

## Access to Diagnostics

*– A key enabler for a primary care led health service*

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## Executive Summary

This report explores current GP access to radiological and endoscopic diagnostics in general practice. Based on a survey of Irish GPs it outlines access for both public and private diagnostics and GP opinion on how this affects their ability to provide an effective service for patients. A postal survey was conducted on a sample of GPs on the ICGP membership database; the response rate was 58.4% (n=292) and the respondent profile is consistent with that of the full membership population.

### Key findings

- More than 20% of GPs do not have direct access to either abdominal or pelvic ultrasound in the public system. Where access is available public patients have an average 14 week waiting period but this varied from one day to 42 weeks depending on geographical location. In stark contrast in the private system virtually all GPs have direct access to ultrasound with an average wait of just over four days.
- In the public system 70-80% of GPs have no direct access to CT Scan. Even where it is available, there is an average 16 week wait but this varied from less than one week to 48 weeks. In the private system 90% of GPs have access to CT Scanning with an average waiting time of 5.5 working days.
- Approximately 10% of GPs have direct access to MRI Scan in the public system. The average wait for MRI Scan in the public system was 22 weeks but varied from six days to 72 weeks. Virtually all GPs have direct access to MRI Scan in the private sector within seven working days.
- One quarter of GPs do not have direct access to Dexa Scan in the public system where available, the average wait was 24 weeks compared to less than seven working days in the private system.
- Direct access to gastroscopy was available to 64% of GPs with 57% having direct access to colonoscopy in the public system while 85% have access in the private sector. A 12 week waiting list for public patients contrasts with a 12 day access for public patients.
- The majority (86%) of respondents were of the opinion that increased access to diagnostics would reduce their referrals to emergency departments and improve the quality of their referrals. When questioned regarding OPD referrals, 90% felt that improved access would reduce their referrals to out-patient departments while 92% felt this would improve the quality of these referrals. Overall 87% believed that improved access to diagnostics would reduce unnecessary admissions.

### Recommendations

1. Increase access to diagnostics for GPs for public patients.
2. Introduce national referral guidelines for access to diagnostics developed using a partnership approach between primary and secondary care.
3. Provide enhanced education for GPs on the use of referral guidelines.
4. Develop structured referral forms which are integrated into GP software systems.
5. Provide rapid results of investigations to GPs.
6. Monitor and audit the new system and provide feedback to GPs.

### Conclusion

In all services, the access to diagnostics for public patients is unacceptably long when compared to private patients. There is no doubt that as a result GPs are forced to refer patients inappropriately to overcrowded emergency departments in order to access diagnostic tests. This can be an unnecessary traumatic experience, particularly for elderly patients, and places an extra costly burden on hospital services. Patient access should be on the basis of need not on the ability to pay.

GPs are highly trained specialists who are currently constrained in their ability to deliver a quality service to their patients due to limited access to diagnostics in the public health system.

Irish GPs believe and international evidence concurs that increased access to diagnostics will lead to a reduction in diagnostic delay, a reduction in the number of referrals to both emergency and out-patient departments, a reduction in unnecessary admissions and an improvement in the quality of referrals overall. This in turn will lead to more effective use of the hospital services and improve the quality of service for Irish patients.

## Introduction

Patients present to general practice with a variety of undifferentiated symptoms. The general practitioner (GP) is a skilled diagnostician as symptoms and signs of serious and common conditions often overlap and there is a high prevalence of medically unexplained symptoms. As a result “the diagnostic process in general practice is as often a combination of shortcuts, loops and dead ends as it is a straight line going from presentation to diagnosis”<sup>1</sup>. It is not surprising therefore that the importance of appropriate access for GPs to diagnostics has been highlighted in a number of Irish Health Service Reports<sup>2,3,4,5</sup>.

The primary care strategy provided the road map for a primary care led health service and it clearly states that “Primary care teams will have direct access to appropriate hospital-based diagnostic services based on local protocols, which can support earlier intervention and better on-going care for individuals”<sup>2</sup>. The A and E 10 point plan promoted enhanced access to GP diagnostic services to support diagnosis, prevent GP referral to the emergency department and speed up treatment in the inpatient setting<sup>4</sup>.

