

*Summative Evaluation of  
HRSDC Labour Market Information  
Products and Services*

**Final Report**

*Program Evaluation  
Audit and Evaluation Directorate  
Strategic Policy and Planning Branch  
Human Resources and Skills Development Canada*

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# *Executive Summary*

Human Resources and Skills Development Canada (HRSDC) Labour Market Information (LMI) is a collection of products and services which provide workers, employers, and career and employment counsellors with information about the conditions prevailing in different sectors of the economy. Informed firms and workers can make better job-related decisions. Moreover, HRSDC LMI has proven useful in providing workers with the tools necessary for conducting successful job search. The existing economic literature suggests that workers who use public employment services (such as HRSDC LMI) face stronger barriers to reemployment compared to the rest of the labour force. To the extent that HRSDC LMI serves as a tool of last resort for job searchers who would otherwise get discouraged and quit the labour force, it provides a service that no other private institution in the market does.

The evaluation of HRSDC LMI products and services consists of two component studies which are summarized in this report. The first study evaluates how Employment Insurance (EI) recipients are affected by HRSDC LMI products and services: Job Search Assistance; Job Bank, Job Postings and Electronic Labour Exchange; and Information Products and Services. The second study investigates the impact of HRSDC Individual Counselling on all unemployed individuals. Findings are presented separately for LMI Products and Services and Individual Counselling.

Three evaluation questions were initially identified however, not all questions could be answered by this evaluation.

- *Does HRSDC LMI reduce Employment Insurance benefits paid in the short-term by reducing the duration of EI claim and, in the longer-term, by increasing the stability of employment?*
- *Does HRSDC LMI reduce job search duration, and how does it impact on the intensity of job search and the number of methods used by job seekers?*
- *What is the use and impact of Information Resource Centres (IRCs) and Information Officers (IOs) on HRSDC clients?*

Given data limitations, these questions were answered in part. The impact of LMI Products and Services on long-term employment stability raised in the first question could not be addressed due to the short six month survey timeframe selected to minimize recall bias and maximize accuracy of responses.

The third question had to be modified once it was recognized that clients have difficulty distinguishing an IRC from general Human Resource Centre Canada (HRCC) facilities or IOs from regular HRCC staff. Many HRCC's do not have IOs in their offices. With this consideration, it was determined that the best approach would be to simply ask clients to self-report whether they received assistance to use LMI Products and Services or not.

## **Key Findings**

### ***Unemployment Duration***

Findings showed that Individual Counselling reduced unemployment duration in the short term. Counselling was found to have the largest impact during the week in which the intervention took place but continued to have a positive effect up to ten weeks after the counselling session. Aboriginals who received individual counselling are more likely to leave unemployment compared to aboriginals who did not. Some evidence from the LMI Products and Services user's study suggests that it may reduce duration of unemployment.

### ***Job Search Duration, Intensity and Number of Methods Used***

The impact of LMI Products and Services on job search duration could not be answered directly by the evaluation but can arguably be answered by inference from the findings to the first question. If the period of unemployment is reduced, as the findings demonstrated, then presumably the job search period would also be reduced. The assumption underlying this inference is that individuals search for a job while unemployed and stop searching once a job is obtained.

There is some evidence to suggest that users of LMI Products and Services conduct a more intense job search. Using the number of visits to HRCCs and non-HRCCs as a proxy for the intensity of the job search revealed that users were more actively involved in the job search compared to non-users.

In terms of the number of job search methods used, LMI users were significantly more likely to use all other job search methods compared to non-users. This is true for users of all types of LMI, including participants in counselling, and suggests that LMI is supplementing rather than displacing other sources.

### ***Assisted Use of LMI Products and Services***

Clients can be assisted with LMI by IO or by regular HRCC staff. Almost half of LMI users were assisted with LMI products and services. Evidence indicated that assisted HRSDC LMI had more beneficial effects on the job search process. Women, older clients, those with high school education and blue-collar workers were more likely to seek assistance.

### ***Labour Market Profile of Users of LMI Products and Services***

Labour Market Profiles of LMI users and non-users were generated and reveal that the two groups are significantly different, lending support to the hypothesis that self-selection bias is occurring and may account for the different outcomes between the two groups. LMI users were more likely to work in white collar occupations and have more stable work histories while a higher proportion of non-users were found in blue-collar jobs. Non-users had more unstable work histories as measured by the number of Employment Insurance Claims and ROE's in the past three years and, compared to users, more frequently reported that they expected a job recall or expected a seasonal job, which



could partially explain why they did not use LMI to find a job. A major difference in the profiles of individual counselling users and non-users was the duration of unemployment with users experiencing much longer periods of unemployment.

### ***Incidence of Use***

Overall, almost 70% of all EI clients used at least one of the LMI products and services. However, some products and services are accessed more than others. Job Bank was the most popular – almost 60% of all users turned to this product – while Community Information and ELE were less utilized (8% and 6% respectively).

### ***Socio-Demographics of Users***

Education was a good predictor of LMI use. Almost three-quarters (72%) of post secondary graduates used at least one LMI product or service; among those with less than high school education 57% reported using LMI. In general, variation by age and gender was modest. LMI users are more likely to come from urban centres rather than rural areas. Proximity to an HRCC was also a good predictor of use: over three quarters (77%) of those living less than five minutes driving distance from an HRCC used at least one LMI product or service compared to 55% of those located more than 30 minutes driving distance from an HRCC.

### ***Satisfaction among Users***

The majority (87%) of LMI users rated the products and services useful, with a minority (13%) reporting LMI not useful.

### ***Awareness of LMI Products and Services***

Findings from the evaluation suggest that if product awareness levels were increased the use of LMI products and services would likely increase. However, the evidence was not definitive enough to measure the exact magnitude of this increase.



# *Management Response*

The evaluation of Human Resources and Skills Development (HRSDC) Labour Market Information (LMI) products and services consisted of two component studies. The first evaluated how Employment Insurance (EI) recipients were affected by HRSDC LMI products and services, defined to include Job Search Assistance, Job Bank, Job Postings/Electronic Labour Exchange, and Information Products and Services. The second investigated the impact of Counselling on unemployed individuals.

The evaluation addressed the following issues:

- The impact of HRSDC LMI on unemployment duration;
- The effect of HRSDC LMI on job search duration, intensity of job search and the number of methods used by job seekers;
- The impacts of assisted LMI use; and
- The impact of the awareness of LMI and potential for increased use.

## **1. Impact of HRSDC LMI on Unemployment Duration**

The Evaluation found evidence that:

HRSDC LMI reduces the duration of unemployment in the short-term. LMI products and services appeared to have a positive effect in that it reduced unemployment duration. “Findings suggest that Job Search Assistance, Labour Exchange, and Information Products and Services may reduce unemployment duration in the short term”.

The evaluation investigated the impact of counselling on the duration of unemployment spells. While covering only a small proportion of all LMI users, it provided evidence that counselling reduced unemployment duration. The report indicates that the counselling impact during the week in which the intervention occurs is the highest, implying an increased probability of leaving unemployment. In the ten weeks after the intervention, the probability of leaving unemployment also increases, but at a decreasing rate.

LMI Directorate Response to HRSDC LMI Impact on Unemployment Duration:

These findings support the continued investment in Job Bank and other information products and services.

*Action, Responsibility and Timelines:* The LMI Directorate will take steps to ensure that the products and services made available meet user needs and have a positive effect on the users’ duration on Employment Insurance. To ensure that HRSDC LMI activities, products and services remain relevant, the LMI Directorate is implementing two initiatives:

- An Accountability Framework for Local LMI has been developed and is being implemented on a phased-in basis (August 2003-February 2004). The methodology provides for an annual client satisfaction survey, with results expected March 2005.
- A departmental LMI Product, Service and Activity Review is underway, with results expected by fall 2005. The review will help ensure that integrated, cost-effective information products and services are aligned with departmental policies and programs, and are available consistently across the country. It will identify activities for which HRSDC has a unique role relative to other players (e.g. provinces, NGOs) and which continue to meet the needs of users.

LMI Directorate Response to the Impact of Counselling on Employment Insurance Duration:

These results are indicative that counselling is an important intervention.

*Action, Responsibility and Timelines:* While HRSDC no longer directly offers counselling services, the Employment Programs and Operations (EPO) Branch has developed an Operational Directive which indicates that the FLMM LMI Working Group's Career Development Practitioner Guidelines and Standards are a best practice which should be followed by third parties who receive contribution funds under EAS and other similar Employment Support Programs. The LMI Directorate will continue to explore ways to achieve even broader use and support of the guidelines.

## **2. Impact of HRSDC LMI on Job Search Duration, Intensity of Job Search and Number of Methods Used by Job Seekers**

The Evaluation found that:

The impact of LMI on **job search duration** could not be answered directly by the evaluation but can arguably be answered by inference from the findings to the first question. If the period of unemployment is reduced, as the findings demonstrate, then presumably the job search period would also be reduced. The assumption underlying this inference is that individuals search for a job while unemployed and stop searching once a job is obtained.

“There is some evidence to suggest that LMI users conduct a more intense job search. Using the number of visits to Human Resource Centres of Canada (HRCCs) and non-HRCCs as a proxy for the **intensity of the job search** revealed that users were more actively involved in the job search compared to non-users.

On average users visited HRCCs three times as often as non-users to access employment resources. The higher **intensity of job search** among users was also reflected in their visits to locations other than HRCCs. The incidence of visits to non-HRCCs to access employment resources was higher than non-users (41% vs 20% of non-users) as was their frequency of visits (17% vs 6% had more than six visits to non-HRCCs).”

“In terms of the **number of job search methods** used, LMI users were significantly more likely to use all other job search methods compared to non-users. This is true for users of all types of LMI, including participants in counselling, and suggests that LMI is supplementing rather than displacing other sources.”

LMI Directorate Response:

We agree with the inference that if the period of unemployment is reduced then presumably the **job search** period would also be reduced. The assumption used overlooks job search activities by employed persons, for which use of LMI may or may not have the same impact.

The findings related to **impact on intensity and number of methods used** show the importance of continuing to make LMI available through HRSDC’s network of HRCCs, and enhancing the use of LMI in third party employment offices and via other intermediary resources.

*Actions, Responsibility and Timelines:* The LMI Directorate works closely with the Service Delivery Directorate and the HRSDC/SDC In-Person Services Team, on an ongoing basis, to help coordinate the delivery of LMI electronically, in HRCCs and through external intermediaries and third-party deliverers.

### **3. Impact of Assisted LMI Use**

The Evaluation found that:

“Evidence indicated that assisted LMI use had more beneficial impacts on the job search process than non-assisted LMI use. LMI Users who received assistance in using LMI reported a higher level of benefit than those who used LMI without assistance. Table 10 shows that nearly half of all HRSDC LMI users received assistance to use LMI (48%). Incidence of assistance varied across regions and by product and service.

A higher proportion of assisted LMI users decided to apply for their current or most recent job after using LMI (32%) compared to non-assisted users (26%). Assisted users are more likely to report that they applied for a job found on Job Bank (64%) than non-assisted users (52%).”

LMI Directorate Response:

The recent movement is to more and more use the Internet, as it is believed to be the most cost-effective way of providing LMI. However, least expensive does not necessarily mean cost-effective. Previous research conducted for the LMI Task Force, by Createc<sup>1</sup> and Environics<sup>2</sup>, clearly shows electronic use only does not adequately meet the LMI needs of many citizens, and an intervention is often required. The conclusion is a need for

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<sup>1</sup> Labour Market Information - 2003 Users National Survey; Créatec + Recherche - Marketing

<sup>2</sup> HRSDC Segments Related to Labour Market Information Needs of Canadians; Environics Research Group 2004.

three tiers of service delivery, that is, self help, light help and individual assistance, in order to respond appropriately to the specific requirements of users.

*Actions, Responsibility and Timelines:* Currently, HRSDC sponsors a network of service providers in non-devolved regions under the Employment Assistance Service program. Also, the LMI Directorate is in the process of determining options regarding the appropriate balance between the three tiers, based on factors including relative costs and user needs.

