at or close to the hospital and referring physician’s offices (a location that is already well recognized by patients), if traffic and parking for patients are not too onerous. The fact that a competitor may have already located an OPIC in a prime location should not necessarily deter a hospital from opening one in a similar location. If the hospital can confidently assume that it can sufficiently differentiate itself from the competition on quality and service, then, in a free-market environment, its customers will likely gravitate toward the hospital, particularly if the competition is located close to the hospital or in an area where many of the hospital’s patients reside.

Space

Hospitals may choose to build or rent facilities, depending on the availability of existing facilities and cost constraints [9]. Building a facility is generally more expensive but does allow a hospital to customize the OPIC to its needs [9]. Moving into existing facilities will likely re-

quire adaptation from the ideal OPIC requirements because of space constraints and the needs of other clients in the same building, particularly if an MRI scanner is being sited (because of noise, weight, and shielding considerations). If renting, it is critical that the hospital have a good relationship with the landlord, either to facilitate timely acceptance of the hospital's proposals or to minimize any disagreements once the OPIC is fully operational. Any unresolved conflicts may encourage the landlord to obstruct any future OPIC expansion plans.

Indeed, planning for the potential expansion of services should be strongly considered at the outset but is often neglected in the flurry of activity during the initial startup phase. Although expansion may seem unrealistic or unlikely at or soon after the opening of the OPIC, it is not unusual for successful OPICs to require further capacity as business grows, either to expand existing modalities or to add new modalities. Expansion is usually easier with a freestanding building, particularly if it is owned by the hospital [9]. Sometimes it is considered prudent to construct "shell space" at the time of initial building, with the expectation that further equipment will be added when the market justifies it. For instance, the construction of a shell MRI room, complete with shielding and weight considerations, can significantly reduce future costs, which can usually be "bundled" at lower cost into the initial construction price [9]. The construction of shell space will also minimize any future disruptions to the OPIC's workflow, should additional equipment be needed. Further expansion, however, may not be possible in an existing office facility and could require the hospital to relocate its services completely, an expensive proposition given that many of the startup costs of the initial building will require duplication.

Finally, it is important that the OPIC have the right ambience and that its space have the appearance of relative comfort and be pleasing to the eye. Comfortable furniture, free magazines, and coffee can be added, all of which give patients a sense of ease and relative relaxation. Free parking facilities should be offered nearby, and appropriate signage should be placed on and around the OPIC building. Patients are readily frustrated if they have difficulty finding the building and have trouble parking.

Equipment

Operators need to choose their equipment carefully, particularly if hospital-based equipment offers superior scanning capabilities. Given that there is an increasing and expanding role for "higher-end" imaging (eg, 3-D, cardiac, and multiplanar imaging), an OPIC that does not offer these capabilities risks undermining the success of the outpatient facility [9]. At the very least, it may be prudent to install equipment at the OPIC with capabil-

ities similar to the hospital-based scanners. Otherwise, physicians may perceive the OPIC equipment to be inferior and become hesitant to refer patients to the outpatient site, even though for the vast majority of scans, the equipment may be clinically adequate. Referrers may then decide to send their patients to the hospital-based scanner only, or worse, from the hospital's point of view, to a competitive freestanding imaging center, just what the hospital is trying to avoid. Indeed, it may even be prudent to install superior equipment compared with the main hospital scanners (and ideally the competition), giving referrers more reason to direct their patients to the OPIC. Managers should also strongly consider regular equipment and software upgrades as these become available, the costs of which are ideally bundled into the original equipment purchase contract.

Some independent OPICs are accused of "cherry picking" the higher-end, more lucrative computed tomographic and MRI business from hospitals, leaving the hospitals with a greater proportion of the less profitable radiology business. But many referrers also desire that OPIC facilities offer other, less lucrative procedures (eg, mammography, fluoroscopy). Referrers may therefore preferentially send their patients to an OPIC that offers a full or greater range of imaging services, believing that this imaging center has a more "holistic" approach to patient care and is not purely "in it for the money." As such, these less profitable modalities can act as "loss leaders" by drawing in other, more lucrative business, which may not be referred otherwise. Hospitals should therefore carefully consider whether they should simply follow the competition and install only the most profitable modalities. In the short term, however, usually because of budgetary constraints when initially opening a full-service OPIC, a hospital may have no choice but to offer only the higher-end MRI and computed tomographic services, but referrers should be made aware that other modalities will be considered as the business grows and funding becomes more available.

