

Newfoundland and Labrador HealthLine
Evaluation: Phase II
March 2013

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Executive Summary

HealthLine is a toll-free nurse telephone service that is available to residents of Newfoundland and Labrador 24 hours a day, seven days a week. HealthLine was launched in September 2006 as an alternative delivery model to improve access to services, to encourage self-care, and to reduce unnecessary or inappropriate physician and emergency department visits. Services are provided by registered nurses and include the assessment of non-urgent symptoms to recommend a course of action, the provision of health information, and the referral to emergency departments where necessary and/or appropriate.

Evaluation of HealthLine has been ongoing since 2008. Two previous evaluations completed by the Newfoundland and Labrador Centre for Health Information could not fully assess the effectiveness of HealthLine in carrying out its primary functions since the evaluations did not include an examination of adherence to nurse advice. The current evaluation was conducted in direct response to the need for a more comprehensive evaluation of HealthLine to determine how useful the service is to residents of the province and to assess the impact it has on the health care system. The evaluation, based primarily on information gathered from users of HealthLine, focused on three main areas: access to the service, satisfaction with the service and compliance with advice received.

The evaluation indicated that callers to HealthLine are receiving timely access to health services. An overwhelming majority of callers to the HealthLine are satisfied with the service, would use the service again and would recommend the service to others. The vast majority of callers have no problems finding the number to HealthLine; however, only one in every ten callers knows the telephone number for the service. The remaining callers source the number mainly from the Internet, their local hospital, or from marketing materials.

A comparison of the original inclinations of callers, the recommendations given to callers by HealthLine staff, and the actions taken by callers after using HealthLine indicates that the availability of a telephone nursing service in Newfoundland and Labrador promotes higher levels of self-care at home, increased use of primary care services, and fewer visits to the emergency department. Overall, 56.9% of residents whose calls were included in the analysis said that without HealthLine they would have gone to the emergency department and only 5.9% stated that they would have treated the issue at home without accessing some form of health services. HealthLine staff recommended less than one-quarter (23.5%) of callers to go to emergency, advising close to half (47.3%) to see a primary care provider and the remaining 29.2% to engage in self-care at home. After using the HealthLine, the proportion of residents who actually went to the emergency department was 38.4% (a decrease of 18.5% from original inclination), and 39.4% of residents indicated they were able to treat the issue at home (an increase of 33.5% from original inclination). There was a large increase in the proportion of residents who were advised to seek care from a primary care provider than had originally intended (47.3% versus 11.4%); however, it appears as though these individuals were diverted to a lower level of care than they would otherwise have chosen.

Variations among the province's four regional health authorities and across patient age groups were observed. For instance, no residents from Labrador-Grenfell Health Authority stated that their original

inclination was for self-care at home, but after using the HealthLine service more than half of residents from this region opted for this level of care. A comparison of original inclinations and actions taken by patient age found that the largest differences were observed for children, who had increased levels of self-care at home and decreased levels of emergency department visits. Self-care at home would not have been an option for any patient in the province aged 60 years and older had HealthLine not been available, yet more than half (52.5%) of patients in this age group report following this course of action after using the service.

Overall, 57.9% of callers to HealthLine adhere to the advice they are provided. Individuals who are non-adherent are more likely to seek lower levels of care than advised. Reasons for non-adherence include a change in symptoms, disagreement with advice, transportation issues, and wait times or being unable to get an appointment.

There is a discrepancy between the recommendations given to callers by HealthLine staff and the recommendations residents recall being provided. This indicates that users of the service may not fully understand the advice that is provided to them. The implementation of measures to promote understanding of nurse advice may assist to bridge this gap and ensure that patients seek the appropriate level of care.

Modifications to the monthly reports provided to the Department of Health and Community Services by HealthLine's service provider may enable the Department to monitor caller comprehension of, and adherence to, recommendations. These changes include a comparison of the recommendations recalled by users who complete the user feedback surveys to those recorded by the service provider as a means of monitoring caller understanding of nurse advice; and a revision to the user feedback surveys to include a question about action taken so that adherence with recommendations can be more accurately measured.