The Tribal Secta Report clearly outlined the importance of access to diagnostics for GPs and highlighted how lack of access left them with no option other than hospital referral. In many instances the only option available to GPs when a patient needed an urgent scan or test “given that waiting for out-patient appointments can be months” was to send a patient to the emergency department or attempt to get the patient admitted to an in-patient bed, a scarce and entirely inappropriate resource<sup>3</sup>.

The Acute Hospital Bed Review supported improved GP access to hospital and community diagnostics to reduce delays and avoid unnecessary admissions<sup>5</sup>. The Controller and Auditor General commented on a community based diagnostic initiative developed by the HSE in 2007 to improve GP access to xray and ultrasound. The resulting HSE report found it led to reduction in waiting times, improved access for patients and that there was spare capacity within public and private facilities<sup>6</sup>.

Studies in Irish general practice reinforce the importance of these findings<sup>7,8,9</sup>. In a recent report two thirds of GP respondents indicated that their fee paying patients had difficulty accessing diagnostic tests with this figure rising to 99% of GMS patients<sup>7</sup>. The diagnosis of heart failure is severely hampered by lack of access to diagnostics with 54% of GPs unable to access Natriuretic Peptide testing and 99% unable to access echocardiography for their public patients<sup>8</sup>. An audit of a pilot project of direct access to xray and ultrasound demonstrated less referrals to emergency departments and more appropriate referral to OPD. Positive patient satisfaction and professional satisfaction were also reported<sup>9</sup>.

The focus of this report is on current GP access to radiological and endoscopic diagnostics in general practice. Based on a survey of Irish GPs, it outlines current access for both public and private diagnostics and GP opinion on how this affects their ability to provide an effective service for patients. The international experience of GP access to diagnostics is explored, and proposed solutions to the problems identified are also included.

## GP Access to Diagnostics – the international experience

A literature search was undertaken using the medical reference database PubMed (<http://www.pubmed.gov>) applying appropriate keywords and search terms that included general practitioner, family practice, primary care, access, diagnostics, laboratory testing etc. From this literature search, abstracts and full-text papers were sourced and reviewed. Also related articles from the most relevant papers were evaluated. In addition a search of Google with relevant search terms provided reports and studies from Ireland and the UK and from these reports key material was analysed.

International studies on the provision of access to diagnostics for GPs have focused on a number of areas including appropriateness of referral, diagnostic yield and concerns regarding exposure to radiation. Delay in diagnosis, impact on hospital referral and service provision have also been studied. Successful methods of modifying test ordering behaviour have been identified.

### *Appropriateness of referrals and diagnostic yield*

Direct access to diagnostics in general practice appears to increase demand for testing but does not reduce appropriateness of testing or diagnostic yield<sup>10</sup>. Concerns regarding inappropriate referrals if direct access is granted to GPs, leading to consequent overload of the service, have not been found with only 12% of referrals considered inappropriate in one British study<sup>11</sup>. Imaging requests by GPs and hospital specialists have similar diagnostic yields<sup>12,13,14</sup>. Over a 12 year period with open access to MRI in a London teaching hospital, GPs accounted for 2.6% of department workload; 86% of GP requests were for MRI of spine, knee and brain, 48% were normal while 26% had serious pathology<sup>15</sup>. Direct access to CT Scan and MRI (with appropriate guidelines in place) led to a good diagnostic yield in a study from Edinburgh<sup>12</sup>. In an interesting study focusing on the management of patients with chronic daily headache guidelines were provided to GPs facilitating appropriate access to CT of brain<sup>16</sup>. The referral rate for brain CT was 1.2% from headache consultations (232 out of a total of 18,702 consultations). A London based group explored the effect on patient management of providing direct access to diagnostic imaging tests<sup>17</sup>. There were three core components in the process to support appropriate GP referrals – referral guidelines, structured referral forms and clinical triage with telephone feedback to GPs suggesting alternative tests or contraindications to testing. Electronic reports were sent to the GP within 48 hours of test completion enhancing GP and patient support. In this study 32% of patients referred for echocardiography were found to have an abnormal report but only 29% of these were referred to secondary care as the majority were managed in primary care. In the case of MRI, 79% of those referred had an abnormal result with 63% referred for specialist opinion. Direct access to ultrasound resulted in 54% abnormal reports and 26% of these patients were referred to secondary care. Overall 71% of patients referred for diagnostic imaging were managed in the primary care setting<sup>17</sup>. In a study from the Netherlands GPs used the open access echocardiography service efficiently – only 24% of referrals did not yield relevant disease<sup>18</sup>. An ICGP study showed a high positive detection rate from direct access to dexascan with 30% found to have osteoporosis and 44% osteopaenia<sup>19</sup>.