Information Systems

Typically, an OPIC will need physician coverage on-site for potential intravenous contrast reactions and occasionally to discuss clinical issues with patients or technologists. Most images, however, need not be interpreted on-site, and hospitals will usually want to network images into the centralized hospital picture archiving and communication system (PACS), either because it provides hospital-based subspecialty radiologists the ability to interpret the images or because images can be placed on an institutional enterprise network, making them readily available to referring physicians. This is an important differentiator from independent freestanding imaging centers, which usually cannot network images and

reports into a central hospital information system. The number and type of images generated will dictate the necessary “bandwidth” required to network images expeditiously both to and from (so that on-site radiologists can access hospital-generated images) the central PACS [10,11]. Thus, given the “two-way traffic” of images to and from the hospital PACS, higher bandwidth (such as provided by a T3 line) is usually required to ensure the expeditious transfer of images [10,11]. Rapid image transfer to the PACS also permits OPIC technologists to request hospital-based radiologists to immediately review images from patients for whom they have concerns, who may then need to be further evaluated at a referring physician’s office or in an emergency room.

Although image availability for “in-network” referring physicians may be seamless, it can be hard for out-of-network physicians to have access to the hospital PACS. However, hospital information system departments can make special dispensations to some key out-of-network referrers and install virtual private networks, enabling these physicians also to access images on the hospital PACS [10]. This may be the “deal breaker” in persuading these physicians to refer their patients to the hospital OPIC rather than to an existing competitor.

More recently, physician order entry (POE) software has been introduced, enabling referring offices to schedule patients from their desktops [12,13]. Sometimes this also allows referrers to determine where and when there are available appointments within the hospital’s network of scanners. Some POE programs have decision support software embedded into the scheduling function, which guides (and sometimes mandates) referrers to order only those examinations that the organization deems appropriate [13]. Some third-party payers even consider decision support as an appropriate surrogate for examination precertification. Given that the usual precertification process can be intensely frustrating to referrers, POE with decision support offers hospitals a unique strategy for “locking in” their referral bases [12,13].

OPERATIONAL EXCELLENCE

Maximizing Productivity

All modalities, but particularly the most lucrative, should operate as productively as possible to meet stakeholder needs, retain and grow market share, and maximize profitability [14]. This will require optimization of the workflow, which usually necessitates modification of any existing hospital-based outpatient work flows, particularly if hospital scanners share both inpatient and outpatient examinations [14-16]. Maximal productivity will require, among other things, optimization of the staffing mix, minimizing the examination length, and extending the hours of operation. These are discussed in turn.

Staffing Mix. High patient throughput should be the key goal of any OPIC, helping reduce waiting lists (a key stakeholder demand) with the added benefit of maximizing revenue [14-16]. All personnel must recognize that the workflow will be designed toward meeting this goal [3,14].

Timely patient arrival to the OPIC suite should reduce disruptions to the schedule. Urgent patient add-on examinations, potentially disruptive to the schedule, should be expected and accommodated for [8,14]. For computed tomographic and MRI scanners to operate as productively as possible, patients must be delivered and removed from the scanners as quickly as possible. These goals can be achieved only through the use of multiple personnel, which, to some hospital-based operators may at first seem excessive because of the additional costs of such maneuvers, rather than recognizing the potential ensuing revenue opportunities [1]. First, there should be sufficient patient schedulers to ensure fast access for referring physician requests. This may require hiring dedicated outpatient schedulers (sometimes with dedicated telephone lines) who are specifically trained to understand the customer service requirements of this business. If hospital operators choose to maintain the existing hospital-based scheduling process (sometimes perceived as cumbersome, with relatively poor customer service), physicians may not be persuaded to redirect referrals to the new OPIC, particularly if competitors offer an easier scheduling process. As discussed, some referrers now prefer POE programs, avoiding scheduling personnel altogether [12,13]. In any event, schedulers (or other ancillary personnel) should confirm patient appointments the day before the examination to ensure that patients arrive on time, minimizing unnecessary disruptions to the workflow.