Given that the findings of the evaluation attest that the Newfoundland and Labrador HealthLine is providing timely access to health services, promoting higher levels of self-care at home, and reducing unnecessary or inappropriate emergency department visits, increasing awareness of and promoting the use of the HealthLine service among residents of the province is likely an effective means by which government can further reduce undue burden on the health care system.

Introduction

Newfoundland and Labrador HealthLine was first introduced in September 2006 as part of the Self-Care/telecare priority identified in the Department and Health and Community Service's *Three-Year Provincial Telehealth Strategic Plan for Newfoundland and Labrador*. Originally funded through the Primary Health Care Transition Fund, HealthLine was intended to provide Newfoundlanders and Labradorians with access to toll-free health information and advice 24 hours a day, seven days a week. HealthLine fell under goal three of *Moving Together: Mobilizing Primary Care, A Framework for Primary Care Renewal in Newfoundland and Labrador* to "enhance accessibility and sustainability of primary health care services". As an alternative delivery model, HealthLine has three primary functions: to improve access to service; to encourage self-care; and to reduce unnecessary or inappropriate physician and emergency room department visits. Services of HealthLine include the assessment of non-urgent symptoms to recommend a course of action and the provision of health information. HealthLine operates out of three contact centres: a base contact centre in St. Anthony with satellite sites in Stephenville and Corner Brook.

The Newfoundland and Labrador Centre for Health Information (the Centre) completed an evaluation of the HealthLine in January 2009 which included a review of evaluations of teletriage services carried out in other jurisdictions and a descriptive report based on an analysis of call data collected by the HealthLine service provider (Clinidata, a division of Sykes Assistance Services Corporation) between September 2006 and October 2008. A second phase of the evaluation, which was to possibly include caller surveys, could not be conducted because the Department of Health and Community Services (the Department) issued a request for proposals for a five-year service provider contract. The contract was awarded to FONEMED North America Inc. which took over operations of the HealthLine from Sykes in September 2009. In 2010-2011, at the Department's request, the Centre updated the review of current evidence and conducted a second analysis of call data considering the change in service provider. The second report was provided to the Department in September 2011.

Recognizing the need for a more comprehensive evaluation of HealthLine, the overall scope of the current evaluation was to determine how useful the service has been to the residents of the province and assess the impact the service has had on the health care system. The Centre for Health Information developed the evaluation framework (Appendix A) in consultation with the Department of Health and Community Services.

The evaluation aimed to answer the following key questions:

- Are there any issues in accessing the HealthLine service?
 - Finding the number to call HealthLine and getting through to a nurse
 - Understanding the nurse and the recommendation/information provided
- Are callers compliant with nurses' recommendations?
 - If not, what service did callers seek and why

- What would callers have done instead of calling HealthLine if the service was unavailable
- How satisfied are callers with the HealthLine service?
 - Satisfaction with information provided
 - Satisfaction with the knowledge level of the nurse and/or their ability to provide advice or information
 - Satisfaction with the length of time required
 - Overall satisfaction with the HealthLine service
- How does the callers' initial inclinations compare to the recommendations they are provided and the actions they take after calling HealthLine?
 - Are callers recommended to seek a higher or lower level of service than they originally intended

Methods

The evaluation utilized data that were obtained through a telephone survey (Appendix B) conducted with a sample of users of the HealthLine service, as well as call data provided to the Centre by HealthLine's current service provider, FONEMED North America Inc.

A list of callers to HealthLine who called the service between November 26, 2012, and January 7, 2013, regarding medical symptoms, and had agreed to be contacted for a follow-up survey, was provided to the Centre by FONEMED. A geographically representative sample of 404 users of the HealthLine service was contacted via telephone to take part in a survey related to their call experience. The survey was administered by MQO Research by telephone from December 13, 2012, to January 9, 2013; however, no calling was conducted during the Christmas season between December 21, 2012, and January 8, 2013. Data collection took place Monday to Friday from 1:30pm to 9:30pm, Saturday from 11:30am to 7:00pm, and Sunday from 1:30pm to 9:30pm to ensure that data collection occurred during various times of the day and days of the week. All interviewing was conducted by fully trained and supervised interviewers while 10 percent of all completed interviews were monitored by quality assurance staff. The average length of time required to complete a survey was approximately seven minutes. To reduce recall bias related to their experience with the HealthLine service, as well as to allow sufficient follow-up time to assess compliance with recommendations, efforts were made to conduct the telephone surveys between two to three weeks following the index call to HealthLine.