In addition, the LMI Directorate is working with partners and stakeholders within HRSDC and with provincial/territorial governments and NGOs, to explore methods to increase the capacity of intermediaries to better use LMI information, products and services when dealing with their clients and to help clients better use it themselves:

- HRSDC was co-lead in the development of the Forum of Labour Market Ministers (FLMM) Career and LMI Service Delivery Guidelines:
  - Included in the Guidelines is a description of a new function, the Career and Employment Information Specialist, who is tasked with helping users of Career and LMI products. By supporting this function, both within HRSDC and in partner offices, the LMI Directorate is addressing the need to increase the capacity to provide assistance in the use of Career and LM information. The LMI Directorate is currently working in partnership with the Provinces and Territories, the Regions and local HRCCs to make a training course available to our staff and those of partner organizations, on a cost-shared basis.
- Work on developing training on the use of LMI for career practitioners is underway under the auspices of the F-P-T FLMM LMI Working Group. HRSDC is co-lead and an active participant.
- There is also a need to orient other intermediaries in the interpretation and use of LMI. A plan to address this will be developed as part of the overall 2005/06 LMI Directorate Workplan.

#### **4. Awareness of LMI and Potential for Increased Use**

The Evaluation found that:

Virtually all clients are aware of at least one HRSDC LMI product or service (97%) and 90% are aware of Job Bank. “There is the potential for increased use of some products and services if awareness levels are increased. The difference in the use between the overall Employment Insurance client population and those aware of the product or service provides some measure of the potential increase if all clients are made aware of these products and services. According to the difference in incidences, the largest gains might occur for information on industries, occupations and employers, community information, and job postings.”

“Survey respondents were asked about their experience and overall satisfaction with LMI. While this qualitative analysis does not explicitly answer the evaluation questions, it does provide relevant information about how respondent’s perceive or understand the role played by LMI...Over three quarters of the Job Bank users found at least one job listed that was relevant to their interests and 63% of job posting users found jobs of interest. The majority of users found the LMI products and services to be useful.”

LMI Directorate Response:

Increased usage of LMI for labour market and workplace transitions would benefit Canadians, including individuals and employers. It can help improve the quality of the labour market supply and help to reduce labour market supply and demand mismatches, both of which contribute to positive impacts for the Employment Insurance program, such as shorter duration on Employment Insurance and appropriate skills investments.

*Actions, Responsibility and Timelines:* The LMI Directorate is working with Communications Branch and other partners within HRSDC, Provincial/Territorial governments and NGOs to develop strategies to increase awareness of the uses and usefulness of labour market information as a tool for various types of labour market decisions, as well as awareness and access to various LMI products and services.





# 1. Introduction

This evaluation examines the labour market outcomes of users of HRSDC Labour Market Information (LMI) Products and Services. LMI Products and Services are designed to help workers, employers, and other providers of training and re-employment services identify the best opportunities in the labour market. The evaluation assessed the influence of LMI programs and services on employment outcomes of clients who use LMI. The LMI programs and services assist clients in their job search efforts by exposing them to appropriate job search methods, offering access to job lists, providing information about current demand for different skills and re-training opportunities, and individual job counselling.

The evaluation consists of two component studies which examine different types of LMI products and services. The first study, *Evaluation of HRDC Labour Market Information (LMI) Services*, looks at user outcomes for the job search and information services. The second study, *Incremental Impacts of Individual Counselling-Based LMI on Re-employment Prospects*, investigates the impact of counselling on the duration of unemployment spells. The information presented here is a synthesis of the findings presented in these two studies. As such, this text draws heavily on the main results and interpretations from these two studies. Findings are presented separately for LMI Products and Services and Individual Counselling since they draw on different populations and cover different time periods.

The first step in the analysis was the generation of a profile of HRSDC LMI. To a large extent, the user profile is consistent with findings in the literature that workers with worse job prospects self-select into public LMI. The econometric methodology applied subsequently addresses the question of LMI impacts in the presence of self-selection. Other relevant questions, such as how does LMI interact with other job search strategies employed by workers, and what would be the potential implications of increasing public awareness about the range of programs and services offered by HRSDC LMI, are also investigated.



## ***2. Background on LMI***

The *Employment Insurance Act* (1996) calls on Human Resources and Skills Development Canada (HRSDC) to maintain a national employment service that provides information to help workers find jobs and to help employers find the qualified workers they need. In particular, Labour Market Information (LMI) is designed to:

- Help job seekers identify where the best opportunities are and the expected pay rates; measure job expectations against the conditions in the local labour market; make career choices and decisions and plan their job search; select learning and training opportunities;
- Help employers develop recruiting strategies, hire and plan human resources, locate training, and make investment and expansion decisions;
- Help career and employment counsellors and other service providers to work with their clients to develop realistic return-to-work action plans; inform education and training institutions of upcoming labour market demand in order to adjust curriculum and the availability of courses; and guide Government departments and other organizations in developing policies and programs that facilitate employment and economic growth.

### **2.1 HRSDC LMI Products and Services**

In order to measure the effectiveness of HRSDC LMI Products and Services and their impact on the labour market outcomes of users, the evaluation concentrated on the following categories:

- Job Search Assistance (JSA);
- Job Bank, Job Postings and Electronic Labour Exchange (ELE);
- Information Products and Services.

Below is a more detailed description of the products and services considered in the evaluation.

#### ***Job Search Assistance products***

- **Job search preparation tools and products.** Tools designed to help job seekers with their resume, cover letters, interviews, application forms, etc.
- **Job search services.** Half-day sessions on how to conduct a job search.

### ***Job Bank, Job Postings and Electronic Labour Exchange***

- **Job Bank:** An electronic listing of jobs provided by employers across Canada, allowing job seekers to search by occupation, by job title and by area. This listing is only available online through terminals provided at employment centres or on the Internet.
- **Job postings:** Information about specific job openings posted on job boards in employment centres. These are paper postings of jobs, which distinguishes them from the electronic based information on the Job Bank.
- **Electronic Labour Exchange:** An internet-based skills matching system designed to help employers and workers connect on-line. With this system, workers can enter their profile in a database and find employers with positions that match their profile and employers can consult the database to find job candidates. Unlike the Job Bank, the ELE creates a database of worker profiles.

### ***Information products and services***

- **Information on industries, occupations and employers:** Information on the nature of the work and wages in a given industry or occupation, the number of employers and size of firms, lists of employers with employees in specific occupational groups, and employment trends.
- **Information on training programs:** Information on the availability of educational or training programs related to an occupation, and the names and addresses of educational and training institutions.
- **Community information:** Basic overviews of local communities, including population data, housing prices/rental rates, information on transportation services, schools and municipal services, and on labour market events with potential for job creation in the area.

## **2.2 Individual Counselling**

The second study looked at Individual Counselling which refers to one-on-one sessions which provide assistance and advice to clients on how to successfully re-integrate into the workforce.

## *3. Literature Review*

### **3.1 Literature on Public Employment Service Labour Market Information**

One characteristic of public employment service<sup>3</sup> clients common across North American and European labor markets is that LMI users are often low skilled and face the most serious barriers to reemployment. This fact is documented for instance for the United States (U.S.) (Bishop, 1993), the Netherlands (Van Ours, 1993), and England (Gregg and Wadsworth, 1994). The literature also tends to agree that individuals increase their search intensity after some time has elapsed in their unemployment spell. Job seekers tend to turn to LMI later in their unemployment spell, when other job search methods have failed.

Some of the evidence regarding the efficiency of LMI job search methods comes from studies that examined the relationship between various job search methods and the labour market outcomes of job searchers. Compared to newspaper ads, direct employer contacts, or informal searches using networks of friends and relatives, LMI job search is often perceived as a less efficient method, associated with longer search periods and lower paid jobs.<sup>4</sup> It is also the search method that unemployed turn to later on in the unemployment spell, when all other methods have failed (i.e., a last-resort opportunity).

### **3.2 Literature on Job Search Assistance**

Since Job Search Assistance (JSA) activities have been subject to many experimental and non-experimental evaluations, especially in the U.S., much has been learned about the impact of JSA on its users.<sup>5</sup> It is generally agreed that JSA is a relatively cheap service that has modest impacts in reducing the unemployment duration of its participants – in general, a reduction between half a week and two weeks –, and increasing their earnings – on the average, an increase of up to \$200 US per quarter.<sup>6</sup>

### **3.3 Literature on Electronic Labour Exchange and Job Bank**

Less is known about the efficiency of Electronic Labour Exchange (ELE) job matching services. Some evidence from the U.S. finds differences across the performance of job banks and labour exchanges across states and across the different client populations. Johnson et al. (1985) estimate that impacts of referrals on employment and earnings

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<sup>3</sup> Public Employment Service is a generic name for European and U.S. institutions similar to HRSDC in Canada.

<sup>4</sup> See for instance Holzer (1988) or Bishop (1993).

<sup>5</sup> See for instance the survey in O'Leary (2002) or the experimental results reported by Decker et al. (2001).

<sup>6</sup> Results vary slightly across experimental programs and across states where programs were implemented.

women. The impact on total earnings in the six months after application to the Public Labour Exchange (PLX) was \$325 for women (statistically significant). Men referred by PLX received a job offer 0.64 weeks sooner, while women referred by PLX received a job offer 2.79 weeks sooner than PLX users who did not receive a referral.

The other two available North American studies focus on evaluations of ELE/ job matching used by unemployment insurance recipients alone. Katz (1991) finds that job referrals are most effective for long-term unemployed claimants, two or three quarters into their unemployment spells. Due to referrals from the employment service, Jacobson and Petta (2000) estimate a reduction in unemployment spell duration of 2.1 weeks in the state of Washington and 1.1 weeks in the state of Oregon, the two states where data were available.

### **3.4 Literature on Information and the Role for Government Intervention**

Information Services are public goods available for everybody's use. As such, economic theory indicates that, as a public good, there is a case for the government to finance the collection and dissemination of information, but there is not much empirical evidence about the impact of Information Services. There is also a role for government intervention in job search assistance and job matching services. Even when similar services are available in the private sector (for instance, job search sites or private head-hunting agencies); private agencies strongly favour high-skill job searchers, while leaving out low-skill job searchers. In this sense there is a justifiable role for the government in financing job search services (Stiglitz et al., 2000).<sup>7</sup>

### **3.5 Literature on Counselling**

The effect of counselling in reducing unemployment duration has been investigated in the literature before, under slightly different circumstances. Experimental studies in the U.S. and Europe that looked at the joint impact of mandatory counselling and job search monitoring found small positive impacts in increasing the probability of finding employment. While it is difficult to separate the benefits associated with counselling from the benefits coming from clients knowing that they are being monitored as part of an experiment, findings of small positive impacts due to counselling seem robust. For the U.S., a useful reference is Decker et al. (2000), who look at the impact of counselling (individualized job search assistance) in the context of mandatory interventions under the Worker Profiling and Re-employment Service (WPRS) program. For Europe, relevant references are Dolton and O'Neil (1991) who investigate the Restart program in Britain, or Gorter and Kalb (1995) who examine a Counselling and Monitoring program in the Netherlands. Further evidence from a re-employment bonus experiment in the U.S. confirms that counselling speeds up the job-finding process when coupled with a monetary incentive for finding a stable job sooner (Anderson, 1992).

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<sup>7</sup> Note that these are arguments in favour of government's financing LMI services, but not necessarily in favour of providing these services as well.

A related strand of literature examines the performance of caseworkers in assigning individuals to the right treatment when different options are available within the same program. Caseworkers perform reasonably in assigning individuals to participate in a program or not, but do not perform too well in assigning individuals to treatment streams within a program.<sup>8</sup>

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<sup>8</sup> See for instance O'Leary et al. (2002), Deheja (1999), Lechner & Smith (2002), Frolich (2001), Smith and Plesca (2000).





## ***4. Methodology***

### **4.1 Evaluation Objectives**

The main objective of this evaluation was to measure the impact of Human Resources and Skills Development Canada (HRSDC's) Labour Market Information (LMI) products and services on Employment Insurance (EI) clients. In addition, this study looked at the role played by Individual Counselling, in reducing unemployment duration.

More specifically, the following three evaluation questions were identified.

- Does HRSDC LMI reduce Employment Insurance benefits paid in the short-term by reducing the duration of Employment Insurance claim and, in the longer-term, by increasing the stability of employment?
- Does HRSDC LMI reduce job search duration, and how does it impact on the intensity of job search and the number of methods used by job seekers?
- What is the use and impact of Information Resource Centres (IRCs) and Information Officers (IOs) on HRSDC clients?

Due to methodological considerations not all of the original questions could be answered by this evaluation. No claims about employment stability could be made due to data limitations.

