

Lab Testing

Current Practice Analysis; Context and Implementation Study

November 2014

CADTH

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CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

November 2014

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1. BACKGROUND AND OBJECTIVES

The Canadian Agency for Drugs and Technologies in Health (CADTH) retained Ipsos Reid to undertake a study into laboratory test ordering practices in Canada. The study investigated current practices as well as the perceived barriers and opportunities to optimizing lab testing from the perspective of family physicians, internists, and nurse practitioners. The research findings are based on the results of qualitative research in the form of interviews. Ipsos Reid sought to understand and explain how implementing change in the area of lab testing will be affected by context. This report of those findings presents a summary of the responses collected, as well as the underlying themes that extend across the qualitative data from particular questions and respondents.

1.1 Research Objectives

The objectives of this research were to:

- Understand the stakeholder perspective of the lab test ordering environment
- Determine the clinician decision-making process and awareness of laboratory services
- Determine clinician awareness of costs associated with laboratory services
- Determine where clinicians get information regarding laboratory services
- Determine what tools are used by clinicians in ordering laboratory services
- Understand the impact of new tests being available on clinicians' ordering practices
- Identify gaps, opportunities, and barriers to implementing prospective changes to lab test ordering and the use of laboratory services.

2. METHODOLOGY

Ipsos conducted 60 individual interviews with doctors, nurse practitioners, and internists, to better understand the context, barriers, opportunities, and gaps in current lab test ordering practices. These interviews lasted between 20 and 30 minutes and included primarily open-ended questions regarding their perceptions of context, the decision-making process, tools, information, influences, and understanding of cost as it relates to ordering lab tests. The results from these interviews are primarily qualitative in nature, yielding a rich pool of insights and perspectives through an interview format that allows the participants to fully express their views. The following tables show the final number of interviews by stakeholder group and location of practice. Participants were chosen based on their occupation, region, and setting (rural or urban) and were interviewed in their language of choice.

Description	Number of Interviews
Doctors	25
Internists	25
Nurse Practitioners	10
Total	60

Location of Practice	Count
Hospital — Community Hospital	21
Hospital — Emergency Room	4
Solo Practice	16
Group Practice	18
Family Health Team	2
Primary Health or Community Health Centre	7
Other	33

Twelve participants were rural practitioners and four were remote practitioners.

Interviews were conducted over the phone, at the convenience of the participant.

As is typical of interviews with physicians and other health care professionals, in-depth interview participants received a financial incentive to participate.

Prior to the commencement of the individual interviews, participants were informed of the purpose of the research, the study sponsor, and Ipsos Reid's mandate to carry out the research. Participants were reminded of Ipsos Reid's intent to retain written transcripts of the sessions. In addition, participants were informed that participation in the study was voluntary, confidential, and that all information they provided would be administered according to the requirements of the *Privacy Act*. Ipsos Reid also met and exceeded the Marketing Research and Intelligence Association standards in conducting these interviews.

3. RESULTS

3.1 Factors in Test Selection

Participants were asked about their current use of laboratory tests and how they are ordered, including any related guidelines at their place of work. Generally, participants did not indicate any specific, practice-driven guidelines in place for ordering lab tests, with most stating that the patient's symptoms and medical history were usually the deciding factor in what to test.

Discussion about ordering practice revealed that half of all participants are both testing a hypothesis and gathering as much information as possible. Roughly one-third of general practitioners said they ordered lab work to test a hypothesis with respect to a diagnosis, while only a few said they were gathering as much information as possible.

[Q7] When you order a test, are you testing a hypothesis with respect to a patient's diagnosis, or are you gathering as much information as possible? Or is it both?

Testing a hypothesis with respect to a patient's diagnosis



Gathering as much information as possible
Both

When asked what factors play a role in their decision about whether to order a test, the majority of participants cited patient medical history and presenting symptoms, as well as the nature of

the visit and findings of the examination. For the most part, participants noted that their decision on which tests to select depends largely on the situation at hand; i.e., what symptoms the patient is experiencing.

General Practitioners:

"Each doctor will try to follow Canadian guidelines. For example, if a patient is diabetic, we will regularly monitor their sugars until stable and then every six months, or lipids in cardiac patients once a year. If guidelines are unavailable or unclear, then each of us chooses our own path. But for most tests, there are well-established guidelines, and it's what we try to use."