Second, some busier OPICs employ patient coordinators to facilitate patients’ arrival and registration processes and help ensure that patients are delivered to and removed from scanners expeditiously. There should also be sufficient front desk staff to attend to new patient arrivals and to handle potential problems, which inevitably occur (eg, scheduling mix-ups, patient complaints, unexpected requests for films or compact disc copies).

Third, once patients are delivered to technologists, the patients should spend as little time as possible within the scanner room, so that the technologists can move on to the next patient. This will also require multiple personnel, enabling the team to perform many of the necessary operational tasks in parallel, rather than in series. For instance, it has been demonstrated that a single technologist will take, on average, 27 minutes to process a patient through a computed tomographic scanner, whereas it takes 11 minutes with 2 technologists and 8 minutes with 3 technologists [14]. Alternatively, a third technol-

ogist could be replaced by a technologist aid or dedicated nurse for intravenous catheter placement [14]. The potential revenue resulting from this increased capacity and productivity far exceeds the relatively minor costs of these additional personnel [14]. In other words, it makes little sense to operate expensive equipment with insufficient personnel to save costs, given the major revenue potential, let alone service benefits.

Manipulating the Schedule. Once the appropriate personnel are in place to scan patients faster, it should be possible to manipulate the existing schedule to provide shorter examination slots (eg, 10-minute or 15-minute intervals for computed tomography) [14]. Shortening the examination slots is more challenging for MRI, however, given the prolonged scan lengths, but can be reduced by minimizing the number of unnecessary MRI pulse sequences. This can be challenging for hospital-owned OPICs, because some hospital radiologists, particularly academic radiologists, have become used to scanning their patients with numerous and prolonged pulse sequences, with the intent that all patients be scanned with the ideal MRI protocol. The majority of outpatients, however, may not routinely benefit from these additional pulse sequences, so the goal is to obtain the right balance between too many and too few pulse sequences for MRI protocols. Some departments, therefore, have instituted policies whereby technologists adhere to standardized MRI protocols, unless they uncover an unexpected history from a patient immediately before scanning. In such circumstances, they discuss the case with the covering radiologist, who could at this point change the MRI protocol, if necessary.

Extending the Hours of Operation. Finally, lengthening the hours of operation (ie, into the evening hours and weekends) offers the opportunity to decrease patient waiting lists, provide more convenience to patients, and further enhance revenue. Considering that computed tomographic and MRI equipment have high fixed costs, it makes little sense, given a healthy referral base, to operate these scanners during weekdays only. For instance, it has been demonstrated that OPICs that offer after-hours in addition to weekday services have the potential to scan nearly twice the number of patients as those offering weekday services alone [14]. The revenue implications can run into millions of dollars, which far exceeds the cost of operating after hours.

Customer Service and Marketing

Hired staff members should be made fully aware that OPICs should ideally operate according to different business principles compared with hospital-based scanners [1]. Staff members must execute optimal customer service levels at all times, not just because “it is the right

thing to do” but also because referrers in a competitive OPIC environment may choose to send their patients elsewhere, should they, or their patients, be dissatisfied [1,2,17-20]. Indeed, superior customer service levels can be the major determining factor affecting referral patterns from referring physicians [8,17,19,21].

To maintain premium customer service levels, dedicated marketing personnel should be employed whose role is not simply to leave materials at physicians' offices in the hope that this will generate new business. Successful marketers should be responsible for identifying and communicating referring physician service requests to the operational team. Marketing personnel should be responsible for developing and implementing customer satisfaction surveys and communicating results back to the management team [8,21-23].