The third question had to be modified once it was recognized that clients have difficulty distinguishing an IRC from general Human Resource Centre of Canada (HRCC) facilities or IOs from regular HRCC staff. Many HRCC's do not have IOs in their offices. With this consideration, it was determined that the best approach would be to simply ask clients to self-report whether they received assistance to use LMI or not. This enabled the examination of the characteristics and outcomes of clients who received assistance versus those who did not. However, it is important to note that any potential differences cannot be attributed specifically to IOs.

## 4.2 Data sources

The evaluation findings presented in the synthesis report are based on two component studies: the LMI User Survey of Products and Services and Individual Counselling Data. The LMI User Survey was conducted on behalf of HRSDC and covers Job Search Assistance, Job Bank, Job Postings and Electronic Labour Exchange and Information Products and Services. To investigate Individual Counselling, an available HRSDC public data set: Canadian Out-of-Employment Panel (COEP) was used. To fill in some gaps in information both these data sets were combined with HRSDC administrative data. The main difference in terms of underlying populations is that the LMI User Survey refers only to unemployed individuals who collect EI benefits in the short term, while the Individual Counselling data includes the entire population of unemployed individuals, whether in receipt of Employment Insurance benefits or not and includes the long term unemployed.

### 4.2.1 HRSDC LMI User Survey

The sampling frame included all LMI clients who had a regular Employment Insurance Benefit Period Commencement (BPC) during May or June of 2002. Excluded from the sample were claims associated with sickness, maternity, paternity, parental, adoption, or retirement benefits.

In order to obtain a group of non-users that were as close as possible to the users in terms of the distribution of observable characteristics, LMI users were matched with potential non-users based on a nearest neighbour matching technique.<sup>9</sup> HRSDC administrative data was used in the matching process.<sup>10</sup> The LMI user survey began on November 16, 2002 and was completed by December 30, 2002. It was designed to cover a relatively short time frame of six months commencing with the EI Claim start date. The shorter time period was selected to minimize recall problems among users which a longer time period would have encountered.

### 4.2.2 Individual Counselling Data

The primary source of information was the Canadian Out-of-Employment Panel (COEP) survey. This dataset is collected on behalf of HRSDC by Statistics Canada. The sampling frame of the survey is based on HRSDC administrative data, enabling the responses to be linked to other administrative data housed within the department. In this case, data on the nature of government interventions comes from the HRSDC data on the National Employment Services System (NESS).

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<sup>9</sup> The nearest-neighbor matching procedure finds, for every HRSDC LMI user, the non-user with most similar observable characteristics. Usually, the comparison is facilitated by generating a linear index (propensity score) from the relevant characteristics.

<sup>10</sup> The variables used in matching included age, gender, number of ROEs in the previous three years, number of Employment Insurance claims in the previous three years, and occupational code. Region was not included in the model since matching was based on HRCC location.

Respondents are selected from a sample of all Records of Employment (ROEs). An employer must complete an ROE each time a job is terminated and must subsequently submit the ROE to HRSDC. Each ROE contains a substantial amount of analytically useful information, including the reason for job termination. Approximately five million ROEs are completed each year.

For the purposes of this survey, respondents whose jobs ended for reasons that would not be expected to lead to a job search were excluded from the analysis. The omissions include those who were involved in a labour dispute, quit to start another job, experienced an injury or became ill, required pregnancy or parental leave, returned to school, or retired.

Eleven quarters of data were used from the survey: four cohorts with a job separation in the four quarters following Employment Insurance reform (1997Q1 – 1997Q4), three cohorts representing the third quarters of 1998, 1999 and 2000, and the four most recent cohorts with a job separation (2000Q4 – 2001Q3). More details on how the dataset for the individual counselling analysis was created are available from the Data Appendix.

For the purpose of the analysis, participants are divided into three groups according to the duration spent unemployed:

- Zero weeks of unemployment – Individuals start the job search process before the termination of their current job. From a policy perspective, this eliminates any period of unemployment during the transition process, minimizing the amount of time a person stays unemployed, as well as the amount of Employment Insurance benefits collected;
- 1 to 52 weeks of unemployment – Most job seekers will be actively trying various job search techniques, with many receiving Employment Insurance coverage;
- More than 52 weeks of unemployment – Categorized as the long-term unemployed, this group consists of those who have not been employed for more than 52 weeks after job loss. Typically, access to Employment Insurance benefits will have been exhausted.

### **4.2.3 Data Limitations**

Although both data sets are rich enough to allow further insights into the job search process, there are some issues which the data can not address. The methodological implications need to be taken into account before interpreting LMI estimation results.

- The findings from the LMI user survey apply only to the four regions participating in the evaluation since results may be sensitive to the different delivery mechanisms and to the labour markets in each province. COEP is a national survey therefore the results of Individual Counselling apply across Canada;
- The time horizon, six months after commencing Employment Insurance benefits, for the LMI user survey was chosen to minimize recall bias on the part of the respondents. Unfortunately, this short-time horizon does not allow for questions regarding the longer term stability of job outcomes for LMI users. Moreover, it may also underestimate the

incidence and impacts of use in the long term. Some literature has shown that clients tend to turn to LMI later in their unemployment spell and has found that longer-term unemployed benefit most from LMI in their second and third quarter of unemployment;

- As with all surveys, the potential for some recall bias remains even with the shorter time span. For example, respondents may not remember the source of LMI, especially if the information was obtained in a non-HRCC or on the Internet at home. It is therefore possible that individuals use LMI products and services without knowing that they used it in their job search;
- The survey had a response rate of 22.2% (2,158 completions/total sample) for LMI users and 20.5% (2,205 completions/total sample) for non-users. A correction factor for the non-response was applied to the data. More details on this procedure are provided in the Data Appendix of the original report. Given the low response rate some caution should be used when generalizing results to the population covered;
- Both data sets are meant to be representative of the entire population it covers. One difference is that the LMI User Survey is restricted to Employment Insurance recipients, while the individual counselling data covers all unemployed, those who receive Employment Insurance as well as those who do not. As might be expected the underlying populations in the two data sets are different.
- Table 1 depicts sample statistics re-weighted to account for survey design from the two data sets, the LMI survey and COEP. The individual counselling data contains a higher proportion of males, youth and those with less than high school education compared to the LMI User Survey. In addition, more persons with disabilities are found in the counselling data while the LMI User data contains a higher proportion of foreign born individuals.<sup>11</sup> Given the scope of the current evaluation, these differences are unlikely to affect any of the conclusions derived from analyzing the data.

<b>Table 1</b>					
<b>Characteristics of the LMI Study Samples</b>					
	LMI Survey <sup>a</sup> (%)	COEP Survey <sup>b</sup>			
		All unemployment durations (%)	Zero weeks unemployed (%)	1-52 weeks unemployed (%)	>52 weeks unemployed (%)
<b>Gender</b>					
Male	50.9	57.1	55.5	58.6	52.0
Female	49.1	42.9	44.5	41.4	48.0
<b>Age</b>					
Youth (15-24)	12.4	22.2	23.7	22.2	18.9
Prime (25-54)	76.8	68.3	68.5	69.3	62.8
Older (55+)	10.8	9.5	7.8	8.4	18.2

<sup>11</sup> Given the larger sample size of the COEP, it is more likely that the COEP figures are closer to the population ones.

<b>Table 1 (continued)</b>					
<b>Characteristics of the LMI Study Samples</b>					
	LMI Survey <sup>a</sup> (%)	COEP Survey <sup>b</sup>			
		All unemployment durations (%)	Zero weeks unemployed (%)	1-52 weeks unemployed (%)	>52 weeks unemployed (%)
<b>Education</b>					
Less than High School	16.1	24.4	22.4	24.2	29.4
High School	25.5	27.3	26.5	27.8	26.6
More than High School	58.4	45.8	48.3	45.7	41.0
<b>Aboriginal</b>	5.7	5.3	4.7	5.5	5.8
<b>Visible Minority</b>	13.5	14.2	13.6	13.3	20.1
<b>Disabled</b>	3.3	7.7	7.1	7.0	12.8
<b>Foreign Born</b>	23.6	13.5	13.0	12.5	20.0
<i>Sample Size</i>	<i>4,166</i>	<i>33,626</i>	<i>7,835</i>	<i>21,905</i>	<i>3,886</i>
<sup>a</sup> Source: Survey of LMI Use and Administrative data, 2002 Q3 – 2002 Q4. <sup>b</sup> Source: COEP and NESS data, 1997Q1 – 1997Q4, 1998Q3, 1999Q3, 2000Q3 – 2001Q3. All numbers (except sample sizes) are in percentages. Data re-weighted to account for survey design.					

### 4.3 Net Impact Estimation Methodology

Based on observed<sup>12</sup> and unobserved<sup>13</sup> characteristics, individuals decide whether or not to participate in a program or use a service such as LMI. These characteristics are an important factor to consider when estimating the effect on subsequent labour market outcomes that can be attributed to the use of LMI, through the use of non-experimental methods such as comparison groups. For example, it may be the case that those who use LMI are far more aggressive in their job search behaviour, resulting in the positive benefits being falsely attributed to the impact of individual counselling, without considering the effect of the aggressive job search behaviour. Or, even more likely (and consistent with the literature), it may be the case that those who use LMI tend to be less effective in the job search, turning to LMI after they had already been unemployed for an extended period of time. If these workers are less able, in some unobserved ability component, than their counterparts who find jobs easier and without any job search assistance programs, then some of the positive benefits from LMI would be falsely obscured by the unobserved ability component. Failing to account for unobserved and observed selection factors causes regression estimators to be biased and will therefore not uncover the true impact of LMI.<sup>14</sup> In order to measure correctly the impact of LMI, the labour market outcomes of the users should be compared to

<sup>12</sup> For example, education, gender, age.

<sup>13</sup> For example, motivation.

<sup>14</sup> See Wooldridge (2000) Section 7.6 for more information.

the counterfactual of what would have been the outcome for users had they not used LMI. The econometric difficulty resides in constructing the counterfactual using observations on non-participants.

One approach to control for self-selection into LMI participation is the instrumental variables technique. To construct the counterfactual of what would have happened to participants had they not participated by using non-participants as a control group, researchers have to account for the fact that non-participants differ from participants in unobserved ways (and possibly in observed ways as well). The econometric problem is alleviated if a variable correlated with LMI participation but otherwise uncorrelated with unobserved individual characteristics can be identified. The problem with instruments is that such variables are usually difficult to find given the data available.<sup>15</sup>

Another approach was implemented in the analysis of counselling. Rather than attempting to generate the counterfactual by using non-participants as a control group, the estimation uses *only* program participants and compares their behaviour before and after receiving the individual counselling.<sup>16</sup> The problem of unobservable differences between participants and non-participants is therefore, to some extent, avoided.<sup>17</sup>

However, it is important to note that based on input from external advisors and peer reviewers for this evaluation, it was concluded that any attempt to estimate the incremental impacts of LMI on labour market outcomes would be very challenging. This was due to the inherent difficulties of disentangling the impact of HRSDC LMI on the users' labour market outcomes from the impact of the users' self-selection bias.

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<sup>15</sup> To correct for self-selection bias of participants, an instrumental variable technique was used with the driving distance to an HRCC as an instrument for LMI participation. While it is straightforward to check that the instrument is indeed correlated with the LMI participation variable, the burden of arguing that the instrument is uncorrelated with unobserved characteristic remains largely at researchers' discretion.

<sup>16</sup> This is what the literature calls duration analysis or survival analysis.

<sup>17</sup> In evaluating Counselling, the use of an accelerated failure-time model with time-varying covariates and unobserved heterogeneity was deemed to avoid the self-selection problem. See Henson and Cahill (2003) for a detailed description of the use of accelerated failure-time models in duration evaluations. In this framework, the probability that an individual leaves the unemployment pool at time  $t$ , given that s/he was unemployed at time  $t-1$ , is estimated. The time-varying covariates and unobserved heterogeneity terms are supposed to take care of changes in the labour market outcome due to factors other than LMI Counselling. Sensitivity to a correct specification of the underlying distribution and to unobserved heterogeneity is a potential bias-inducing problem in this kind of duration analysis. Another potential source of bias is if the probability of leaving unemployment goes up as the length of unemployment duration increases and the hazard model did not appropriately account for it. Different specifications were estimated and produced similar results.

## ***5. Findings***

The evaluation findings are presented in this section beginning with a labour market profile of users and non-users of LMI Products and Services and Individual Counselling. The profile is followed by a discussion of incidence of use by select geographical and socio-demographic characteristics. Finally, the results of the impact analysis are presented along with findings about other aspects of LMI use which emerged from the analysis.