### Exposure to radiation

There has been a rapid increase in the use of diagnostic imaging in recent years. These investigations may not always be necessary. Therefore when proposing increased access to radiology it is important to bear this in mind. An estimated 62 million CT scans (including 4 million in children) were performed in the USA in 2007 for symptomatic and increasingly nonsymptomatic indications. Computed tomography is an increasing source of radiation exposure<sup>20</sup>. It is generally accepted that the use of diagnostic xrays carries a small risk of increased cancer<sup>21</sup>. Guidelines for appropriate referral are needed to highlight information such as one lumbar spine xray is equivalent to forty chest xrays and a Chest CT scan is equivalent to 440 chest xrays in terms of radiation exposure<sup>22</sup>. Limitations of CT Scanning should be included in guidelines. For example CT Scan is not indicated in the assessment of uncomplicated low back pain and has only a limited role in sciatica. Caution in interpretation of results is also advised as herniated lumbar discs are commonly found in asymptomatic individuals – 19.5% of those under 40 years of age and 26.9% of those over 40<sup>23</sup>.

### Delay in diagnosis

One of the principle barriers identified by Irish GPs in relation to early detection of cancer was the lack of direct access to diagnostics<sup>24</sup>. This barrier was also identified in the national audit of cancer diagnosis in primary care in the UK<sup>25</sup>. The British Government intends to invest £450 million in the next four years to support GP direct access to diagnostics for patients with suspected cancer. Tests include direct access to chest xrays, non obstetrical ultrasound for ovarian cancer, MRI for suspected brain cancer and flexible sigmoidoscopy/colonoscopy. Early detection is likely to be cost effective but not cost saving leading to improved health outcomes and reduced treatment costs<sup>26,27</sup>. A study by Sibbald indicates direct access results in reduced waiting times from presentation to testing and treatment<sup>28</sup>.

### Impact on referrals

A review by Roland found that direct access to diagnostic tests allows GPs to manage a substantial number of patients who would otherwise have been referred to the hospital out-patient department (OPD)<sup>29</sup>. In a study of referral patterns to OPD by the King's Fund<sup>3</sup> 33% of referrals were for tests/investigations that the GP could not order. GPs in Greater Glasgow have had direct access to CT scanning for investigation of chronic daily headache since 1999. A prospective study showed that following CT, 86% of patients did not require specialist referral<sup>29</sup>. In another study, early access to MRI compared to referral to an orthopaedic specialist did not alter GPs diagnosis or treatment plans but significantly increased their therapeutic confidence<sup>30</sup>. A Dutch study<sup>31</sup> demonstrated a change in management by GPs in 60% of patients following chest xray resulting in a substantial reduction in referrals and initiation or change in therapy.

### Service provision

The provision of increased access for GPs to diagnostics will need to be flexible in terms of service provision. Suboptimal clinical referral information or lack of access to previous imaging in the primary care setting could increase the need for unnecessary subsequent investigation or referral<sup>32</sup>. It is unlikely that a one size fits all approach will be effective and flexibility in utilising existing resources will be needed. There is limited information available on costing associated with increased access to diagnostics for GPs versus hospital based access only. Simpson<sup>29</sup> suggests a costing model could be based on the cost of an initial OPD appointment, the average number of patients referred for CT from the OPD and the average number given a further follow up appointment minus the cost of the direct access to CT and reduction in referral to OPD. A randomised control trial for direct access to magnetic resonance imaging for knee problems in the UK resulted in an increase in costs which were offset by a statistically significant improvement in health related quality of life<sup>33</sup>. Open access to transvaginal sonography in women of reproductive age with abnormal vaginal bleeding



improved diagnosis and management by GPs. Access resulted in an increased number of patients referred at an earlier stage contributing to cost effectiveness<sup>34</sup>.