"Most of the time, if we are investigating a certain diagnosis, we have guidelines for what tests to order."

"No, no guidelines. Doctors order what they feel is necessary for the patient."

"No, I order what I want. I work in an emergency room and am able to make judgment calls about what needs to be run — not protocolized."

"We work under medical directives, so order sets. We also work with a nurse practitioner who says that we can run a test if we can justify it. Lot more leeway."

"I try to practise using lab tests with the philosophy 'what am I going to do with results?,' a way to point me in the right direction. I'm picky or choosy; if result won't change management, or if I won't do anything with it, then I won't order it in the first place."

"So many potential guidelines for a potential patient that could be applied, but we don't know how to apply."

"[Depends on] age, if they are new patients or not."

"Patient age, history, symptoms, family history, existing conditions."

"If a patient comes forward for a physical... we do a complete blood workup... If a new patient comes with a family history of diabetes, we need to do blood sugar."

"Depends on the patient and their symptoms, as well as current best practice guidelines from literature or an association."

"It really depends on the patient's medical history, symptoms, age, previous test results, my findings on examination, as well as their family history."

Internists:

"Symptoms of patient, whether or not I am trying to rule out a diagnosis or am simply doing follow-up work."

"Primarily based on patient management, necessary monitoring protocol for patients on certain meds (renal function, blood count, etc.)."

"Depends on why I'm seeing the patient: annual physical, pre-op cases, post-op complications; individual to individual."

“Lab tests are based on guidelines and what you’re assessing the patient for.”

“Yes. My work is in dialysis, so there are protocols we follow for ordering lab tests, and usually the entire unit follows the same practice. I also have my own protocols that I follow.”

“I usually base what tests I run on the literature available and adapt it to my practice. Lots of discussion as a team among other internists, for the sake of uniformity.”

“Primarily based on patient management, necessary monitoring protocol for patients on certain meds.”

Nurse Practitioners:

“Yes, there are set protocols for once-a-year blood work for patients. CBC, additional liver function studies, vitamin levels, glucose, oral glucose tolerance. They receive a different set on diagnosis.”

“Patient history, age. Imaging: follow provincial guidelines. Start with the basic and increase as needed. Lab work: patient history, nature of visit.”

“Individual, based on the person’s history, presenting symptoms, physical exam.”

3.2 Volume of Testing and Influence of Setting

Most participants interviewed thought they ordered about the same number of tests as their colleagues, because they only ordered what they deemed necessary and assumed that other physicians shared this philosophy. A few doctors and internists thought they ordered more tests on average, either because they were new doctors erring on the side of caution, or because they didn’t see their patient often and wanted to ensure they didn’t miss a possible diagnosis. Younger doctors, internists, and those who worked in emergency situations, such as intensive care unit and emergency room (ER) physicians, believed that they tended to order more tests than their colleagues. Older, more experienced physicians, as well as those working in a family practice and non-emergency settings, said they tended to order fewer tests on average than their colleagues.

Virtually none of the subjects interviewed indicated that they ordered tests without strong justification for doing so. Even physicians who believed they ordered more tests than their colleagues said they did so because they wanted to err on the side of caution, or because they wanted to carefully monitor a patient’s condition or reaction to a certain medication.

When asked about the differences in lab test ordering between a hospital setting and their community practice, most interviewees stated that medical professionals working in a hospital setting likely ordered considerably more than their colleagues elsewhere. This was thought to be a result of several factors: severity of patient symptoms or condition upon admission to the hospital, access to on-site labs, and the ability to consult with specialists on site.

General Practitioners:

“I probably order more tests than most of my colleagues, but I don’t want to miss things at an early stage.”

“[I order] case by case, depending on age and conditions.”

“Hospitals have immediate access to testing. I don’t have access. ERs will run lots of tests

because they have immediate access and because there is a sense that if you are in the ER, it's because of an emergency."

"ER orders everything... they don't know the patient... they don't have time... They have to order everything if they want to figure it out."

"In a hospital, they're trying to test as much as possible to diagnose the patient quickly. They don't do the screening process that family doctors do when they're monitoring a patient. Also, access can play a role. Access to specialists, lab, equipment."