### **5.1 User Profiles**

The section begins by comparing the labour market characteristics of LMI users with those of non-users. Further analysis examines the incidence of use by different socio-demographic and geographic categories, overall and for each product and service.

#### ***5.1.1 Labour Market Characteristics***

The labour market characteristics of LMI users and non-users are reported in Table 2. Compared to non-users, users are more likely to belong to clerical and sales occupations. The fact that LMI use is more predominant among white-collar workers seems to indicate that, unlike in the U.S. where public employment services is higher among the lower-skill blue-collar workers, the Canadian experience may be more in line with that of European countries such as Great Britain, where the public employment service attracts workers of all skills.

In contrast to users, LMI non-users are more likely to be in the trades or primary industries. They also have better prospects of regaining employment with a higher percentage expecting a recall or a seasonal job which could account for the lower use of LMI (and probably other job search methods as well) among this group. In addition, non-users have more Employment Insurance Claims and Record of Employment (ROE's) in the past three years indicating that they move in and out of the labour market more frequently than LMI users.

This finding seems to contradict what was expected from the literature, namely that public employment services are favoured by job searchers with less stable work histories. According to the literature, workers with less stable employment histories may turn to LMI later in their unemployment spell. Since the timing of the survey was less than six months into the unemployment spell, it might be the case that some users with unstable work histories would still be accessing LMI later on in their unemployment spell (ongoing at the time of interview) while workers with stable histories would not.

It would be impossible to test such a conjecture given the short time-horizon of the LMI survey design. Nevertheless, some supporting evidence emerges when looking at Individual counselling (bottom panel of Table 2) in the longer-horizon COEP data.<sup>18</sup> On average counselling users had longer unemployment spells compared to non-users: fifty weeks compared to 20 weeks. Specifically, one third of users had unemployment spells between half a year and a year, and another third had unemployment spells longer than two years. Conversely, individuals who did not use counselling had shorter unemployment spells: a third had unemployment spells of less than 10 weeks.<sup>19</sup>

<b>Table 2</b>		
<b>Labour Market Characteristics of LMI Users (%)</b>		
	<b>LMI User (excludes Counselling)</b>	<b>LMI Non-User (excludes Counselling)</b>
<b><sup>a</sup> Prior Occupation***</b>		
Managerial/Technical/Profess.	30.8	28.4
Clerical	17.0	10.5
Sales	17.5	14.8
Trades/Transp/Equip/Manufact	32.0	41.2
Primary Industries	2.7	5.2
<b><sup>a</sup> Employment Insurance Claims Past 3 Years***</b>		
None	50.6	40.4
1	25.5	24.4
2 or more	23.9	35.3
<b><sup>a</sup>ROEs Past 3 Years***</b>		
1	20.9	15.3
2-3	36.3	31.6
4-5	23.7	25.5
6 or more	19.2	27.6
<b><sup>b</sup> Employment Status 1 Week Prior to EI Application/Start***</b>		
Employed Full-Time/Self-Emp.	56.7	56.3
Employed Part-Time	12.5	19.5
Unemployed and Looking	25.7	18.9
Unemployed and Not Looking	1.0	0.9
Other	4.0	4.3
<b><sup>b</sup> Expected Recall***</b>	41.7	57.7
<b><sup>b</sup> Expected Seasonal Job***</b>	25.5	35.6
<i>Sample size</i>	1,962	2,204

<sup>18</sup> In this respect, the difference from the LMI user survey is that most spells in the COEP are completed by the time of the interview, and therefore unemployment spells longer than six months are also represented in the data.

<sup>19</sup> This does not mean that LMI Counselling induced longer durations for its users: quite the contrary, it may be possible that LMI Counselling users might have had even longer durations had they not used LMI.



<b>Table 2 (continued)</b> <b>Labour Market Characteristics of LMI Users (%)</b>		
	<b>Individual Counselling</b>	<b>No Counselling</b>
<sup>c</sup> <b>Average Unemployment Duration (Weeks)</b>	49.9	20.1
<sup>c</sup> <b>Length of Unemployment</b>		
0 Weeks	4.6	25.5
1 to 10 Weeks	12.3	35.3
11 to 20 Weeks	11.1	10.9
21 to 52 Weeks	35.9	16.8
53 to 103 Weeks	5.2	1.3
104 Weeks or More	31.0	10.2
<sup>c</sup> <b>Collected EI</b>	58.5	34.6
<b>Sample size</b>	1,214	32,412
<p>* p&lt;.05 **p&lt;.01 ***p&lt;.001. Significance levels refer to tests of the difference between HRSDC LMI users and non-users for different labour market characteristics. For each labour market characteristic, the null hypothesis is that the distribution is the same across users and non-users. Significance tests were not performed for Individual Counselling.</p> <p><sup>a</sup> Source: Administrative data, weighted for LMI screening.</p> <p><sup>b</sup> Source: Survey of LMI Use, weighted for LMI screening.</p> <p><sup>c</sup> Source: COEP and NESS data, 1997Q1 – 1997Q4, 1998Q3, 1999Q3, 2000Q3 – 2001Q3, weighted to account for survey design. All numbers except for sample sizes are in percentages.</p>		

## 5.1.2 Incidence of Use

Table 3 shows the incidence of LMI use overall and tables 3.1 and 3.2 show the incidence by socio-demographic characteristics. Table 3 reveals that almost seven out of ten Employment Insurance clients use LMI products or services. Job Bank clearly had the highest incidence rate at almost 60% while other products such as Community Information and ELE were less used by Employment Insurance clients. It is also interesting to note that participation in counselling increased with length of unemployment. Among those with less than a year of unemployment 2.6% turned to counselling. In contrast, a much higher incidence of use (8.4%) was reported for those unemployed for more than a year.

<b>Table 3</b> <b>Incidence of LMI Use (%)</b>	
<b>LMI (without Counselling)</b>	<b>Total</b>
At Least One HRSDC LMI ***	68.8
Job Bank***	58.6
Job Postings***	33.7
Indus / Occ / Employer Information***	27.6
Job Search Tools/Products***	23.0
Training / Educ Information***	18.4
Job Search Services***	15.4
Community Information***	8.1
ELE***	6.4
<b>Individual Counselling</b>	
All unemployment durations***	2.8
Zero weeks unemployment***	0.5
1 - 52 weeks unemployment***	2.6
> 52 weeks unemployment***	8.4

Table 3.1 shows that the variation is much smaller by age and gender. The rate of LMI use by males and females is generally very similar with the small exception that, for individuals unemployed for more than one year, males are more likely than females to take up counselling. Similarly, LMI use on the whole is fairly even by age category, although clients under 25 and over 55 report slightly lower rates of use than prime age individuals. It is also noteworthy that younger workers under 25 appear much less likely to use hardcopy job postings but exhibit about the same rate of use for Job Bank as prime age workers. In contrast, older workers are more likely to use hardcopy job postings but report relatively low rates of use for Job Bank.

<b>Table 3.1</b>						
<b>Incidence of LMI use (%)</b>						
<b>Gender</b>	<b>Male</b>	<b>Female</b>			<b>Total</b>	
<b>LMI (without Counselling)</b>						
At Least One HRSDC LMI	67.5	70.2			68.8	
Job Bank	58.0	59.2			58.6	
Job Postings*	25.9	29.3			33.7	
Indus / Occ / Employer Information	27.2	28.0			27.6	
Job Search Tools/Products	22.2	23.7			23.0	
Training / Education Information	14.5	14.3			18.4	
Job Search Services	13.2	13.1			15.4	
Community Information	8.5	7.7			8.1	
ELE	6.5	6.3			6.4	
<b>Counselling</b>						
All unemployment durations	2.9	2.9			2.8	
Zero weeks unemployment	0.7	0.3			0.5	
1 - 52 weeks unemployment	2.5	2.8			2.6	
> 52 weeks unemployment***	10.4	6.2			8.4	
<b>Age</b>	<b>Less than 25</b>	<b>25 to 54</b>			<b>55 Plus</b>	<b>Total</b>
		<b>25 to 34</b>	<b>35 to 44</b>	<b>45 to 54</b>		
<b>LMI (without Counselling)</b>						
At Least One HRSDC LMI**	65.2	72.3	70.6	68.0	62.3	68.8
Job Bank***	58.1	63.1	59.2	58.8	46.4	58.6
Job Postings**	21.9	24.3	29.8	30.3	29.6	33.7
Indus / Occ / Employer Information**	21.3	27.4	32.1	26.9	24.7	27.6
Job Search Tools/Products	21.0	23.9	23.7	24.5	17.5	23.0
Training / Education Information***	8.2	17.5	14.7	16.3	9.4	18.4
Job Search Services	10.2	11.5	14.7	14.2	13.4	15.4
Community Information**	4.2	8.3	10.8	7.3	6.5	8.1
ELE	5.1	5.8	6.6	8.7	4.2	6.4
<b>Individual Counselling</b>						
All unemployment durations*	2.2		3.1		2.2	2.8
Zero weeks unemployment*	0.1		0.7		0.1	0.5
1 - 52 weeks unemployment	2.2		2.9		1.5	2.6
> 52 weeks unemployment	7.7		9.4		5.5	8.4

Table 3.2 shows that rates of LMI use were higher among more highly educated individuals. Seventy-two percent of those with post-secondary education use at least one type of LMI compared to 56.6% of those with less than high school. Moreover, the table shows that the rates among those with higher education are generally higher than those with less than high school for each specific product or service.

<b>Table 3.2</b>					
<b>Incidence of LMI Use (%)</b>					
<b>Education</b>	<b>Less than HS</b>	<b>HS Grad</b>	<b>Some Post-Sec.</b>	<b>Post-Sec Grad</b>	<b>Total</b>
<b>LMI (without Counselling)</b>					
At Least One HRSDC LMI ***	56.6	71.3	67.4	72.0	68.8
Job Bank***	42.8	59.9	60.5	62.8	58.6
Job Postings**	21.8	30.1	27.4	27.2	33.7
Indus / Occ / Employer Information	23.7	26.6	27.3	29.2	27.6
Job Search Tools/Products*	18.3	25.0	20.0	24.7	23.0
Training / Education Information	10.9	16.0	14.7	14.2	18.4
Job Search Services*	10.7	13.0	9.1	14.4	15.4
Community Information	5.7	7.2	7.0	9.6	8.1
ELE*	4.1	6.1	4.2	7.7	6.4
<b>Individual Counselling</b>					
All unemployment durations	2.7	2.5	2.9		2.8
Zero weeks unemployment	1.3	0.2	0.3		0.5
1 - 52 weeks unemployment	2.7	2.5	2.6		2.6
> 52 weeks unemployment***	4.5	7.4	11.2		8.4

Table 4 shows that location and distance are important factors influencing LMI use. Individuals in urban locations (71%) are more likely to use LMI compared to those in rural locations (60%). Moreover, those located close to a Human Resource Centre Canada (HRCC) are more likely to use LMI. The table shows that at least 77% of those within five minutes driving distance to an HRCC report using LMI compared to only 55% who live more than 30 minutes away.<sup>20</sup>

<sup>20</sup> This is the main reason why distance to an HRCC is commonly used as an instrumental variable that is correlated with participation but not with unobserved characteristics. Between two identical individuals, one living close and one living far to the HRCC, the one who lives close is more likely to participate in HRSDC LMI not because it would benefit more from participation, but because the cost of attending is smaller.

<b>Table 4</b>				
<b>Incidence of LMI Use by Location (LMI Product/Service excluding Counselling) (%)</b>				
<b>Urban or Rural</b>	<b>Rural</b>		<b>Urban</b>	
At Least One HRSDC LMI ***	60.2		71.2	
Job Bank***	48.9		61.4	
Job Postings	25.8		27.5	
Indus / Occ / Employer Information***	21.4		29.2	
Job Search Tools/Products***	17.8		24.1	
Training / Education Information	12.0		15.1	
Job Search Services***	8.6		14.2	
Community Information	7.7		8.0	
ELE*	4.4		7.0	
<i>Sample Size</i>	1,053		2,895	
<b>Driving Distance to HRCC</b>	<b>Less than 5 (Minutes)</b>	<b>5 to 15 (Minutes)</b>	<b>16 to 30 (Minutes)</b>	<b>&gt; 30 (Minutes)</b>
At Least One HRSDC LMI ***	76.8	70.9	66.0	55.4
Job Bank***	68.8	59.9	54.5	49.4
Job Postings***	33.4	29.2	23.4	23.3
Indus / Occ / Employer Information*	32.6	28.1	27.6	20.5
Job Search Tools/Products*	27.7	24.0	19.9	19.6
Training / Education Information**	16.7	15.9	10.4	14.9
Job Search Services*	14.7	14.2	10.1	12.0
Community Information*	9.1	9.3	5.5	7.6
ELE	5.4	6.9	6.7	5.2
<i>Sample Size</i>	482	2,108	1,025	471

<b>Table 4.1</b>	
<b>Access Location</b>	
<b>LMI Product/Service (Excluding Counselling)</b>	<b>Total (%)</b>
<b>Access Location</b>	
HRCC***	76.0
HRSDC Website***	41.9
Non-HRSDC Website***	34.8
Non-HRCC Centre***	29.4
<b>Source of Non-HRCC LMI</b>	
Provincial/territorial government***	25.5
Private company	36.2
Non-profit organization**	13.8
School or university	16.5
<i>Sample Size</i>	1,962
* p<.05 **p<.01 ***p<.001. Significance levels refer to tests of the difference across rural/urban locations, distances to HRCCs, and provinces, for each HRSDC LMI product/service listed in the table.	
Source: Survey of LMI Use, weighted for LMI screening.	
All numbers except for sample sizes are in percentages.	