### *Modifying test ordering behaviour*

Yelland explored the process of ordering radiological tests by clinicians<sup>33</sup>. Primary clinician considerations included the potential impact on the clinical outcome for the patient, the probability of significant findings based on the clinical picture and the sensitivity/specificity of the test. Secondary considerations included patient reassurance, medicolegal and compensation issues and the costs and risks of the investigation.

A systematic review of the literature indicated that multiple interventions to modify test ordering rather than single interventions were more successful. The successful interventions comprised a combination of the use of peer group activity, audit and feedback, guideline dissemination, reminder messages and modification of test order forms<sup>35</sup>. An interesting randomised control trial from the Netherlands compared the use of a restricted test order form (limited number of test options) to a guideline based order form – 20% fewer tests were ordered by the guideline based group compared to the restricted form group<sup>36</sup>. Another Dutch study using a combination of guideline dissemination, personalised feedback and regular peer small group meetings led to a significant reduction in testing<sup>37</sup>. Limited uptake of direct access by GPs can be an issue highlighting the need to engage GPs in the planning and implementation of new services<sup>28</sup>.

In a Cochrane review of interventions to improve outpatient referrals from primary to secondary care, ineffective strategies included passive dissemination of guidelines, feedback on referral rates and discussion with an independent medical advisor<sup>38</sup>. Effective interventions included dissemination of guidelines with a structured referral form.

## **Methods**

As part of this work, we conducted a postal survey of GPs on the ICGP membership database. The questionnaire and one reminder were sent to a sample of 500 GPs. The response rate was 58.4% and the respondent profile is consistent with that of the full membership population.

Data analysis was carried out using PASW (Version 18) using univariate and bi-variate analysis as appropriate. Descriptive statistics including frequencies, percentages, range, median, mean and standard deviation are reported for most analyses. The waiting times for tests reported are based on working days and excludes outliers.

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## **Results**

### *Demographics*

Overall, 44.3% of respondents were female and the majority (67.1%) were more than 15 years in practice (Table 1). The average number of doctors working in a practice was three; 44.6% of respondents reported that their practice had 1-2 doctors; 46.7% had 3-5 doctors while the remaining 8.7% had >5 doctors in the practice.

**Table 1: Years in general practice**

YEARS	%
<5	17.8
5-<15	25.1
15-<30	42.1
30+	15
<b>Total</b>	<b>100</b>

Table 2 shows 39.9% of respondents had a primary practice location in a town and 45.7% were less than 5 miles from the nearest hospital for acute admissions (Table 3).

**Table 2: Practice location**

LOCATION	%
City	33.7
Town	39.9
Village	26.3
<b>Total</b>	<b>100</b>

**Table 3 Distance from an acute hospital**

MILES	%
< 5	45.7
5- 25	38.7
>25	15.6
<b>Total</b>	<b>100</b>

### Access to services

There was a marked difference in access to diagnostics for patients in the public healthcare system versus those in the private system. In the public system direct access was defined as access to tests by a GP without referring to another practitioner first, which the patient could then receive free of charge.

There was a great deal of variability in the waiting times for access to diagnostics in the public system as illustrated in Table 4. Waiting times showed a wider distribution and a higher mean in all cases in respect of the public system when compared to the private system (Table 5). The narrowest differential in the mean between public and private was noted for chest xray and xray for trauma. The comparatively low numbers with direct access in the public system for CT scans and MRIs are of note when comparing the summary statistics.

While virtually all GPs had direct access to chest xray, the waiting time varied from 1 - 22.5 working days with a mean of 4.78 working days. Access to private chest xrays had a narrower waiting time distribution and a lower mean of 1.3 working days. In the private system 70% of GPs reported that access to chest xray was within one working day and all within 3.5 working days whereas comparative figures for the public system were 37.5% and 57.5% respectively.

In terms of xray for trauma, the average waiting time was 2.6 and 1.17 working days respectively for the public and private systems with 81.1% and 58.5% respectively reporting access within one working day and 100% and 77.9% respectively reporting access within three working days.