"In office-based setting, there are fewer unnecessary tests done than in a hospital."

"In general, hospitals do less lab than solo practice because there are more guidelines and peer support."

Internists:

"Yes, depends on patient population. Also, when admitted you are much sicker than when you are an outpatient. Also, more tests available."

"Dans un centre hospitalier c'est un client plus malade, donc test plus raffiné (pointue). En bureau, c'est plus général."

"Hospital is more dangerous because they have orders that leave it wide open for lack of critical thinking. Sheet comes out automatically and you just sign it."

Nurse Practitioners:

"Absolutely. In the hospital, we're here, we have tests and can do it. Access. I know we order way more than others. We have the stuff on site."

"Yes, hospitals probably order more tests because patients are sicker and they have access to more testing."

3.3 Key Influences in Test Selection

The majority of participants said peer influences or advice or recommendations had no impact on their treatment of patients, given the independent nature of the work environment. However, several participants also conceded that they were willing to discuss a case with a colleague, if necessary.

General practitioners (GPs) and nurse practitioners are somewhat more likely than internists to be swayed by patient preferences and requests. Most GPs and nurses interviewed noted that the advent of the Internet has made patients savvy about their health, leading to a noticeable increase in the number and kinds of tests specifically requested by their patients. Most interviewees admitted that they will often take such requests into consideration if they can be justified, or if doing so serves to ease the patient's anxiety about their health. Almost all interviewees noted that they will try to dissuade the patient from undergoing unnecessary tests.

General Practitioners:

"Sometimes a patient will ask to run a specific test if they are not satisfied with their diagnosis, but if it is really not needed — e.g., thyroid or diabetes — I would explain the guidelines to them and assure them that their condition is being monitored on a regular basis to give them a greater sense of security."

"Oui, la demande du patient est importante et répond à un besoin du patient, mais nous devons être restrictifs."

"In my world, the only tests I will agree to are the ones that are justified. If they are willing to pay for it at a private clinic, that's a different story. If they want to pay for it, that's their business."

"If a patient feels they are not happy with the diagnosis, we might run the test again."

"Yes, all the time. Usually if you have a patient that is well aware of their condition and feels that we aren't looking for the right thing, we will run more tests."

"Try to make sure it doesn't influence what I order; mostly when they ask, try to ask them what is the reason why they think they need that test, try to explain."

"Sometimes a patient will ask for a test that is totally unnecessary."

"Yes, patient anxiety can influence the tests I order."

"By far the number one is guideline-driven, second would be availability, third would be cost, and probably fourth would be peer-driven; if I know [the] specialist I deal with and they always do this, then will get it before I refer."

"Over the years with specialists, you get their input on what tests are appropriate: [example] rheumatologist has taught what tests are best to order in this situation — i.e., which blood test is most appropriate."

"Don't discuss this issue with colleagues."

"Yes, I will often consult my colleagues for advice, if needed."

Internists:

"I try to make sure it doesn't influence what I order; mostly, when they ask, try to ask them what is the reason why they think they need that test, try to explain and console them they don't really need this. Clinical diagnosis [is] what they need."

"Sure. Patients say 'would you please check my iron,' and that's fine. But I do try and get the family doc tests so we don't repeat them. We really need a central repository of all tests that have been run."

"Not really; I only order what is needed. 99% [of] patients are very reasonable; they don't ask for more tests."

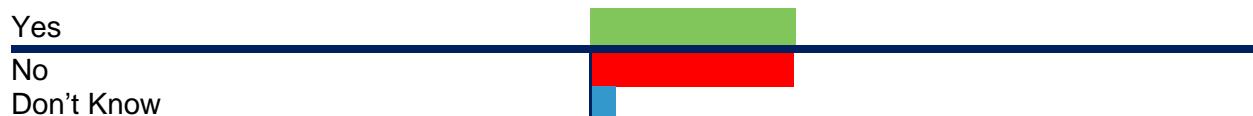
Nurse Practitioners:

"Yes, happens a lot. People on Google, want lots of tests run. I like to educate them on the test and whether or not it will change their management plan. Will advise them of costs."

3.4 Cost of Testing

Participants were asked if they felt that costs of testing affected their decisions, and if they were aware of how much different tests cost. Just over half of participants indicated they felt that cost does play a role in their decision-making. Interestingly, though, many participants admitted that they did not know how much tests cost.