Although one marketing goal is to create new referrals from outside the hospital network (to maximize profitability), it must be remembered that the key radiology stakeholders lie within the existing organization itself. Because many referring physicians can choose to refer their patients outside of the network, their referrals should never be taken for granted, and marketers must regularly visit these offices to maintain a regular communication stream, either listening to referrers' concerns or educating them on new OPIC services [8,21-24]. Specific focus should be placed on newly employed physicians, with the intent that their referrals will, hopefully, stay within the network. More challenging is what to do with those referrers who already refer patients out of the network. Often, relationships between these physicians and the competing OPICs run deep, and it can be readily assumed that the competing imaging centers will do everything possible to try to maintain the allegiance of those referring physicians. At a minimum, the marketing personnel from the competing OPICs should, ideally, be barred from hospital property. In addition, these referring physicians must be persuaded that their patients should now be just as well served, if not better served, by referring to the new OPIC, particularly if the images and reports from the OPIC now reside within the hospital information system [3].

Although in-network marketing should continue in perpetuity, marketing to nonnetwork physicians, although more challenging, should be implemented just as vigorously. Marketers must clearly understand why their OPIC can be positively differentiated from competing OPICs [8,17,21]. This could be due to the availability of newer equipment, the use of more sophisticated scanning protocols, or a greater range of subspecialty radiologists, or perhaps by offering dedicated imaging slots to the higher referrers. It may also be advantageous to offer these higher referrers the ability to view images and reports electronically, a particular challenge for hospital

information system departments but a readily achievable goal through the use of virtual private networks.

Finally, all staff members (including radiologists) should act as representatives and marketers of the OPIC. As such, every interaction with customers (patients and referring physicians) should be a “marketing” opportunity, designed to deliver the highest levels of customer service [8,17-24].

Management and Leadership

Considering that the OPIC offers the hospital the chance of meeting many stakeholder demands (including being a major profit center), it should have a dedicated leadership team whose primary focus is the success of that OPIC [1]. This team should at least include, among others, a business manager, a lead technologist from each modality, the medical director, and the lead marketer. Including personnel on the leadership team from multiple areas of the operation helps create “buy-in” from all staff members when operational changes and improvements are necessitated. For instance, having a lead technologist on the leadership team will help that person disseminate the reasons behind any operational changes to line technologists, who might otherwise have little understanding and enthusiasm for improving performance [18].

The leadership team should meet regularly, ideally weekly, to evaluate the success of the existing operation, identify and provide solutions to operational problems, and explore new business and revenue opportunities. This will require a “data-driven” management style, with the frequent evaluation of several key metrics pertaining to the success of the business [3,25,26]. These will include, among others, weekly, monthly, and yearly analyses of patient volumes and physician referrals. This will permit the early detection of deviations from budget forecasts, enabling the managers to investigate the discrepancies and implement potential solutions [3].

The success of the OPIC is highly dependent on the acumen of the business manager, who is responsible for setting budgets, negotiating equipment and space purchases, collaborating with the hospital on payer contracts, and ensuring that examination collections are maximized [25-29]. This member should provide regular feedback to the leadership team on the financial performance of the OPIC compared with budget forecasts. Their contribution is critical when additional equipment or space is being considered, because their business plan will help guide the leadership team as to whether a new project is feasible and likely profitable. Their input also helps educate nonbusiness personnel (lead technologists and physicians) on the importance of prudent accounting: how to minimize unnecessary costs while maximizing revenue. Unless the clinical and business lead-

ership teams are regularly communicating and sharing strategic goals, it is possible that neither party will understand their differing agendas, and strategic initiatives will inevitably be harder to implement and realize [3,26,29,30,31].

SUMMARY

Hospitals are recognizing that owning and operating OPICs is increasingly important for meeting stakeholder expectations and maximizing revenue. The success of a hospital-owned OPIC is dependent on multiple factors, including its competition, location, and ambience; the services it offers (including integrated information systems); the customer service of its staff; optimal workflow procedures; marketing; and a dedicated management and leadership team. Market share should never be taken for granted, because competitors, recognizing the financial opportunities, will relentlessly pursue new business opportunities, even from hospital-networked physicians. The management and leadership team should dynamically monitor, using key operational and financial metrics, the OPICs performance. This enables the early detection of any variances to financial or operational expectations, providing opportunities to develop strategies and solutions for maximizing market share and financial return.

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