There was in the region of an average 14 week wait for access to abdominal or pelvic ultrasound in the public system but this varied from one day to 42 weeks depending on location. In the private system the average wait was just over four days. In the private system, 91.2% and 90.4% of GPs reported access to abdominal and pelvic ultrasound respectively within five working days; the equivalent reported for the public system was 1.3% and 2% respectively.

In the public system, there was an average 16 week wait for CT scan but this varied from less than one week to 48 weeks, however, the numbers reporting direct access were low. The average waiting time in the private system was circa 5.5 working days. In the private system, all GPs reported access with 10 working days compared to 19.6% for brain CT scan, 8.6% for chest CT scan and 6.5% for abdomen CT scan in the public system.

The average wait for MRI Scan in the public system was 22 weeks but varied from six days to 72 weeks, however, the numbers reporting direct access were low. In the private system, the average wait was less than six days. In the private system two-thirds or more of responding GPs reported access within seven working days; this was reported by 4.8% to 5.6% in the public system depending on MRI type.

The average waiting time for Dexascan in the public system was 24 weeks compared to less than seven working days in the private system. Only 2.1% of GPs reported access within 10 working days via the public system compared to 90.4% via the private system.

Of the tests listed, the average waiting times in the private system was longest for gastroscopy and colonoscopy – both in the region of 12 working days. However, the comparable data for the public system was in the region of 12 weeks. In the public system 5% and 7.1% reported access within 15 working days for gastroscopy and colonoscopy respectively while in the private system access in this timeframe was reported by three-quarters of responding GPs.

### Access protocols

Provision of GP protocols for access to services was uniformly low (Table 6); 28% of respondents were aware of direct access protocols for plain xray in public hospitals with 27% aware of dexascan protocols and 32% aware of endoscopy protocols. Only 17% were aware of ultrasound protocols in public hospitals with even fewer related to CT Scan and MRI access in public hospitals. Private hospitals did not perform any better overall other than providing more information on CT Scan and MRI access.

Among respondents 86% were of the opinion that increased access to diagnostics would reduce their referrals to emergency departments and improve the quality of their referrals (Table 7). When questioned re OPD referrals, 90% felt that improved access would reduce their referrals to out-patient departments while 92% felt this would improve the quality of these referrals. Overall 87% believed that improved access to diagnostics would reduce unnecessary admissions.