The proportion of callers surveyed from each regional health authority was determined based on the regional distribution of all callers to HealthLine as reported in the previous evaluation report from September 2011. Table 1 shows the regional distribution of callers to HealthLine compared to that of the survey respondents. The proportion of callers surveyed from the Labrador-Grenfell Health Authority was increased to 10% to allow for a more detailed analysis of results from this region. Surveys were completed until the desired quotas were obtained for each region.

Table 1. Distribution of HealthLine Callers and Survey Respondents, by RHA

Regional Health Authority	Distribution of HealthLine Callers ¹	Distribution of Survey Respondents
	%	%
Eastern Health	62.0	55.0
Central Health	13.5	15.1
Western Health	19.6	20.0
Labrador-Grenfell Health	4.9	9.9
Total	100.0	100.0

¹Distribution of callers to HealthLine who used the service between September 2009 and August 2010

Data collected via the telephone survey were linked to the call data to allow for a comparison of disposition (as recorded by HealthLine and recalled by callers) and to determine compliance with nurse advice. Adherence was assessed by comparing the recommendation to the action taken. In some cases, respondents gave more than one answer for questions around original inclination, recommendation and action taken. For the purposes of the analyses, the highest level of care stated was selected for original inclination and action taken. However, if respondents recalled more than one recommendation the lowest level of care was assumed to be the immediate recommendation at the time of the call. Data were analyzed using IBM SPSS Statistics 17.0.

Results

As the results of the evaluation are presented in terms of the evaluation questions, they are divided into sections specific to access to the service, satisfaction with the service, compliance with nurse advice, and the impact on the health care system.

Profile of Patients and Respondents

HealthLine's service provider records the sex of the caller and his or her relationship to the 'patient', and uses patient date of birth to determine patient age on the date of the call. This information for the sample of residents included in the evaluation is presented in Table 2.

Table 2. Characteristics of HealthLine Callers and Patients, by RHA

	Province	Eastern	Central	Western	Labrador – Grenfell
	%	%	%	%	%
Age of Patient					
18 years and younger	34.4	30.2	41.0	33.3	50.0
19-59 years	51.0	56.8	45.9	44.4	40.0
60 years and older	14.6	13.1	13.1	22.2	10.0
Sex of Caller/Survey Respondent					
Female	83.9	82.4	86.9	86.4	82.5
Male	16.1	17.6	13.1	13.6	17.5
Relation to patient					
Self	55.4	60.8	52.5	51.9	37.5
Parent	31.7	29.7	36.1	32.1	35.0
Spouse	5.7	5.0	3.3	11.1	2.5
Other (i.e. child, family, friend)	7.2	4.5	8.2	4.9	25.0

Approximately two-thirds (65.6%) of the calls to HealthLine included in the evaluation were made regarding adults aged 19 and older (with 14.6% of calls concerning patients aged 60 years or older), while the remaining 34.4% of calls were made for children aged 18 years or younger. These proportions are similar to the age distribution of general users of the service. Residents of the Central and Labrador-Grenfell health authorities made more calls to the service on behalf of children compared to the other health regions, and residents of the Western Health Authority made a higher proportion of calls regarding patients aged 60 years or older compared to the other health regions.

Overall, 83.9% of evaluation participants were female; this proportion is higher than the percentage of all users of HealthLine who are female (60%). There was little difference among the health regions with respect to the sex of the callers/survey respondents. More than half (55.4%) of all calls were made by individuals calling on behalf of themselves and close to one-third (31.4%) of calls were made by parents calling on behalf of a child. Notably, one-quarter of callers/survey respondents from the Labrador-Grenfell Health Authority called HealthLine on behalf of individuals other than themselves, a child or a spouse; in other words, they called on behalf of other family members, friends, etc.

Access to HealthLine

A review of caller access to HealthLine is important in ensuring that residents of the province have timely access to health services and information when needed. Callers to HealthLine were asked to indicate whether they had any problems finding the number to call and the source of information they used to find the number. Access to the service was further assessed by asking respondents if they got through to a nurse right away or had to wait for a call back and by asking respondents the amount of time they waited for their call to be answered or returned. Results are presented by health region and age group.