Table 5 presents the incidence of LMI use by different target groups (aboriginal, visible minority and persons with disabilities) and country of origin. Respondents identifying themselves as visible minorities have a higher use of most LMI compared to the other two groups, except for Job Bank and Job Postings. Persons with disabilities are more likely to use Job Search Tools and less inclined to participate in counselling compared to the other two groups, if they have been unemployed for longer than one year.<sup>21</sup> In contrast, respondents identifying themselves as Aboriginals are less likely to use at least one product or service or to use Job Bank. Foreign born clients, whose highest level of education was obtained outside of Canada, show higher LMI use.

<b>Table 5</b>				
<b>Incidence of HRSDC LMI Use by Target Group and Country of Origin (%)</b>				
<b>LMI Product/Service</b>	<b>Aboriginal</b>	<b>Visible Minority</b>	<b>Disability</b>	<b>Total</b>
<b>LMI (without Counselling)</b>				
At Least One HRSDC LMI	59.6**	71.0	71.3	68.8
Job Bank	47.2**	58.7	60.6	58.6
Job Postings	25.5	28.2	31.9	33.7
Indus / Occ / Employer Information	28.6	36.3***	34.0	27.6
Job Search Tools/Products	20.4	31.2***	34.0**	23.0
Training / Education Information	20.5*	21.8***	17.0	18.4
Job Search Services	12.4	21.2***	16.0	15.4
Community Information	6.8	13.1***	9.6	8.1
ELE	8.1	7.0	8.5	6.4
<b>Individual Counselling</b>				
All unemployment durations	2.4	3.6	3.4	2.8
Zero weeks unemployment	1.7	0.6	1.6	0.5
1 - 52 weeks unemployment	1.9	2.7	3.9	2.6
> 52 weeks unemployment	6.2	10.8	4.3***	8.4
<b>LMI Product/Service</b>	<b>Foreign Born</b>	<b>Foreign Education</b>	<b>Total</b>	
<b>LMI (without Counselling)</b>				
At Least One HRSDC LMI	84.6***	78.3***	68.8	
Job Bank	70.4***	64.5*	58.6	
Job Postings	21.4***	37.0***	33.7	
Indus / Occ / Employer Information	34.2***	36.3**	27.6	
Job Search Tools / Products	32.6***	38.5***	23.0	
Training / Education Information	16.3	27.8***	18.4	
Job Search Services	16.1***	32.8***	15.4	
Community Information	12.0***	18.8***	8.1	
ELE	9.7***	6.8	6.4	

<sup>21</sup> The latter may indicate that persons with disabilities may get discouraged and quit the labour force if they are unemployed for too long.

<b>Table 5 (continued)</b>			
<b>Incidence of HRSDC LMI Use by Target Group and Country of Origin (%)</b>			
<b>LMI Product/Service</b>	<b>Foreign Born</b>	<b>Foreign Education</b>	<b>Total</b>
<b>Individual Counselling</b>			
All unemployment durations	3.7	–	2.8
Zero weeks unemployment	0.3	–	0.5
1 - 52 weeks unemployment	3.3	–	2.6
> 52 weeks unemployment	9.7	–	8.4
* p<.05 **p<.01 ***p<.001. Significance levels refer to tests of the difference between the target group and the rest of the population (e.g. Foreign Born versus Born in Canada) for each HRSDC LMI product/service listed in the table. Source: Survey of LMI Use, weighted for LMI screening; COEP and NESS data for Counselling.			

Table 6 reports LMI incidence in the entire population sampled, as well as in the sub-sample aware of the products and services. There is substantial variation in awareness levels for individual products and services. Virtually all clients are aware of at least one product or service (97%) and 90% are aware of Job Bank.

<b>Table 6</b>				
<b>Incidence of HRSDC LMI Assistance by Product Awareness (%)</b>				
<b>LMI Product/Service (Excluding Counselling)</b>	<b>Percentage of EI clients aware of LMI</b>	<b>Incidence among Users aware of LMI product</b>	<b>Incidence among all EI clients</b>	<b>Sample Size (N)</b>
<b>LMI (without counselling)</b>				
At Least One HRSDC LMI	96.9			4,166
Job Bank	89.6	65.4	58.6	3,537
Job Postings	74.1	49.2	27.6	2,574
Job Search Tools / Products	73.8	31.1	23.0	2,963
Training / Education Information	68.5	27.4	14.5	2,275
Job Search Services	60.1	27.4	13.1	2,010
Indus / Occ / Employer Information	50.3	54.8	27.6	1,890
ELE	31.5	20.3	6.4	1,119
Community Information	26.2	30.8	8.1	1,078
Source: Survey of HRSDC LMI Use, weighted for HRSDC LMI screening.				

There is the potential for increased use of some products and services if awareness levels are increased. The difference in the use between the overall Employment Insurance client population and those aware of the product or service provides some measure of the potential increase if all clients are made aware of these products and services. According to the difference in incidences, the largest gains might occur for information on industries, occupations and employers, community information, and job postings.

A word of caution is warranted, though, when making inferences about the extent of the increase in LMI use associated with an increase in service awareness. Expanding awareness would make the incidence of LMI use go up, but it is less evident by how much.

The argument that increased levels of awareness would increase use is supported by what respondents answered to the question whether clients would use HRSDC LMI products and services if they were aware of them. A large percentage answered they would have if they had been aware of them. For most products and services a lack of awareness was the most frequent reason provided by non-users. However, as in other instances of self-reported data, these self-reported estimates of probable use from clients who were unaware of the products and services are likely substantially overstated.

## 5.2 Impact on Unemployment Duration

*The first question to be addressed by the evaluation was whether HRSDC LMI reduces Employment Insurance benefits paid in the short-term by reducing the duration of Employment Insurance claim and, in the longer-term, by increasing the stability of employment.*

The evaluation findings show that LMI reduces the duration of Employment Insurance in the short run but no long-term impact results are available. The results of the impact analysis are presented along with qualitative data on self-reported satisfaction indicators.

### 5.2.1 Impact of Individual Counselling

The Individual Counselling Study, while covering only a small proportion of all LMI users, provided evidence that counselling reduced unemployment duration. Table 7 gives the results from the duration estimation<sup>22</sup> of the net impact of counselling on its users.<sup>23</sup> Because of the nature of the duration estimation exercise, the counselling impact measures the likelihood that an unemployed individual continues to remain unemployed as a result of the counselling intervention. Individuals considered in this impact analysis have been unemployed between 1 and 52 weeks. Impacts were calculated for three time periods following the intervention: the current week; weeks one to five after the intervention occurred; and weeks six to ten after the intervention.<sup>24</sup>

The counselling impact during the week in which the intervention occurs is the highest, implying an increased probability of leaving unemployment (decreased probability of staying in the unemployment pool). In the ten weeks after the intervention, the probability of leaving unemployment also increases, but at a decreasing rate.<sup>25</sup> Also, aboriginals receiving

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<sup>22</sup> The type of duration model employed was a Weibull baseline hazard model. See methodology section for more details.

<sup>23</sup> Since the coefficients give the change in the probability of remaining in the unemployment pool, a negative number indicates that, comparing two otherwise observationally equivalent individuals, the individual who received counselling is less likely to stay unemployed than the individual who had not.

<sup>24</sup> This approach was motivated by Crossley and Kuhn (1999), who noted that workers usually did not leave unemployment as soon as a job match with an employer occurred. In particular, they found that there is typically a 1.3 week delay between contacting an employer and agreeing to a job, as well as a 1.0 week delay between agreeing to start a job and actually beginning work.

<sup>25</sup> Separate regressions were estimated for males and females, as it was thought that the unemployment experiences between the two were different. The estimation results indicated that the effect of counselling was virtually identical for both men and women.

individual counselling are more likely to leave unemployment compared to aboriginals who did not receive individual counselling.

More results regarding other determinants of the probability of remaining unemployed are available from the same table. In terms of the nature of the job loss, those losing a job for the first time in 52 weeks are less likely to leave unemployment, indicating that recent job search experience may play a pivotal role in reducing the duration of unemployment. It may also indicate that individuals with a less stable work pattern are also less exacting than those with a stronger employment record. Workers who quit a job due to poor working conditions are able to find a new job more quickly than workers who were laid off. It may be the case that a self-imposed job termination allows more planning and preparation for future employment than an unexpected job termination. The more hours an individual spends in job search, the more likely s/he will make a quicker exit from unemployment.<sup>26</sup>

<b>Table 7</b>			
<b>Individual Counselling: Determinants of Remaining Unemployed for Individuals Unemployed one to fifty-two weeks</b>			
Percentage change in the probability of remaining unemployed		Percentage change in the probability of remaining unemployed	
<b>Intervention Received</b>		<b>Nature of Job Loss</b>	
Individual Counselling		Received Notice	
Current Week***	-75.3	Weeks t-1 to t-5	-8.1
Weeks 1 to 5***	-68.2	Weeks t-5 +	-12.5
Weeks 6 to 10***	-43.2	Had Firm Recall Date	-12.1
Disabled	12.8	First Job Loss in One Year**	22.5
Visible Minority	37.1	Reason for Job Loss	
Foreign Born	-25.1	Layoff	control
Aboriginal*	-104.4	End of Contract	6.9
<b>Demographics</b>		Dismissal	9.0
Male	11.2	Quit - Working Conditions	-33.1
Youth (15-24)	14.5	Quit - Other Reason	-6.4
Prime (25-54)	7.1	Ended for Other Reason	15.0
Older (55+)	control	<b>Quarter</b>	
Disabled	-2.9	First	-10.4
Visible Minority	13.0	Second	-18.8
Foreign Born	13.6	Third	Control
Aboriginal	19.5	Fourth	-1.1
Less than High School	8.1	<b>Nature of Job Search</b>	
High School	control	Number of Techniques Used	8.6
More than High School	-0.1	Technique Used	
Mortgage	-8.0	Friends and Relations	Dropped

<sup>26</sup> One final observation to make is that the probability of leaving unemployment increases with time. This implies that, as time goes on, regardless of other factors, a person in this sample is more likely to leave unemployment (positive duration dependence). This is not surprising for two reasons. First, the sample is truncated at individuals with unemployment between 1 and 52 weeks in duration (roughly corresponding to unemployed individuals able to collect EI). The negative duration dependence usually found in the literature comes, in part, from the long-term unemployed, who find it increasingly difficult to exit unemployment after more than a year of unemployment. Moreover, respondents who received counselling are more likely to have been unemployed for a longer period of time, and therefore very few are leaving unemployment in the early stages of the unemployment spell.



**Table 7 (continued)**  
**Individual Counselling: Determinants of Remaining Unemployed for Individuals Unemployed one to fifty-two weeks**

Percentage change in the probability of remaining unemployed		Percentage change in the probability of remaining unemployed	
<b>Labour Market Situation</b>		Contacted Employers	4.5
Seasonal Worker	-13.4	Responded to Ads	-23.0
Unemployment Rate	0.7	Visited HRC	-3.2
Received EI	4.6	Provincial Agency	-2.9
Industry		Union Hiring Hall	-0.1
Manufacturing	-9.8	Employment Agency	0.4
Construction	-9.5	Placed Ads	-5.8
Services	control	Other	-7.2
Government	-13.8	Hours of Weekly Job Search*	-0.8

*P* (Standard Error) 3.15 (0.42); Subjects 623. Sample Size 22,781

\* *p*<.05 \*\**p*<.01 \*\*\**p*<.001. Significance levels refer to tests whether the coefficients are statistically different from zero.