**Table 4: Direct access to diagnostics in the public system**

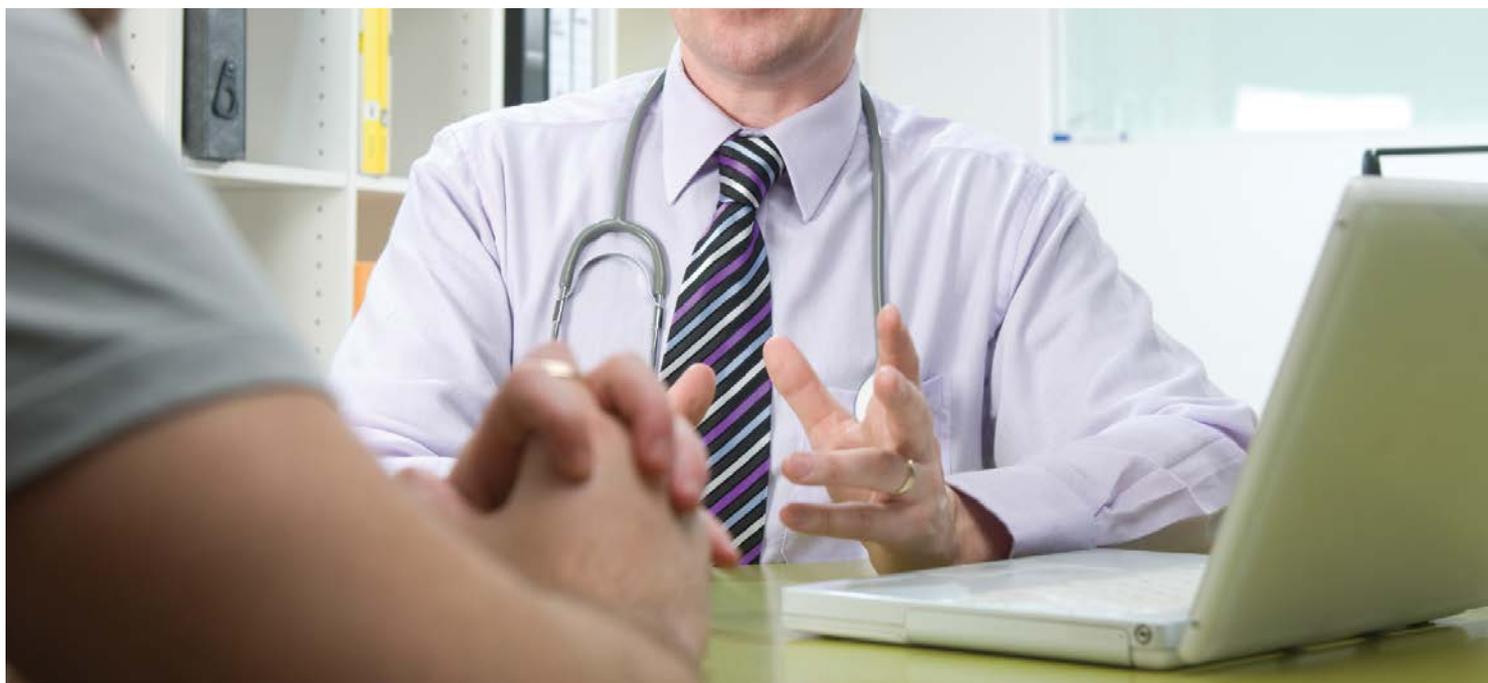
	DIRECT ACCESS	IF YES, AVERAGE WAITING TIME IN WORKING DAYS*			
	%	N	Range	Mean	Median
Chest Xray	99.6	120	1-22.5	4.78	2
Xray for Trauma	66.0	68	0.5-12.5	2.60	1
Abdominal Ultrasound	78.6	157	3-180	67.54	60
Pelvic Ultrasound	75.4	152	1-210	72.20	60
CT Scan Brain	28.5	51	1.5-120	43.53	30
CT Scan Chest	20.1	35	7.5-180	62.07	45
CT Scan Abdomen	18.4	31	7.5-240	72.66	55
MRI Brain	10.5	20	6-240	112.43	110
MRI Spine	10.5	18	6-180	99.36	120
MRI Musculoskeletal	9.3	21	6-360	120.40	120
Dexascan	75.1	142	5-300	104.26	90
Gastroscopy	64.0	121	0.5-130	59.27	60
Colonoscopy	57.1	113	0.5-180	68.58	60

\*Outliers excluded

**Table 5: Direct access to diagnostics in the private system**

	DIRECT ACCESS	IF YES, AVERAGE WAITING TIME IN WORKING DAYS*			
	%	N	Range	Mean	Median
Chest Xray	98.4	110	0.5-3.5	1.30	1
Xray for Trauma	84.8	95	0.5-3.0	1.17	1
Abdominal Ultrasound	99.2	159	1-7.5	4.13	5
Pelvic Ultrasound	98.8	156	1-7.5	4.23	5
CT Scan Brain	90.0	156	1-10	5.35	5
CT Scan Chest	88.6	151	1-10	5.37	5
CT Scan Abdomen	88.2	152	1-10	5.52	5
MRI Brain	95.9	169	0.5-10	5.80	5
MRI Spine	97.5	172	0.5-10	5.76	5
MRI Musculoskeletal	95.7	168	1-10	5.70	5
Dexascan	98.7	167	1-17.5	6.64	5
Gastroscopy	85.5	163	1-30	11.99	10
Colonoscopy	84.3	160	2-30	12.30	10

\*Outliers excluded



**Table 6: Protocol provision for access to diagnostics**

	COLUMN A - PUBLIC HOSPITAL PROVIDES DIRECT ACCESS PROTOCOL			COLUMN B - PRIVATE HOSPITAL PROVIDES DIRECT ACCESS PROTOCOL		
	Yes %	No %	Don't know %	Yes %	No %	Don't know %
Plain Xray	28.3	57.1	14.6	16.8	67.2	16.0
Ultrasound	17.1	65.4	17.5	16.8	65.5	17.6
CT Scan	8.1	73.0	18.9	18.2	62.7	19.1
MRI	7.4	73.3	19.4	26.8	57.3	15.9
Dexascan	27.3	52.8	19.9	17.6	63.6	18.8
Endoscopy	31.7	52.6	15.7	24.8	58.8	16.4