[Q10C] Are you aware of how much tests cost?



Most GPs and many nurse practitioners were more likely to say that cost plays a role in their decision-making process, compared with just half of internists. GPs also had the highest level of awareness of test costs, followed by internists and fewer nurse practitioner colleagues. Many mentioned that they knew the costs that were passed on to patients for certain tests that are not covered by all insurance plans. A few doctors mentioned the impact of other factors on cost, including the laboratory technician's time and resources, which would be difficult to factor into the overall cost.

[Q10B] Does cost play a role in your decision-making?



General Practitioners:

"Cost? I don't really consider cost in choosing [a test]. The most important is patient's well-being. I don't know how much they cost."

"Cost can factor in; try to keep in mind cost of tests. Don't like to order unnecessary costly [tests]; if necessary, try to keep in mind a budget — need to justify it's worth the cost."

"Not sure [of] the exact costs of tests, but nothing really costs more than \$6 per test."

Internists:

"Cost? Certainly not in toxicology for private companies ordering testing; in terms of regulatory, is a must-do, but medicare covers most of it, but don't see it as indirect cost."

3.5 Risks of Inappropriate Testing

Perceived risks of inappropriate testing were generally identical across all participants. Cost, patient risk, and unintended results were universally cited risks associated with over-testing, with most participants also noting that the potential to miss a diagnosis was a risk of under-testing. Most participants noted that under-testing was not something they often encountered during their daily work.

General Practitioners:

"Risks of under-testing — missing diagnosis. Risk in over-testing is almost practising defensive medicine — cost system more money, should be aware that they cost money when ordering. Another risk would be that we pick up things that are really of no consequence, find something that you weren't looking for, then find something else and create stress in the patient."

"Risks of over-testing: very expensive to the health care system; patient anxiety."

Internists:

"Over: randomness of abnormal findings that force you to proceed with more costly or dangerous investigations. Under: miss a diagnosis, something critical."

Nurse Practitioners:

"Over: finding things you don't know what to do with, incidental, end up with further testing. Under: missing critical things."

3.6 Problematic Tests

For the most part, participants found most tests to be fairly routine and uneventful. However, some tests were cited as problematic for various reasons, including false positive results, reliability of results, and confusing results (difficult to decipher).

General Practitioners:

"The tests for screening prostate cancer and ovarian cancer are quite problematic because they are new and can pick up markers that would necessitate further screening and possibly invasive tests, only to find out the patient is perfectly fine."

"Prostate cancer testing is very problematic. Not reliable and leads to a lot of invasive testing that finds nothing. Prostate cancer is very slow growing, and you can have it for a long time and still die of some other illness; no real need to do a test that is going to open a can of worms."

"Sometimes, some of the hematological tests can be confusing; protein electrophoresis results can be confusing. Depends. [If I'm] unsure, I can call [the] hematologist and ask if it needs to be referred, [in] their opinion."

"Sometimes you can do cholesterol and do it again in a month and numbers are not even close to being in range, one normal, then the next says you need more meds, then again and normal again, lab error, need to repeat if going up or down, don't necessarily believe it. Sometimes need to do third to see which is right."

"There is also a particular test that always seems to come back with wildly different results, depending on which lab has run it. The PTH (thyroid) is notorious for that."

"Serial troponin testing for possible myocardial infarctions. (...) These tests are not reliable compared to the ones we used in the past. In the last few years, we have switched to a highly sensitive troponin test, and EVERYONE comes back positive."

"Tests for narcolepsy are impossible to decipher."

"Lyme disease test."

“Urine tests — sometimes doctors will ignore them, in which case why did you order the tests if you’re going to ignore them anyway? Measuring things like calcium and magnesium, often out of whack depending upon what meds the patient is on.”

Internists:

“ANA, nuclear antibody; ANCA; ESR-CRP; all above difficult to interpret. Risks of false positives.”

“Yes, some tests don’t have a lot of utility. Sedimentation rate, for example — high ESR could mean cancer, or it could be nothing. Iron tests and thyroid function tests are problematic.”

“ANAs — guidelines say one ANA, not to be repeated. But you can run four tests and receive four different results. Lack of appreciation for the fact that a lot of results show lupus but they aren’t sent for follow-up.”