The coefficients reflect how a unit change in any of the variables would change the probability of a worker "surviving" in the unemployment pool (i.e. the probability of remaining unemployed).

Source: NESS and COEP 1997Q1 - 1997Q4, 1998Q3, 1999Q3, 2000Q3 - 2001Q3.

## 5.2.2 Impact of HRSDC LMI

To correct for the self-selection bias of participants, an instrumental variable technique was used with the driving distance to an HRCC as an instrument for LMI use. Using the survey data collected for the evaluation and corresponding administrative data a wide range of models were tested in an attempt to assess the impact that LMI has on Employment Insurance benefits paid. Preliminary results suggested that once the analysis accounted for the fact that participants are a non-random sub-sample of the eligible population, LMI appeared to have a positive effect in that it reduced unemployment duration. While the duration of unemployment decreased the estimated impacts were not within the expected range suggested in the literature. In addition, these magnitudes varied depending on the assumptions used in the different models and were generally not robust, therefore they do not allow for an accurate estimate of the effect on reduced Employment Insurance. However, such findings suggest that JSA, ELE and Information Products and Services may reduce unemployment duration in the short term and shorten the length of the Employment Insurance claim.

### 5.2.3 Some qualitative measures of self-reported usefulness of HRSDC LMI: JSA, ELE and Information Services

Survey respondents were asked about their experience and overall satisfaction with LMI. While this qualitative analysis does not explicitly answer the evaluation questions, it does provide relevant information about how respondent's perceive or understand the role played by LMI in their job search.

Table 8 presents some measures of the performance of LMI as reported by survey respondents.<sup>27</sup> It shows that over three quarters of the Job Bank users found at least one job listed that was relevant to their interests, 23% of Job Bank users found eleven or more jobs of interest and 63% of job posting users found jobs of interest.

Moreover, the majority of users found the products and services to be useful. Considering all the sources of LMI used, 87% of users rated the products and services as useful or somewhat useful. Only 13% rated LMI as not useful or not at all useful.

<b>Table 8</b>	
<b>Jobs and Employers Identified with HRSDC LMI Products and Services (%)</b>	
	<b>Total</b>
<b>Jobs of Interest in Job Bank***</b>	
None	22.2
1 to 5	38.1
6 to 10	16.9
11 to 20	11.2
21 plus	11.5
Mean**	10.4
Sample size	1,421
<b>Jobs of Interest on Job Postings**</b>	
None	36.8
1 to 5	42.3
6 to 10	10.3
11 to 20	7.0
21 plus	3.6
Mean***	4.7
Sample size	742
<b>Employers Matched on ELE</b>	
None	54.5
1 to 5	31.7
6 plus	13.9
Mean	3.4
Sample size	101

<sup>27</sup> This discussion excludes LMI Counselling.

<b>Table 8 (continued)</b>	
<b>Jobs and Employers Identified with HRSDC LMI Products and Services (%)</b>	
	<b>Total</b>
<b>Contacts from Employers based on ELE</b>	
None	39.3
1 to 5	47.9
6 plus	12.8
Mean	3.1
<i>Sample size</i>	120
<b>Usefulness of All LMI Used***</b>	
Not Useful	12.8
Somewhat Useful	40.5
Useful	46.7
Mean*** (1 to 5 scale)	3.5
<i>Sample size</i>	1,935
<p>* p&lt;.05 **p&lt;.01 ***p&lt;.001. For each HRSDC LMI job outcome, the significance level attached to a category refers to a test of similarity across provinces in the distribution of outcomes for that category. The second significance level refers to a test of equal average number of outcomes across provinces. The other significance level refers to a test of equal means across provinces.</p> <p>Source: Survey of HRSDC LMI Use, weighted for HRSDC LMI screening.</p> <p>All numbers except for sample sizes are in percentages.</p> <p>Note that some cells were left blank since the sample size was very small.</p>	

Additional information, not included in table 8, indicates that over one in ten users of Job Bank and Job Postings attributed their current or most recent job to having used these products and services. Among Job Bank users 15% stated that their current or most recent job in the previous six months was obtained as a result of using the Job Bank, and 11% of the job posting users attributed their current or most recent job to job postings. ELE appeared to have more limited success since only 2% attributed their current or most recent job to this source of LMI.

These numbers seem to be at the lower-end of the 10%-20% placement performance reported in the literature, for instance by Jacobson and Petta (2000) for the U.S. and by Gregg and Wadsworth (1998) for Great Britain. Since there is no distinction between assisted and non-assisted use in these studies, it is possible that the higher figures could come from employment services where most use is assisted.

### **5.3 The impact of HRSDC LMI on job search duration and intensity and number of job search methods**

*The second evaluation question asked whether HRSDC LMI reduces job search duration, and how it impacts on the intensity of job search and the number of methods used by job seekers.*

### **5.3.1 Job Search Duration**

The impact of LMI on job search duration is indirectly answered by the previous findings from the impact analysis on unemployment duration. To the extent that the duration of job search is associated with the duration of unemployment (that is, an unemployed individual stops the job search process if and only if s/he finds a job), then a reduction in unemployment duration would strongly suggest a reduction in job search duration. Extrapolating from the impact findings in the previous section, which revealed that LMI reduces unemployment duration, it would seem highly probable that it also reduces the job search duration.<sup>28</sup>

### **5.3.2 Intensity of Job Search**

There is some evidence to suggest that LMI users are more intensely involved in the job search process. Using the number of visits to an HRCC and non-HRCC as a proxy for measuring the intensity of job search activities, revealed that users had a much higher intensity of job search activity compared to non-users. Users visited HRCCs, on average three times as often as non-users to access employment resources. In addition, the vast majority (92%) of users dropped in to an HRCC at least once and almost 30% reported over six visits. In contrast, three-quarters of non-users paid visits to an HRCC and their frequency of visits was much less – only 8% made six visits or more.

The higher intensity of job search among users was also reflected in their visits to locations other than HRCCs. The incidence of visits to non-HRCCs to access employment resources (41% versus 20% of non-users) was higher than non-users as was their frequency of visits compared to non-users (17% versus 6% paid more than six visits to non-HRCCs).

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<sup>28</sup> Again, this is conditional on the individual stopping the job search once a job has been taken. Also, it is assumed that, while collecting Employment Insurance, the individual is actively engaging in job search.

**Table 9**  
**Visits to HRCCs and Non-HRCCs (%)**

	User	Non-User
<b>HRCC Visits***</b>		
None	7.8	25.0
1 to 2	29.4	49.1
3 to 5	33.4	17.7
6 to 10	13.4	5.0
11 plus	16.0	3.2
<b>Total</b>	100.0	100.0
<b>Mean***</b>	7.1	2.4
<b>n</b>	1,882	2,152
<b>Non-HRCC Visits***</b>		
None	59.1	79.9
1 to 2	14.0	8.3
3 to 5	10.3	5.7
6 to 10	7.9	2.5
11 plus	8.7	3.6
<b>Total</b>	100.0	100.0
<b>Mean***</b>	3.75	1.60
<b>n</b>	1,868	2,100

\*p<.05 \*\*p<.01 \*\*\*p<.001

For each visit group (HRCC and Non-HRCC), the first significance level refers to a test of similarity across provinces in the distribution of the number of visits. The null hypothesis is that the distribution of the number of visits is the same for users and non-users. The second significance level refers to a test of equal average number of visits across provinces. The null hypothesis is that the average number of visits is the same for each province.

Source: Survey of HRSDC LMI Use, weighted for HRSDC LMI screening.

### **5.3.3 Relationship between HRSDC LMI and Other Job Search Activities**

LMI users are significantly more likely to use all other job search methods compared to non-users. This is true for all LMI examined in this evaluation and suggests that the use of LMI is supplementing rather than displacing the use of other sources of LMI or job search activities.

Table 9.1 depicts the other job search methods employed by LMI users and table 9.2 gives the job search strategies for counselling users. Table 9.1 shows that the most popular alternative job search method was job ads in newspapers, followed by internet searches and visiting employers who did not advertise.

**Table 9.1**  
**Other Job Search Methods for HRSDC LMI Users (%)**

	<b>HRSDC LMI User</b>	<b>HRSDC LMI Non-User</b>
Looked for job ads in newspaper***	93.7	76.2
Called or visited employers who did not advertise***	68.6	57.8
Placed an ad in the newspaper	9.1	7.4
Conducted Job Search Activities on the Internet	68.9	46.4
– Searched non-government sites on the Internet for jobs***	61.1	42.1
– Posted a résumé at a job website***	29.8	17.5
– Submitted job application or résumé through the Internet***	42.1	22.9
Paid a company or individual to assist you	3.7	2.4
Registered with job placement or temp agencies***	18.0	8.9
<i>Sample size</i>	1,962	2,204
<b>For those who found a job</b>		
<b>Number of Employers Contacted***</b>		
1 to 5	32.9	44.8
6 to 10	17.8	18.9
11 to 20	18.1	13.6
21 to 40	14.9	9.8
41 or more	16.2	12.8
Mean Number of Employers Contacted (at least 1)*	26.1	20.9
<i>Sample size</i>	987	1,661
<p>* p&lt;.05 **p&lt;.01 ***p&lt;.001. Significance levels refer to tests of the difference between HRSDC LMI users and non-users for each of the other job search methods listed in the table. For each other job search method, the null hypothesis is that the incidence is the same for HRSDC LMI users and non-users. For the number of employers contacted, the null hypothesis is that the distribution of the number of employers contacted is the same for HRSDC LMI users and non-users.</p> <p>Source: Survey of HRSDC LMI Use, weighted for HRSDC LMI screening.</p>		

**Table 9.2**  
**Other Job Search Methods for HRSDC Counselling Users (%)**

	All Unemployed Durations		No Unemployment		1 to 52 Weeks		More than 52 Weeks	
	All sample	Counsl.	All sample	Counsl.	All sample	Counsl.	All sample	Counsl.
<b>Number of Techniques from COEP<sup>1</sup></b>	3.9	4.5	–	–	3.9	4.5	4.0	4.5
Friends and Relations	80.8	84.1	–	–	80.1	84.7	84.0	82.7
Contacted Employers	83.7	83.2	–	–	83.5	83.0	83.5	83.0
Responded to Ads	73.3	82.0	–	–	73.8	82.5	74.5	81.2
Visited HRC <sup>2</sup>	68.6	84.2	–	–	68.3	85.3	70.5	82.4
Used Union Hiring Hall	10.4	9.8	–	–	10.6	7.0	7.3	12.2
Employment Agency	21.3	29.5	–	–	21.3	31.0	24.3	27.6
Placed Ads	9.3	9.8	–	–	8.9	10.6	10.5	8.6
Other	27.0	40.4	–	–	27.7	41.1	28.0	40.8
<b>Hours of Search<sup>3</sup></b>	13.5	16.5	–	–	13.9	16.7	12.6	16.1
<b>Received Counselling</b>	2.8	–	0.5	–	2.6	–	8.4	–
<i>Sample Size</i>	33,626	1,214	7,835	56	21,905	738	3,886	420

<sup>1</sup> Units are a level count. Elsewhere (unless specified differently) units are percentages.

<sup>2</sup> Some respondents may have been unaware that their counselling sessions were taking place at an HRC.

<sup>3</sup> Units are hours per week.

Source: NESS and COEP 1997Q1 - 1997Q4, 1998Q3, 1999Q3, 2000Q3 - 2001Q3.

All statistics, except for sample sizes, are weighted to account for survey design.

Note: – indicates data not available.

In terms of the mix of job search strategies used by a searcher, there is evidence in the literature that the longer the unemployment spell of a job searcher, the greater the search intensity and the number of search methods used.<sup>29</sup> The findings here do not contradict those estimated elsewhere in the literature.

## 5.4 Assisted LMI Use

Clients can be assisted in the use of LMI by Information Officers (IOs), when they are present or by regular HRSDC staff when IOs are not on site. Very few HRCCs have IOs on site. Unlike Counselling, which refers to one-on-one career advice, assisted LMI use refers to assistance as simple as help with accessing products and services. It was determined that examining assisted LMI use, while not a direct measure of the impact of IOs, would serve as the most reasonable proxy available and provide useful information on the relationship between and outcomes of assistance and LMI use.

<sup>29</sup> See Osberg (1993) and Wong and Henson (2000) for Canada, Kuhn and Skuterud (2001) for the U.S., Thomas (1997) for UK.