The vast majority of respondents (92.3%) reported no problems with finding the number for HealthLine. A higher proportion of respondents from the Central and Labrador-Grenfell health authorities reported problems with finding the number compared to the other regions; however, the percentages were still low at 13.1% and 12.5%, respectively (Table 3).

Only one in every ten callers reported that they knew the number for the HealthLine service. Overall, 23.3% of respondents indicated that they found the number for HealthLine on the Internet, 22.3% obtained the number by contacting the hospital, and 20.3% reported that they found the number through marketing material (pamphlets, brochures, magnets, etc.). A higher percentage of respondents from the Eastern Health Authority stated that they used the Internet to get the number and were less likely to obtain the number from the hospital compared to residents of the other health authorities.

Table 3. Access to HealthLine, by RHA

	Province	Eastern	Central	Western	Labrador – Grenfell
	%	%	%	%	%
Any problems with finding the number to call?					
Yes	7.7	5.9	13.1	6.2	12.5
No	92.3	94.1	86.9	93.8	87.5
Where did you find the number?					
Online	23.3	31.5	11.5	12.3	17.5
From hospital	22.3	15.3	31.1	28.4	35.0
Marketing materials	20.3	18.9	23.0	23.5	17.5
Phone Book	11.9	11.7	11.5	14.8	7.5
Already knew it	10.1	9.9	8.2	14.8	5.0
Friend/family	8.9	9.5	9.8	3.7	15.0
Other	3.2	3.2	4.9	2.5	2.5
Did you get through to a nurse or did you have to wait for call back?					
Got through	80.7	83.3	73.8	79.0	80.0
Wait for call back	19.3	16.7	26.2	21.0	20.0
Was there a communication barrier?					
Yes	0.2	0.0	1.6	0.0	0.0
No	99.8	100	98.4	100	100
If you got through to nurse, how long did you wait before speaking with him or her?					
<5 minutes	94.8	94.6	93.3	98.4	90.6
5-10 minutes	2.5	3.2	2.2	0.0	3.1
Don't know/Not sure	2.8	2.2	4.4	1.6	6.3
Was this wait time reasonable?					
Yes	100.0	100.0	100.0	100.0	100.0
No	0.0	0.0	0.0	0.0	0.0
If you had to wait for call back, how long did it take?					
<30 minutes	96.2	97.3	100.0	100.0	75.0
30-60 minutes	3.8	2.7	0.0	0.0	25.0
Was this wait time reasonable?					
Yes	97.4	100.0	93.8	100.0	87.5
No	2.6	0.0	6.3	0.0	12.5

There were some differences among patient age groups in how individuals found the number to HealthLine (Table 4). Very few patients aged 60 years or older found the number for HealthLine on the Internet. Patients in this age group were more likely than those in the other age groups to have found the number on marketing materials.

Overall, the majority (80.7%) of respondents reported that they got through to a nurse right away and did not have to wait for a call back. Of those, 94.8% waited less than five minutes to speak with a nurse; all respondents reported this wait time as reasonable. Of those who did not receive service upon first calling, 96.2% received a call back within 30 minutes; 97.4% reported this wait time as reasonable. A lower number of respondents from Labrador-Grenfell reported that they received their call back within 30 minutes compared to the other regions, however, this difference is likely a reflection of the small number of individuals surveyed from this region who required a call back and not an indication of a regional difference.

For comparison purposes, the monthly reports provided to the Department of Health and Community Services by HealthLine's service provider for the six month period from July to December 2012 were reviewed to see whether the percentage of calls resulting in calls backs was comparable to that among the survey respondents. FONEMED reported that 10% to 14% of all serviced calls during this period required a call back with 99.5% of numbers called back within 30 minutes. The percentage of calls requiring a call back in the evaluation sample was 19.3% with 96.2% receiving a call back within 30 minutes. The evaluation estimates are based on caller recall and may account for the slight discrepancy.

Essentially all (99.8%) callers surveyed indicated there were no communication barriers when speaking with the nurses and that they had no difficulties in understanding the nurses or the advice that the nurses provided. This sentiment was echoed in all health authorities and across all age groups.