Nurse Practitioners:

“PSA — that exam is so problematic because it shows prostate-specific antigens, but it doesn’t tell you anything about why the cells are enlarging. ESRs — a test that will also tell you that an inflammatory process is happening, but not why.”

“PSA — very controversial blood test, don’t order it as a screening, always couple it with a theory. Tumour markers because of family history of cancer. We never do that as screening, only if there is something specific we’re investigating.”

“TSH — cheap test, but problematic. Lipids — hs-CRP, IMT thickness — false positives and negatives.”

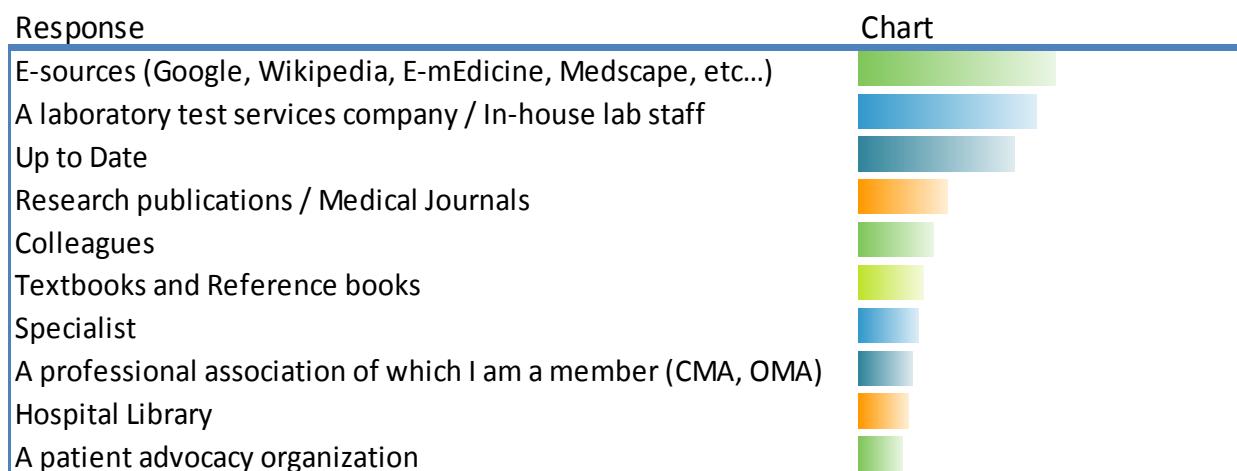
3.7 Information Sources

The vast majority of those interviewed said that they would consult the same sources of information for both new and existing tests.

The most frequently cited source of information for participants was UpToDate, an online clinical decision support resource.

The laboratory running the tests was another popular source of information. Many participants felt that the technicians on site were the best resource if they wanted to find out more information about a new or existing test.

[Q12] I'm going to ask you first about your habits when looking for more information about lab tests. For existing tests, if you ever wanted to find out more about them — where would you go to get that information?



When asked how they usually find out about a new test being introduced, many participants said that the in-house lab will circulate bulletins or emails. By virtue of proximity to the laboratory, physicians working primarily in a hospital setting tended to be among the first to hear about new tests, whereas physicians in private practice tended to hear about new tests later.

Others mentioned that educational conferences and courses required as part of their continuing education credits often include mentions of new or emerging laboratory tests. A few participants mentioned the Choosing Wisely campaign as a source of information related to lab tests.

General Practitioners:

"Yes, go to lectures, conferences, and often have specialists talking about a certain disorder and pick up tips and hints for increasing or decreasing tests. Try to keep up with things changing constantly; sometimes it's useless after a certain time."

"Sometimes during rounds."

"Yes, this Choosing Wisely project encourages peer pressure. Specialist societies advising GPs what to order and what not to order. Statements are very brief and meant to be clear."

"Subscribe to evidence-based newsletter, ACP, and British Medical Journal multiple times a day, and often has characteristics of tests. Will go to basic literature — e.g., BNP; had a discussion about liability and cost of ordering for every heart patient; went to original papers."

"Mayo Clinic, Info Update for providers (website), WebMD on iPhone."