## 5.4.1 Incidence of Assisted LMI Use

Table 10 shows that nearly half of all LMI users received assistance to use LMI (48%). Assisted use was highest for job search tools/products, job search services and training/education information (about 60%). In contrast, assisted use was much lower among users of industrial/occupation information, job postings, ELE and job bank.

<b>Table 10</b> <b>Incidence of Assistance by LMI users of Product or Service (%)</b>	
<b>LMI Product/Service</b>	<b>Total</b>
All HRDC LMI	47.6
Job Bank	22.9
Job Postings	27.3
Indus / Occ / Employer Information	38.9
Job Search Tools / Products	62.6
Training / Education Information	57.4
Job Search Services	59.7
Community Information	50.4
ELE	26.4

Source: Survey of HRSDC LMI Use, weighted for HRSDC LMI screening. Only LMI users are considered here.

## 5.4.2 Impacts of Assisted LMI Use

There is evidence to suggest that assisted LMI had more beneficial impacts on the job search process (Table 11). A higher proportion of assisted LMI users decided to apply for their current or most recent job after using LMI (32%) compared to non-assisted users (26%). Assisted users are more likely to report that they applied for a job found on Job Bank (64%) than non-assisted users (52%).

<b>Table 11</b> <b>Impact of HRSDC LMI on Job Application (%)</b>			
	<b>Non-Assisted LMI</b>	<b>Assisted LMI</b>	<b>Total</b>
<b>Did you apply for a job that you found on the job bank?***</b>			
Yes	51.6	63.6	57.1
No	48.4	36.4	42.9
<b>Total</b>	100.0	100.0	100.0
<b>n</b>	869	801	1,670
<b>Did you decide to apply for this current or most recent job after obtaining labour market information?*</b>			
Yes	26.2	31.9	28.8
No	73.8	68.1	71.2
<b>Total</b>	100.0	100.0	100.0
<b>n</b>	592	502	1,094



**Table 11 (continued)**  
**Impact of HRSDC LMI on Job Application (%)**

	Non-Assisted LMI	Assisted LMI	Total
<b>Overall how useful was the HRDC LMI</b>			
Not Useful	15.0	10.3	12.8
Somewhat Useful	44.3	36.4	40.5
Useful	40.7	53.3	46.7
<b>Total</b>	100.0	100.0	100.0
<b>Mean (1 to 5 scale)</b>	3.3	3.7	3.5
<b>n</b>	998	963	1,961
<b>How important was the labour market information in your decision to apply for this job?</b>			
Low importance	17.2	16.7	17.0
Moderate importance	38.9	25.9	32.4
High importance	43.8	57.4	50.6
<b>Total</b>	100.0	100.0	100.0
<b>Mean (1 to 5 scale)</b>	3.4	3.7	3.54
<b>n</b>	144	149	293
<b>What labour market information product or service was the most important in your decision to apply for this job?</b>			
Information on industries, occupations, and employers	8.7	8.7	8.7
Information on training programs	0.7	3.4	2.1
Community information	2.9	2.7	2.8
Job search preparation tools and products	4.3	6.0	5.2
Job Bank	31.2	22.8	26.8
Job posting	11.6	12.1	11.8
Electronic Labour Exchange	0	3.4	1.7
Job search services	2.9	5.4	4.2
Other	37.0	31.5	34.1
All were important	0.7	4.0	2.4
<b>Total</b>	100.0	100.0	100.0
<b>n</b>	123	134	257
*p<.05 **p<.01 ***p<.001			
Significance levels refer to tests of the difference between assisted and non-assisted HRSDC LMI users in the distribution of a few job application characteristics. For each job application characteristic, the null hypothesis is that the distribution of the characteristic is the same for assisted and non-assisted HRSDC LMI users.			
Source: Survey of LMI Use, weighted for LMI screening. Only LMI users are considered here.			

In terms of obtaining a job those who had assistance using ELE were significantly more likely to have found a job (5%) compared to non-assisted users of ELE (0%).

There was no significant difference in the incidence of assisted HRSDC LMI users and non-assisted users stating they had obtained a job as a result of the Job Bank or job postings (Table 12).

**Table 12**  
**Obtained Job From Job Bank, Postings, ELE (%)\***

	Non-Assisted LMI	Assisted LMI	Total
<b>Did you obtain a job as a result of using the job bank?</b>			
Yes	15.4	14.4	14.9
No	84.6	85.6	85.1
<b>Total</b>	100.0	100.0	100.0
<b>n</b>	437	496	933
<b>Did you obtain a job as a result of using the job postings?</b>			
Yes	9.1	11.5	10.6
No	90.9	88.5	89.4
<b>Total</b>	100.0	100.0	100.0
<b>n</b>	202	383	585
<b>Did you obtain a job as a result of using the ELE?*</b>			
Yes	0	4.5	2.0
No	100.0	95.5	98.0
<b>Total</b>	100.0	100.0	100.0
<b>n</b>	77	101	178

\*p<.05 \*\*p<.01 p<.001

Significance levels refer to tests of the difference between assisted and non-assisted HRSDC LMI users in the distribution of successful job search characteristics. For each successful job search characteristic, the null hypothesis is that the incidence is the same for assisted and non-assisted HRSDC LMI users.

Source: Survey of LMI Use, weighted for LMI screening. Only LMI users are considered here.

## ***6. Conclusions***

Findings from two evaluation studies are presented in this synthesis report. The first study examined three categories of Labour Market Information (LMI): Job Search Assistance (JSA); Job Bank, Job Postings and Electronic Labour Exchange (ELE); and, Information Products and Services while the second study assessed the impact of Individual Counselling.

The evaluation addressed three issues: the impact of Human Resources and Skills Development Canada (HRSDC) LMI on unemployment duration; the effect on job search duration, intensity of job search and the number of methods used by job seekers; and outcomes of assisted LMI use.

### **6.1 Impact on Unemployment Duration**

Findings showed that Individual Counselling reduced unemployment duration in the short term. Counselling was found to have the largest impact during the week in which the intervention took place but continued to have a positive effect up to ten weeks after the counselling session. Aboriginals who received individual counselling are more likely to leave unemployment compared to aboriginals who did not. The impact of LMI Products and Services on unemployment duration was positive but varied depending on the model used.

### **6.2 Impact on Job Search Duration, Intensity and Number of Methods Used**

The impact of LMI Products and Services on job search duration could not be answered directly by the evaluation but can arguably be answered by inference from the findings to the first question. If the period of unemployment is reduced, as the findings demonstrate, then presumably the job search period would also be reduced. The assumption underlying this inference is that individuals search for a job while unemployed and stop searching once a job is obtained.

There is some evidence to suggest that LMI users conduct a more intense job search. Using the number of visits to HRCCs and non-HRCCs as a proxy for the intensity of the job search revealed that users were more actively involved in the job search compared to non-users.

In terms of the number of job search methods used, LMI users were significantly more likely to use all other job search methods compared to non-users. This is true for users of all types of LMI, including participants in counselling, and suggests that LMI is supplementing rather than displacing other sources.

## **6.3 Impacts of Assisted Use of LMI Products and Services**

Clients can be assisted with LMI by an Information Officer or by regular HRCC staff. Almost half of LMI users were assisted with LMI products and services. Evidence indicated that assisted HRSDC LMI had more beneficial effects on the job search process. Women, older clients, those with high school education and blue-collar workers were more likely to seek assistance.

## **6.4 Other Findings**

### ***Labour Market Profile***

Labour Market Profiles of users and non-users of LMI Products and Services were generated and revealed that the two groups are significantly different, lending support to the hypothesis that self-selection bias is occurring and may account for the different outcomes between the two groups. LMI users were more likely to work in white collar occupations and have more stable work histories while a higher proportion of non-users were found in blue-collar jobs. Non-users had more unstable work histories as measured by the number of Employment Insurance Claims and ROE's in the past three years and, compared to users, more frequently reported that they expected a job recall or expected a seasonal job, which could partially explain why they did not use LMI to find a job. A major difference in the profiles of counselling users and non-users was the duration of unemployment with users experiencing much longer periods of unemployment.

### ***Incidence***

Overall, almost 70% of all Employment Insurance clients used at least one of the LMI products and services. However, some products and services are accessed more than others. Job Bank was the most popular – almost 60% of all users turned to this product – while Community Information and ELE were less utilized (8% and 6% respectively).

### ***Socio-Demographics***

Education was a good predictor of LMI use. Almost three-quarters (72%) of post secondary graduates used at least one LMI product or service; among those with less than high school education 57% reported using LMI. In general, variation by age and gender was modest. LMI users are more likely to come from urban centres rather than rural areas. Proximity to an HRCC was also a good predictor of use: over three quarters (77%) of those living less than five minutes driving distance from an HRCC used at least one LMI product or service compared to 55% of those located more than 30 minutes driving from an HRCC.

## **Satisfaction**

The majority (87%) of LMI users rated the products and services useful, with a minority (13%) reporting LMI not useful.

## **Product Awareness**

Findings from the evaluation suggest that if product awareness levels were increased the use of LMI products and services would likely increase. However, the evidence was not definitive enough to measure the exact magnitude of this increase.

## **6.5 Further Research**

The evaluation generated a range of very useful findings which provide insights into who uses LMI, patterns of use, client satisfaction and which products and services were effective in helping the unemployed re-enter the job market. Such results provide valuable information to policy and program managers as they consider the role played by HRSDC LMI.

However, some scope for undertaking further analysis obviously remains. For example, future analysis might build upon this foundation by examining the impact of HRSDC LMI beyond the six months covered in the HRSDC LMI user survey. The present analysis (with the exception of the Individual Counselling data) was constrained to examining impacts during a six month period in order to minimize the risk of recall bias and to gather accurate information on HRSDC LMI use. It might now be possible to examine the outcomes beyond this six month window by combining the survey data collected with administrative data which could provide important insights about the impacts of HRSDC LMI for the longer-term unemployed (up to one year). Moreover, it is important to note that the research thus far focuses only on the impact of HRSDC LMI on job searchers. However, HRSDC LMI is potentially used by many other types of clients. For example, another possible area for further investigation is an examination of the use and effectiveness of HRSDC LMI by employers.



# *Bibliography*

- Addison, John and Pedro Portugal. 2001. "Job Search methods and Outcomes". *IZA Discussion Paper No. 349*.
- Anderson, Patricia (1992). "Time-varying Effects of Recall Expectation, a Re-employment Bonus, and Job Counselling on Unemployment Durations", *Journal of Labour Economics* 10(1), pp. 99-115.
- Author, David (2000). *Wiring the Labor Market*.
- Bishop, John. 1993. "Improving Matches in the Labor Market". *Brookings Papers on Economic Activity 1*, pp. 335-400.
- Blau, David and Philip Robins. 1990. "Job Search Outcomes for the Employed and Unemployed". *Journal of Political Economy*, 98(3) pp. 637-655.
- Crossley, Thomas and Peter Kuhn (2000), *Job Starts and Job Finds: Employment Insurance and the Microdynamics of Unemployment Spells*, Evaluation and Data Development, Human Resources Development Canada.
- Decker, Paul, Robert Olsen, Lance Freeman and Daniel Klepinger (2000), "Assisting Unemployment Insurance Claimants: The Long-Term Impacts of the Job Search Assistance Demonstration", *Office of Workforce Security Occasional Paper no. 2000-02*, U.S. Department of Labour, Employment and Training Administration, Washington D.C.
- Dehejia, Rajeev. 1999. "Program Evaluation as a Decision Problem". *NBER Working Paper No. W6954*.
- Dolton, P. and D. O'Neill (1996), "The Effect of the Return to Full-Time Employment", *The Economic Journal* 106(435), pp. 387-400.
- Frölich, Markus. 2001. "Treatment Choice Based on Semiparametric Methods". *SIAW, University of St. Gallen Working Paper*.
- Gorter, Cees and Guyonne Kalb (1995), "Estimating the Effect of Counselling and Monitoring the Unemployed Using a Job Search Model", *The Journal of Human Resources* 31(3), pp. 591-610.
- Greg, Paul and Johnatan Wadsworth. 1996. "How Effective are State Employment Agencies? Jobcentre Use and Job Matching in Britain". *Oxford Bulletin of Economics and Statistics*, 58(3), pp. 443-468.
- Ham, John and Robert Lalonde (1990), "Using Social Experiments to Estimate the Effect of Training on Transition Rates", in J. Hartog, G. Ridder and J. Theeuwes (eds.), *Panel Data and Labor Market Studies*, North Holland.