**Table 7: Opinions on Improved access to diagnostics**

	STRONGLY AGREE %	AGREE %	NEITHER AGREE/ DISAGREE %	DISAGREE %	STRONGLY DISAGREE %
Improved access to diagnostics would reduce my referrals to emergency departments	60.9	25.8	8.1	4.4	0.8
Improved access to diagnostics would improve the quality of my referrals to emergency departments	52.4	34.3	5.2	6.0	2.0
Improved access to diagnostics would reduce unnecessary admissions	52.8	34.3	8.9	3.6	0.4
Improved access to diagnostics would reduce my referrals to out- patient departments	63.3	27.0	6.9	2.4	0.4
Improved access to diagnostics would improve the quality of my referrals to out- patient departments	62.5	29.4	6.0	0.8	1.2



## Discussion

The importance of appropriate access for GPs to diagnostics has been highlighted in a number of Irish Government Reports. The international literature suggests that access to diagnostics has the potential to minimise delay in diagnosis, support management in primary care and reduce onward referrals to emergency and out-patient departments.

The results of this survey of a representative sample of Irish GPs outlines current access to radiological and endoscopic diagnostics in general practice. Striking differences are demonstrated between access for public and private patients.

In all services the access to diagnostics for public patients is unacceptably long when compared to private patients. There is no doubt that as a result, GPs are forced to refer patients inappropriately to overcrowded emergency departments in order to access diagnostic tests. This can be an unnecessary traumatic experience, particularly for elderly patients, and places an extra costly burden on hospital services. Patient access should be on the basis of need not on the ability to pay.

GPs are highly trained specialists who are currently constrained in their ability to deliver a quality service to their patients due to limited access to diagnostics in the public health system. The vast majority of respondents in this study indicated that increased access to diagnostics would facilitate them to reduce the number of referrals to both emergency and out-patient departments, reduce unnecessary admissions and improve the quality of referrals overall.

It is time to empower GPs to provide the services they are trained to deliver in the interest of improved quality and safety for Irish patients.

In a time of limited public expenditure it is essential that all services are used appropriately. The provision of increased access for GPs to diagnostics will need to be flexible in terms of service provision. There will need to be analysis of the advantages of private versus public provision, community versus hospital based diagnostics and co-ordination across the primary and secondary care interface.

International evidence suggests that GPs will use diagnostic tests in an appropriate manner. Ultrasound is a non invasive test with no radiation exposure and is increasingly regarded as a baseline investigation for many illnesses. While CT Scan is associated with some concerns re radiation exposure, MRI scanning does not have this risk.

The appropriateness of referrals would be enhanced by the development of joint GP-Hospital referral guidelines. The Clinical Care Programme for Radiology supports the introduction of referral guidelines and plans to introduce them in the near future. The results of this survey indicate that the use of these protocols in the Irish health care system is very low. The majority (92%) of Irish GPs have computerised medical records. The success of the electronic referral letters to cancer centres illustrates the willingness of GPs to engage in structured referral processes based on national referral guidelines.

## Recommendations

1. Increase access to diagnostics for GPs for public patients.
2. Introduce national referral guidelines for access to diagnostics developed using a partnership approach between primary and secondary care.
3. Provide enhanced education for GPs on the use of referral guidelines.
4. Develop structured referral forms which are integrated into GP software systems.
5. Provide rapid results of investigations to GPs.
6. Monitor and audit the new system and provide feedback to GPs.

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## Conclusion

GPs have limited access to diagnostics for public patients in stark contrast to their access for private patients. Access to diagnostics should be based on need rather than on ability to pay. Irish GPs believe and international evidence concurs that increased access to diagnostics will lead to a reduction in diagnostic delay, reduce the number of referrals to both emergency and out-patient departments, reduce unnecessary admissions and improve the quality of referrals overall. This in turn will lead to more effective use of the hospital services and improve the quality of service for Irish patients.

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