"OMA library, CMA, College of Physicians and Surgeons, family physicians, journals, Toronto Public Health."

"UpToDate subscription resource."

"Sometimes we have presentations from the company."

"Tertiary centre sends bulletins or emails."

"Gamma-Dynacare newsletters and bulletins."

Internists:

"Will often speak to the biochemist in the lab."

"Journals."

"UpToDate — I use this first and foremost; Medscape; Netcare."

"Workshop... conference."

"Harrison's, textbook of medicine; bible of internal medicine."

Nurse Practitioners:

"UpToDate."

"The lab."

"Associations."

3.8 Experience With Improvement Initiatives

Very few participants interviewed for this study have had experience with efforts to optimize test ordering. However, many have noticed mostly positive changes to the process and guidelines for ordering tests within the last 10 years, most commonly a reduction in the number of tests available on the provincial requisition forms (for example, the vitamin B12 and iron deficiency tests are no longer listed on the form, but can still be ordered by special request as long as the physician writes it down). These tests, which were once standard, are now available only on request; that is, a doctor must actually write the test down on the form, as opposed to simply checking a box. Most participants thought the change was positive.

[Q14A] Have you had any experience with efforts to optimize test ordering?

Yes



No



Many interviewees also noticed a change from paper ordering systems to online ones.

General Practitioners:

"A shortened req. form introduces an element of critical thinking to a routine practice."

"It makes you think before you order a test that might not be necessary."

"Positive with respect to req. forms."

"Believe in continuing education in all doctors, but especially family doctors, because we see most of the patients and basically we need to know what is essential."

"Would like to know more about costs associated with various tests."

Internists:

"Online test ordering system is faster and easier. Doctor's signature ensures that tests are not being run unnecessarily or repeatedly."

"In some cases, I have to order a lot of tests that aren't on the form and it can take a while."

Nurse Practitioners:

"Removing certain tests from the requisition form was a very good thing; it makes you stay on top of ordering and think before you act."

4. FINAL IMPRESSIONS

It is clear that there are a number of factors that influence laboratory test ordering, and practitioners who order tests are aware of the challenges. Some of the themes coming through from the interviews include the following:

- There is no one standard (and reliable) place to go for information on lab test ordering.
- There is a general lack of awareness of how much tests cost.
- New doctors tend to order more tests than experienced doctors.
- GPs and internists expressed an interest in knowing how they ranked against their colleagues in terms of the volume, frequency, and kind of tests ordered.
- Hospital and community environments are very different (in terms of lab test ordering).
- Emergency and in-patient settings also provide very different lab test ordering environments.
- Few have experience with initiatives designed to improve lab test ordering, aside from changes to the requisition form (which were felt to be effective).

Participants were vocal about issues regarding lab test ordering that they felt were important and worth noting, although outside the questions in the interviews. These include:

- Wait times for test results in community care
- Inefficiency of reordering tests at various levels of care (e.g., if a patient is referred to a specialist, the specialist does not have access to tests done by the family physician, and vice versa) — there is a desire for a central repository of test results.

5. STRENGTHS AND LIMITATIONS

The strength of this study lies in the quality and richness of the comments offered by participants. Interview participants were engaged, informed, and willing to share their sentiments, experiences, and opinions with the moderator. The number and depth of discussions allowed us to achieve saturation on all the key points we set out to address.

The limitations to this study stem from the small number of participants (in particular, nurse practitioners) and inherent self-selection bias. Participants were invited and remunerated to participate in the study. We also note that not all provinces and territories are represented in the sample. Practice patterns may also vary across regions for other reasons.

6. APPENDICES

6.1 Interview Guide

1. Introduction (Two Minutes)

Explain to participants:

- CADTH
- Ipsos Reid
- The length of interview (30 minutes)
- Taping of the interview — potential for written, public report on findings
- Results are confidential, and/or individuals are not identified
- The role of moderator is to ask questions, be a timekeeper, be objective, have no vested interest
- Role of interviewees: not expected to be experts, speak openly and frankly about opinions, no right or wrong answers.

2. Demographics and Warm-up (Five Minutes)

What type(s) of practice do you work in?

- Hospital — community hospital
- Hospital — emergency room
- Solo practice
- Group practice
- Family health team
- Primary health or community health centre
- Other (specify).