Table 4. Access to HealthLine, by Age Group

	Total	0-18 years	19-59 years	60+ years
	%	%	%	%
Any problems with finding the number to call?				
Yes	7.7	9.4	6.3	8.5
No	92.3	90.6	93.7	91.5
Where did you find the number?				
Online	23.3	24.5	28.6	1.7
From hospital	22.3	23.7	20.9	23.7
Marketing materials	20.3	18.7	18.0	32.2
Phone Book	11.9	14.4	10.2	11.9
Already knew it	10.1	10.8	8.3	15.3
Friend/family	8.9	3.6	10.7	15.3
Other	3.2	4.3	3.4	0.0
Did you get through to a nurse or did you have to wait for call back?				
Got through	80.7	74.1	85.0	81.4
Wait for call back	19.3	25.9	15.0	18.6
Was there a communication barrier?				
Yes	0.2	0.7	0.0	0.0
No	99.8	99.3	100.0	100.0
If you got through to nurse, how long did you wait before speaking with him or her?				
<5 minutes	94.8	96.1	94.9	91.7
5-10 minutes	2.5	1.9	3.4	0.0
Don't know/Not sure	2.8	1.9	1.7	2.8
Was this wait time reasonable?				
Yes	100.0	100.0	100.0	100.0
No	0.0	0.0	0.0	0.0
If you had to wait for call back, how long did it take?				
<30 minutes	96.2	97.2	93.5	100.0
30-60 minutes	3.8	2.8	6.5	0.0
Was this wait time reasonable?				
Yes	97.4	97.2	96.8	100.0
No	2.6	2.8	3.2	0.0

HealthLine User Satisfaction

Users of HealthLine are highly satisfied with the service with callers reporting satisfaction levels from 97.0% to 98.8% with the service overall, the length of the call, the advice received, and with the nurses' conduct/professionalism. Just about all respondents (99.8%) indicated the advice provided was easy to understand, and equal proportions of callers indicated they would use the service again (97.5%) and would recommend it to others (98.3%). Caller satisfaction was similar across the regional health authorities (Table 5) and patient age groups (Table 6), with all reporting high levels of satisfaction with the service.

Table 5. HealthLine User Satisfaction, by RHA

	Province	Eastern	Central	Western	Labrador – Grenfell
	%	%	%	%	%
Overall satisfaction					
Satisfied	97.3	97.3	96.7	97.5	97.5
Neutral	2.0	1.8	1.6	1.2	2.5
Dissatisfied	0.7	0.9	0.0	1.2	0.0
Don't Know/Not sure	0.2	0.0	1.6	0.0	0.0
Satisfaction with advice					
Satisfied	97.0	96.8	96.7	96.3	100.0
Neutral	1.7	1.8	0.0	3.7	0.0
Dissatisfied	1.0	1.4	1.6	0.0	0.0
Don't Know/Not sure	0.2	0.0	1.6	0.0	0.0
Satisfaction with nurse's conduct/professionalism					
Satisfied	98.8	98.2	98.4	100	100
Neutral	0.5	0.9	0.0	0.0	0.0
Dissatisfied	0.5	0.9	0.0	0.0	0.0
Don't Know/Not sure	0.2	0.0	1.6	0.0	0.0
Advice easy to understand?					
Yes	99.8	100	98.4	100	100
No	0.0	0.0	0.0	0.0	0.0
Don't Know/Not sure	0.2	0.0	1.6	0.0	0.0
Satisfied with length of call?					
Yes	97.8	97.7	98.4	97.5	97.5
No	2.0	2.3	0.0	2.5	2.5
Don't Know/Not sure	0.2	0.0	1.6	0.0	0.0
Would you use the HealthLine again?					
Yes	97.5	97.7	96.7	97.5	97.5
No	1.2	0.5	3.3	1.2	2.5
Don't Know/Not sure	1.2	1.8	0.0	1.2	0.0
Would you recommend HealthLine to others?					
Yes	98.3	98.2	98.4	98.8	97.5
No	1.0	0.5	1.6	1.2	2.5
Don't Know/Not sure	0.7	1.4	0.0	0.0	0.0

