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The Inevitable Rise of Outpatient Imaging Centres

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Countries around the world have different relationships to advanced diagnostic imaging in the out of hospital (outpatient) environment. In Australia and Italy, it is not uncommon to find imaging centres in shopping malls, a concept which is anathema to both the United Kingdom & South Africa. A shift from hospital based imaging services to a mixed model of both hospital and outpatient centre imaging is inevitable in the current environment. The reasons for this can be explained from a financial, operational & patient perspective.

Hospitals have traditionally been bastions of capital intensive resources such as computed tomography (CT) and magnetic resonance imaging (MRI); in state healthcare systems it is most common for hospitals to have both the resource and the expertise to run both inpatient and outpatient imaging services. In the USA, greater state reimbursement for imaging taking place in a hospital environment has incentivized the status quo. Indeed, imaging remains important to the bottom line of many institutions, subsidizing less profitable service lines.

However, providing both inpatient and outpatient imaging within hospitals can prove extremely inefficient. Operationally, scanners may be tied up for considerable periods with challenging inpatient requirements. Even with dedicated ‘outpatient scanners’ it is not uncommon for unexpected downtime to lead to delays in scheduled outpatient imaging. Overheads and fixed costs are also greater within a hospital making a dedicated outpatient diagnostic imaging centre more efficient both financially and operationally.

But do these centres provide advantages for the patient? I would argue they do, both in terms of convenience, emotional experience and in some cases, cost. Bringing imaging closer to the patient is now eminently possible. A centralised booking service can offer a choice of locations within a network, providing flexibility both in time and geography. Establishing an imaging hub to service family doctors or specialist physicians in an outpatient setting also allows potentially less travel time between referral and scan.

The ability to park is an undervalued commodity. Outpatient imaging centres are usually designed with this in mind, whereas parking space is often the first area cannibalized by hospitals expanding inside a limited geographical footprint. Additionally, there is no reason why outpatient imaging centres need to look, or feel, like hospitals. The design concept of modern imaging centres can be more geared around patient experience and workflow, designed to reduce anxiety. Finally, cost savings achieved in an outpatient setting may be passed on to the payer. In the case of private patients, this may mean a direct saving to either the patient or their insurer.

The development of outpatient imaging centres in many countries has often been led by entrepreneurial Radiologists who own and operate the imaging equipment. But this environment is becoming more challenging. Declining reimbursement, alongside increased demand, forces improved efficiency, driving consolidation to larger and more efficient players such as Affidea in Europe and Radnet in the USA.

Surprisingly, arguments against outpatient imaging centres are often made by clinical staff. There is a perceived loss of control, and concern that Radiologists out of hospital will no longer be part of the multidisciplinary team or be available to answer clinical questions.

As those countries with developed outpatient imaging services understand, the answer is not binary. Radiologists will always remain an essential

part of the on-site hospital team. Not only has there been an exponential increase in the requirement for inpatient imaging as a central role in the diagnostic pathway, but inpatient imaging is more and more required to guide intervention – both diagnostic (biopsy) and for real time intervention, vascular and radiation therapy in particular.

Another argument against the outpatient centre is that Radiologists must be co-located with scanners in order to correctly protocol and oversee the scans, as well as contrast administration. However, in the last decade there have been massive and well documented technological changes – from centralized radiology information systems (RIS), fully digital picture archiving and communication systems (PACS), to voice recognition and the move towards the electronic patient record. More recently, there have been developments in smart protocolling that remove the need for individual scrutiny of every request, as long as there is sufficient clinical detail and a clear clinical question. This coupled with senior technicians (Radiographers), able to operate independently, have allowed the development of satellite outpatient imaging centres that do not require the full time presence of a Radiologist. Although there must always be a Radiologist available remotely to view scans, answer clinical questions and communicate urgent results, contrast may be administered under supervision of a non-specialist doctor with resuscitation training.

This is of great benefit to patients in remote regions. Radiologists no longer have to be single handed, or be expected to have expertise in every area of Radiology. Reporting hubs offering subspecialty expertise and even home-reporting are massively more efficient, with reduced interruptions, improved workflow and smart worklists. Of course this is contingent upon receiving support by an adequate IT infrastructure. Fear of dissociation from clinical teams can be allayed by regular clinical interaction at meetings either in person or by video conference.

These factors all contribute to an inevitable rise in outpatient imaging centres even in countries where the penetration is currently low. The continued rise of the outpatient imaging centre is inevitable in an era of value based healthcare and in an environment where patient experience plays an ever increasing role in how services are delivered.

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