- Henson, Harold and Ian Cahill (2003), *The Econometric Duration Model with Time Varying Coefficients as a Solution to Self-Selection in Program Evaluation*, Human Resources Development Canada.
- Holzer, Harry. 1988. "Job Search by Employed and Unemployed Youth". *Journal of Labor Economics* 6, pp. 1-20.
- HRSDC, *Volunteer Work as a Vehicle for Labour Market Development*, Evaluation and Data Development, Human Resources Development Canada, Forthcoming.
- Jacobson, Louis and Ian Petta. 2000. *Measuring the Effect of Public Labor Exchange (PLX) Referrals and Placements in Washington and Oregon*. Westat, Inc., under contract for U.S. Department of Labor, Washington DC.
- Jones, Stephen (1998), *Unemployment and Benefit Durations*, Evaluation and Data Development, Human Resources Development Canada.
- Keely, M.C. and P.K. Robins. 1985. "Government Programs, Job Search Requirements, and the Duration of Unemployment". *Journal of Labor Economics* 3, pp. 337-362.
- Kuhn, Peter and Mikal Skuterud. 2000. "Job Search methods: Internet vs. Traditional". *Monthly Labor Review*, October 2000, pp. 3-11.
- Lechner, Michael and Jeffrey Smith. 2002. "What is the Value Added by Caseworkers?" *IZA Working Paper*.
- O'Leary, Christopher J. "Effectiveness of Labor Exchange Services." Forthcoming in David E. Baldocchi, Randall W. Eberts and Christopher J. O'Leary, eds. *Labor Exchange Services in the United States: History, Effectiveness, and Prospects*, Kalamazoo, MI: W.E.Upjohn Institute for Employment Research.
- O'Leary, Christopher, Paul Decker, and Stephen Wandner. 2001. "Reemployment Bonuses and Profiling". Forthcoming in *Labour Economics*.
- Osberg, Lars. 1993. "Fishing in Different Pools: Job Search Strategies and Job-Finding Success in Canada in the early 1980s". *Journal of Labor Economics*, 11(2) pp.348-86.
- Stiglitz, Joseph et al. (2000). "The Role of the Government in a Digital Age".
- Wong, Ging and Harold Henson. 2000. *Job Search and the Evaluation of Labour Market Information and Employment Services*, Evaluation and Data Development, Human Resources Development Canada. Paper presented at the Canadian International Labor Network Conference, Burlington, Ontario, September 2000.
- Wong, Ging, Harold Henson and Arun Roy (1999), *Evaluation of Long-Term Unemployment in Canada: Outlook and Policy Implications*, Evaluation and Data Development, HRSDC.



# *Data Appendix*

## **HRSDC LMI User Survey**

The sampling frame included all clients who had a claim start in a specific time period. More specifically, the sampling frame included all clients who had a regular Employment Insurance (EI) Benefit Commencement Period (BPC) during May or June of 2002. Excluded from the sample were claims associated with sickness, maternity, paternity, parental, adoption and retirement benefits.

The May/June time period was selected to be far enough back in time to be able to observe shorter-term outcomes such as reduced Employment Insurance use, but recent enough to avoid recall bias regarding the use of Human Resources and Skills Development Canada (HRSDC) Labour Market Information (LMI). The claim establishment date was selected to obtain clients at the beginning of their interaction with HRSDC and their job search activities. Sampling clients with existing active claims was considered as well, but in these cases HRSDC LMI use could have occurred much earlier and there were recall concerns. The outcome information was measured as at six months from the BPC month (i.e. November and December).

Once the sampling frame was assembled, a survey was conducted with HRSDC LMI users. HRSDC LMI users were identified at the beginning of the survey and non-users were screened out at this stage.

During the design of the questionnaire, several additional screens were added, including approval to link survey responses to administrative data, looked for work during the time period of interest, applied for or received Employment Insurance within the date of the BPC on file, and recalled the date. As a result of these screens, 25% of the individuals who agreed to complete the survey were eliminated.

The next stage was to match these users with potential non-users based on a nearest neighbour matching technique using HRSDC administrative data for the matching process. The idea is to identify for each LMI user a similar non-user (the "nearest neighbour") based on the observed characteristics that determine an individual's use of HRSDC LMI. Comparing the outcomes of LMI users with those of their nearest-neighbours helps reduce some of the bias associated with individuals' self-selection into HRSDC LMI use. As an alternative to constructing high-dimensional matrices for the matched user - neighbour pairs, the matching can be performed on a single index measure, such as the probability of using HRSDC LMI.

A logistic model was developed to predict the likelihood of HRSDC LMI use based on administrative data (sex, age, some labour market information) and contact information (HRCC location) for the respondents (users and non-users) interviewed for the survey of HRSDC LMI users. Given tight time constraints, the model was based on the outcome codes for the survey after approximately 1,200 LMI user interviews had been completed.

The following variables were used in the matching procedure:

Number of prior Employment Insurance claims (three years):

- 0
- 1
- 2 or more

Prior ROEs (three years):

- 0
- 1
- 2 or more

Occupational Code (First Digit of Code):

- Management Occupations
- Business, Finance and Administration Occupations
- Natural and Applied Sciences and Related Occupations
- Health Occupations
- Occupations in Social Science, Education, Government Service and Religion
- Occupations in Art, Culture, Recreation and Sport
- Sales and Service Occupations
- Trades, Transport and Equipment Operators and Related Occupations
- Occupations Unique to Primary Industry
- Occupations Unique to Processing, Manufacturing and Utilities

Age:

- <25
- 26-34
- 35-44
- 45-55
- 55 plus

Sex:

- Male
- Female

Occupation:

- Business, Finance and Administration Occupations
- Natural and Applied Sciences and Related Occupations

Employment Insurance claims in the past 3 years:

- No claim in the past three years
- 1 claim in the past three years

Since there were few strong predictors for HRSDC LMI use, there was a lot of overlap in the predicted likelihood of participation generated by the logistic model. Consequently this created a limited number of HRSDC LMI user types and a relatively large pool of possible comparison cases (nearest neighbours) with the same predicted participation probabilities. The pool of nearest neighbours from which the non-users were drawn was identified separately within each HRCC. During the survey, quotas were established for each of these clusters to obtain approximately the same number of HRSDC LMI users and non-users in each matching cell. All potential survey respondents were sent an advance letter to explain the evaluation and the survey.

### ***Survey Response Rates***

The HRSDC LMI user survey began on November 16, 2002 and was completed on December 16, 2002. At the conclusion of the HRSDC LMI user survey, contacts had been attempted with 16,406 Employment Insurance clients, resulting in 2,158 completions. During the data quality review procedures some cases were eliminated due to inconsistent responses. Specifically, some respondents who identified themselves as users did not cite using any of the HRSDC LMI products and services later in the survey. These individuals were removed from the survey, resulting in slightly less than the 2,100 HRSDC LMI users targeted for survey completion.

The HRSDC LMI non-user survey began on December 9, 2002 and was completed on December 30, 2003. At the conclusion of the HRSDC LMI non-user survey, contacts had been attempted with 22,844 Employment Insurance clients, resulting in 2,205 completions. The average length of the user survey was 27.2 minutes and 18.4 for the non-user survey.

The distribution of these contacts by outcome code is provided below.

<b>LMI User Survey Outcomes</b>		
<b>Outcome Code</b>	<b>Count</b>	<b>%</b>
Complete	2,158	13.2%
Ineligible	2,020	12.3%
Appointment	561	3.4%
Callback	2,296	14.0%
Incomplete	186	1.1%
Refusal	2,200	13.4%
Language Barrier	316	1.9%
Blocked	307	1.9%
Invalid Number	1,805	11.0%
No Answer/Busy	4,557	27.8%
<b>Total</b>	<b>16,406</b>	<b>100.0%</b>

<b>LMI Non-User Survey Outcomes</b>		
<b>Outcome Code</b>	<b>Count</b>	<b>%</b>
Complete	2,205	9.7%
Appointment	1,404	6.1%
Callback	3,489	15.3%
Ineligible	4,634	20.3%
Incomplete	371	1.6%
Refusal	3,097	13.6%
Language Barrier	500	2.2%
Blocked	224	1.0%
Invalid Number	2,581	11.3%
No Answer/Busy	4,339	19.0%
<b>Total</b>	<b>22,844</b>	<b>100.0%</b>

A brief explanation of the codes is as follows:

- Complete:** Survey was completed.
- Appointment:** Respondent expressed willingness to conduct the interview and scheduled an interview. Most but not all of these will result in a completed interview.
- Callback:** Respondent did not want to conduct an interview at this time and did not set appointment or another household member answered the phone and suggested we call back at another time. This establishes a valid contact number but the callback could result in a completed interview or a number of other outcomes such as ineligible, refusal, no answer subsequently, etc.
- Ineligible:** Respondent did not meet the Employment Insurance applicant/recipient criteria, did not use LMI or refused to allow their data to be linked to HRSDC administrative data. Should be counted as a response since they agreed to the survey but were excluded due to quota/eligibility requirements.

Incomplete:	Respondent started the interview and then discontinued with no appointment set. Should be counted as a refusal.
Refusal:	Refused to conduct the survey.
Language Barriers:	Respondent could not complete the interview in either official language.
Blocked:	Number blocked by Bell Canada.
Invalid Number:	Number not valid/no such person at that number.
No Answer/Busy:	Number appears valid, no contact established.

The formula used to compute survey response rates is:

Response Rates = Completions/Total – Ineligible – Appointment – Callback – Invalid Number

There were a high proportion of callbacks, 17% to 21%. Due to tight timelines to complete the project, some callbacks that could have been made at a later date and potentially converted into completed interviews had to be abandoned due to the cut off date for the surveys. The largest source of non-response was no answer/busy, 28% for the user survey, and 19% for the non-user survey. Invalid numbers (e.g. individual not at that number, or business number) accounted for 11% of the contacts. This incidence was surprisingly high considering the administrative data accessed was relatively recent. Actual refusals were relatively low, approximately 13%, and incomplete surveys were just over 1%.

## **HRSDC Individual Counselling Data**

The objective of the survey is to provide a complete picture of the job search process. Respondents are selected from a sample of all Records of Employment (ROEs). An employer must complete an ROE each time a job is terminated and must subsequently submit the ROE to HRSDC. Each ROE contains a substantial amount of analytically useful information, including the reason for job termination. Approximately five million ROEs are completed each year.

For the purposes of this survey, respondents whose jobs ended for reasons that would not be expected to lead to a job search were excluded from the analysis. The omissions include those who:

- Were involved in a labour dispute;
- Quit to start another job;
- Experienced an injury or became ill;
- Required pregnancy or parental leave;
- Returned to school; or
- Retired.

Approximately 22% of all jobs ended for one of the above mentioned reasons. After having discarded these observations, there remained more than 33,000 respondents from the eleven quarters of data that were used from the survey:

- Four cohorts with a job separation in the four quarters following Employment Insurance reform (1997Q1 – 1997Q4);
- Three cohorts representing the third quarters of 1998, 1999 and 2000; and
- The four most recent cohorts with a job separation (2000Q4 – 2001Q3).

Respondents in these eleven cohorts were asked questions of a highly detailed nature. Information on as many as ten jobs was allowed for. This enabled the construction of week-by-week data on employment status, an element crucial to the econometrics. For each job, information on rates of pay and hours of work was also collected.

In addition to the information on each job, respondents were also interviewed concerning their basic demographics and any job search techniques employed. Since respondents were requested to answer more than once, a fairly comprehensive view of the job search process was created. Although available, information on which of the job search techniques were successful was not used in this study because the emphasis here is on the role of individual counselling and its effect on reducing the duration of unemployment.

Data on the nature of government interventions comes from the National Employment Services System (NESS). Since the sampling frame for the Canadian Out-of-Employment Panel (COEP) survey data is based on HRSDC administrative data, it was possible to merge the two data sets, thus creating a database with information on the use of many of HRSDC's activities, as well as information on jobless spells. However, it should be stressed that there is missing information on some HRSDC services related to job search, such as the use of the HRSDC website, as well as information on job search activities for individuals who transited from one job to another without any period of unemployment. Nevertheless, this is a rich enough data set that allows further insights into the job search process and the role of individual counselling in reducing unemployment duration.

## **Duration Model**

The type of duration model employed was a Weibull baseline hazard model. Sensitivity analysis was also conducted using a gamma model and a model with a log-normal distribution that produced similar results to those for the Weibull model.