Table 6. HealthLine User Satisfaction, by Age Group

	Total	0-18 years	19-59 years	60+ years
	%	%	%	%
Overall satisfaction				
Satisfied	97.3	98.6	96.1	98.3
Neutral	1.7	0.7	2.4	1.7
Dissatisfied	0.7	0.7	1.0	0.0
Don't Know/Not sure	0.2	0.0	0.5	0.0
Satisfaction with advice				
Satisfied	97.0	97.1	96.6	98.3
Neutral	1.7	2.2	1.9	0.0
Dissatisfied	1.0	0.7	1.0	1.7
Don't Know/Not sure	0.2	0.0	0.5	0.0
Satisfaction with nurse's conduct/professionalism				
Satisfied	98.8	99.3	98.5	98.3
Neutral	0.5	0.7	0.5	0.0
Dissatisfied	0.5	0.0	0.5	1.7
Don't Know/Not sure	0.2	0.0	0.5	0.0
Advice easy to understand?				
Yes	99.8	100	99.5	100
No	0.0	0.0	0.0	0.0
Don't Know/Not sure	0.2	0.0	0.5	0.0
Satisfied with length of call?				
Yes	97.8	97.8	98.1	96.6
No	2.0	2.2	1.5	3.4
Don't Know/Not sure	0.2	0.0	0.5	0.0
Would you use the HealthLine again?				
Yes	97.5	98.6	97.1	96.6
No	1.2	0.0	1.9	1.7
Don't Know/Not sure	1.2	1.4	1.0	1.7
Would you recommend HealthLine to others?				
Yes	98.3	99.3	98.1	96.6
No	1.0	0.0	1.5	1.7
Don't Know/Not sure	0.7	0.7	0.5	1.7

Impact on the Health Care System and Compliance

Assessing the impact that the Newfoundland and Labrador HealthLine has on the health care system involves taking into account what residents would have done had the service not been available and what course of action residents take after using the service. It is only after determining the compliance with nurse advice that the true impact of HealthLine on the health care system can be fully understood.

Original Inclination

More than half (56.9%) of callers to HealthLine reported that they would have gone to the emergency department (ED) if the service had not been available (Table 7). Other callers indicated they would have called the emergency department (15.3%), gone to their primary care provider (PCP) (11.4%), or called their PCP's office (5.2%). Only 5.9% of all callers to the service indicated that they would have 'waited to see' or treated at home.

Table 7. Original Inclination of HealthLine Callers, by RHA

	Province	Eastern	Central	Western	Labrador– Grenfell
	%	%	%	%	%
Original Inclination					
Gone to ED	56.9	55.0	60.7	55.6	65.0
Called ED	15.3	10.8	18.0	22.2	22.5
Gone to PCP	11.4	14.9	6.6	8.6	5.0
Called PCP office	5.2	5.0	1.6	7.4	7.5
Self-care at home	5.9	8.1	4.9	3.7	0.0
Other/Not Sure	5.2	6.3	8.2	2.4	0.0

Original inclination varied by region with almost two-thirds (65.0%) of residents from the Labrador-Grenfell Health Authority reporting they would have gone to the emergency department had HealthLine not been available; this compared to 60.7% for residents of Central and 55% for residents of the Eastern and Western health authorities. No callers from Labrador-Grenfell stated that self-care at home was something that they would have done if HealthLine had not been available.

When viewed by patient age group, respondents who had called HealthLine on behalf of children or patients that were 60 years or older were less likely to have chosen self-care at home if HealthLine wasn't available and were more likely have gone to the emergency department compared to patients aged 19-59 years (Table 8). Patients aged 60 years or older were less likely to have gone to their primary care provider (PCP) compared to those in the younger age groups.

Table 8. Original Inclination of HealthLine Callers, by Age Group

	Total	0-18 years	19-59 years	60+ years
	%	%	%	%
Original Inclination				
Gone to ED	56.9	59.7	53.4	62.7
Called ED	15.3	17.3	12.1	22.0
Gone to PCP	11.4	10.1	13.6	6.8
Called PCP office	5.2	5.8	4.9	5.1
Self-care at home	5.9	2.2	10.2	0.0
Other/Not Sure	5.2	5.1	5.8	3.4

Recommendations

The most common disposition provided by nurses to callers to HealthLine was to see a physician (47.3%); this was followed by instructions for self-care at home (29.2%). Less than one-quarter (23.5%) of all callers were advised to go to the emergency department or call 911. There were no sizeable differences across the regional health authorities with respect to these dispositions (Table 9); however, the proportions of patients who were advised to go to the emergency department, call 911, or see a physician increased with increasing patient age. Patients aged 60 years or older were three times more likely to be advised to go to emergency or call 911 and three times less likely to be recommended for self-care at home compared to patients aged 18 years or younger (Table 10).