For Internists:

- Tertiary care
- Community hospital
- Community or outpatient clinical practice.

Where do you work?

- Rural
- Remote
- Urban.

3. Use of Laboratory Tests (10 Minutes)

We are going to start off discussing your current use of laboratory tests and how you order them.

[FOR DOCTORS AND INTERNISTS]

Can you tell me about lab test ordering in your practice?

Probe: Does your practice have any set guidelines for ordering laboratory tests? If so, what are they?

What factors into the decision that you make about whether or not to order a test? When you order a test, are you testing a hypothesis with respect to a patient's diagnosis, or are you gathering as much information as possible? Or is it both?

Follow-up probe:

- What do you perceive to be the risks of inappropriate testing (i.e., over-, under-, incorrect testing)?
- Do you think you order more or fewer lab tests on average than your colleagues?
- Why?

[FOR DOCTORS WHO WORK ALSO IN EMERG]

Do you feel that the test ordering practices are different in the emergency room than in primary care? How?

[FOR DOCTORS WHO WORK ALSO IN HOSPITAL SETTING]

What are the differences in lab test ordering between your hospital setting and your community practice? (Or differences between hospital and community in general, based on your experience.)

[ALL PARTICIPANTS]

What influences you in deciding which test to select?

- Does cost play a role in your decision-making?
- Are you aware of how much tests cost?
- Are there peer influences or advice or recommendations from colleagues that affect what you do?
- Do patient preferences or requests affect your ordering practices at times? In what instances?

Are there any lab tests that you find problematic? (I.e., unsure when to order, unsure how to interpret.)

4. Information Sources (Five Minutes)

I'm going to ask you first about your habits when looking for more information about lab tests. For **existing tests**, if you ever wanted to find out more about them: where would you go to get that information?

Probe only:

- A patient advocacy organization, such as the Canadian Diabetes Association or the Multiple Sclerosis Society
- A university health research organization, like the York Institute for Health Research
- Research publications
- Health Canada
- A professional association of which I am a member
- Continuing education services
- A laboratory test services company
- An independent research organization funded by the federal and provincial governments
- Hospital library
- E-sources.

When **new tests** become available:

1. How do you find out about them?
2. Where do you get more information?

5. Efforts to Improve (Five Minutes)

Have you had any experience with efforts to optimize test ordering? [examples]

- Successful?
 - Unsuccessful?
- [Probe: why]

6. Final Impressions and Conclusion (Two Minutes)

Do you have any other comments or suggestions for how laboratory test services and ordering practices might be improved?

THANKS FOR PARTICIPATING

6.2 Recruitment Screener

Good morning/afternoon/evening, my name is _____ and I am calling from the Ipsos Reid Corporation, a national marketing research organization. We are a professional public opinion research firm that gathers opinions from people. From time to time, we solicit opinions by sitting down and talking with people.

We are preparing to conduct a series of interviews on behalf of the Canadian Agency for Drugs and Technologies in Health and are calling to see if you would be willing to participate. CADTH is an independent, not-for-profit agency that delivers timely, evidence-based information to health care leaders about the effectiveness and efficiency of drugs and other health technologies. The interviews will cover the current lab test ordering practices from the perspective of doctors, nurses, and internists.

Please rest assured, your participation is voluntary and should you agree to participate, your identity will remain confidential.

Would you be interested in participating in an interview to be held at your convenience?

Yes **CONTINUE**

No **THANK AND TERMINATE**

Now, I would like to ask you a few questions to see if you qualify to attend.

(INTERVIEWER RECORD GENDER; DO NOT ASK) (AIM FOR 50/50 MIX)

Male (continue for possible recruit)

Female (continue for possible recruit)

Are you in active practice (i.e., seeing patients on a regular basis)?

Do you regularly order lab tests?

Wonderful. The discussion will take about **30 minutes**, and those who qualify and attend will receive a token of our appreciation of

Audience	Incentive
Doctors and Internists	\$150
Nurses	\$75

Are you available now, or would there be a better time for us to contact you for this interview? We are reserving this discussion time for you, so if for any reason you cannot attend, please call: XXX-XXXX.

The discussion may also be recorded to assist us with our report-writing.

Please note that the results of our discussions may be produced in a report format to be publicly posted on the CADTH website.