Table 9. Comparison of HealthLine Recommendations to Recalled Recommendations, by RHA

	Province	Eastern	Central	Western	Labrador-Grenfell
	%	%	%	%	%
HealthLine Recommendation					
Call 911/Go to ED	23.5	23.9	27.9	21.0	20.0
See physician	47.3	45.0	47.5	53.1	47.5
Self-care at home	29.2	31.1	24.6	25.9	32.5
Recalled Recommendation					
Call 911/Go to ED	35.6	32.9	34.4	46.9	30.0
See physician	31.4	33.3	31.1	24.7	35.0
Self-care at home	29.5	28.8	29.5	28.4	35.0
Other/can't recall	3.5	5.0	4.9	0.0	0.0

Table 10. Comparison of HealthLine Recommendations to Recalled Recommendations, by Age Group

	Total	0-18 years	19-59 years	60+ years
	%	%	%	%
HealthLine Recommendation				
Call 911/go to ED	23.5	11.5	28.6	33.9
See physician	47.3	41.0	50.5	50.8
Self-care at home	29.2	47.5	20.9	15.3
Recalled Recommendation				
Call 911/go to ED	35.6	16.5	42.7	55.9
See physician	31.4	29.5	36.4	18.6
Self-care at home	29.5	52.5	18.9	11.9
Other/can't recall	3.5	1.4	1.9	13.6

Callers to HealthLine who were advised that there was no need for medical attention (unless their symptoms changed) and were told to treat at home accurately recalled the nurses' recommendations. However, recall of the other recommendations differed from what the HealthLine nurses recommended. Fewer callers recalled being told to see a physician compared to the proportion of callers that were recommended to do so, and a higher proportion of callers indicated they were told to call 911 or go to the emergency department compared to the actual percentage of callers who were given this disposition. A small number of callers indicated they were advised to call the emergency department, however, this is not a disposition provided by HealthLine staff to callers to the service.

Respondents from all regions and age groups were more likely to inaccurately recall being advised to go to the emergency department than the actual recommendation and less likely to state that they were advised to see a physician. These differences were largest for residents of Western Health and for calls regarding patients aged 60 years and older.

Action Taken

Callers were asked what action they took after they used HealthLine. Overall, 39.4% indicated that they treated at home and did not seek further medical care, 38.4% stated that they called 911 or went to the emergency department, and 14.9% said that they went to see a physician (Table 11). The remaining callers reported that they called a physician's office (4.2%) or called the emergency department (2.0%) but it could not be ascertained whether those levels of care were formally sought.

Table 11. Action Taken after Using HealthLine, by RHA

	Province	Eastern	Central	Western	Labrador – Grenfell
	%	%	%	%	%
Action Taken					
Called 911/went to ED	38.4	36.9	34.4	43.2	42.5
Called emergency	2.0	2.7	3.3	0.0	0.0
Saw physician	14.9	16.7	14.8	16.0	2.5
Called physician	4.2	5.4	4.9	1.2	2.5
Self-care at home	39.4	36.9	39.3	39.5	52.5
Other/can't recall	1.2	1.4	3.2	0.0	0.0
Why chose that action					
Advice given by nurse	72.8	74.3	70.5	67.9	77.5
Symptoms changed	12.4	12.6	9.8	13.6	12.5
Disagreed with nurse	4.2	3.6	4.9	4.9	5.0
Wait times/couldn't get appointment	3.7	3.6	6.6	2.5	2.5
Transportation/inconvenient	3.2	2.7	1.6	7.4	0.0
Other/don't know	3.7	3.2	6.6	3.7	2.5

Callers living in the Labrador-Grenfell Health Authority were less likely to see a physician and more likely to engage in self-care at home compared to residents of the other health authorities. Patients aged 60 years and older were less likely to have gone to their physician compared to younger patients (Table 12). Self-care at home was the most common action taken for patients aged 18 years and younger; these patients also had fewer trips to the emergency department compared to their older counterparts.

Table 12. Action Taken after Using HealthLine, by Age Group

	Total	0-18 years	19-59 years	60+ years
	%	%	%	%
Action Taken				
Called 911/went to ED	38.4	26.6	45.1	42.4
Called emergency	2.0	0.0	2.9	3.4
Saw physician	14.9	15.8	16.0	8.5
Called physician	4.2	1.4	4.9	8.5
Self-care at home	39.4	55.4	30.1	33.9
Other/can't recall	1.2	0.7	1.0	3.4
Why chose that action				
Advice given by nurse	72.8	78.4	72.3	61.0
Symptoms changed	12.4	9.4	14.1	13.6
Disagreed with nurse	4.2	5.0	2.9	6.8
Wait times/couldn't get appointment	3.7	2.9	4.4	3.4
Transportation/inconvenient	3.2	0.7	2.4	11.9
Other/don't know	3.7	3.6	3.9	3.4

When asked why they chose the course of action that they did, almost three-quarters (72.8%) of callers stated that they did so because it was the advice given by the nurse. The remaining respondents cited a change in symptoms, issues with wait times or not being able to get an appointment, or transportation issues as reasons for taking the action they did. Residents of Western Health and patients aged 60 years and older were more likely to report transportation issues compared to residents from the other regions and younger patients, respectively.

A comparison of the original inclinations of callers, the recommendations provided to callers by HealthLine staff, and the actions taken by callers suggests that the availability of a telephone nursing service in Newfoundland and Labrador promotes higher levels of self-care at home, increased use of primary care services, and fewer visits to the emergency department. Overall, 56.9% of residents whose calls were included in the analysis said that without HealthLine they would have gone to the emergency department and only 5.9% stated that they would have treated the issue at home without accessing some form of health services (Table 13). HealthLine staff recommended less than one-quarter (23.5%) of callers to go to the emergency department, advising close to half (47.3%) to see a primary care provider and the remaining 29.2% to engage in self-care at home. After using the HealthLine, the proportion of residents who actually went to the emergency department was 38.4% (a decrease of 18.5% from original inclination), and 39.4% of residents indicated they were able to treat the issue at home (an increase of 33.5% from original inclination). There was a large increase in the proportion of residents who were advised to seek care from a primary care provider than had originally intended (47.3% versus

11.4%); however, it appears as though these individuals were diverted to a lower level of care than they would otherwise have chosen.

Variations were observed among health regions and across patient age groups. For instance, no resident from Labrador-Grenfell Health Authority stated that their original inclination was for self-care at home, but after using the HealthLine service more than half of residents from this region opted for this level of care. A comparison of original inclinations and actions taken by patient age found that the largest differences were observed for calls regarding children, who had increased levels of self-care at home and decreased levels of emergency department visits (Table 14). Self-care at home would not have been an option for any patient in the province aged 60 years and older had HealthLine not been available, yet more than half (52.5%) of patients in this age group followed this course of action after using the service.

Table 13. Comparison of Original Inclination, Recommendation and Action Taken, by RHA

	Original Inclination ¹	HealthLine Recommendation	Recalled Recommendation ¹	Action Taken ¹
	%	%	%	%
Province				
Call 911/go to ED	56.9	23.5	35.6	38.4
See physician	11.4	47.3	31.4	14.9
Self-care at home	5.9	29.2	29.5	39.4
Eastern Health				
Call 911/go to ED	55.0	23.9	32.9	36.9
See physician	14.9	45.0	33.3	16.7
Self-care at home	8.1	31.1	28.8	36.9
Central Health				
Call 911/go to ED	60.7	27.9	34.4	34.4
See physician	6.6	47.5	31.1	14.8
Self-care at home	4.9	24.6	29.5	39.3
Western Health				
Call 911/go to ED	55.6	21.0	46.9	43.2
See physician	8.6	53.1	24.7	16.0
Self-care at home	3.7	25.9	28.4	39.5
Labrador/Grenfell				
Call 911/go to ED	65.0	20.0	30.0	42.5
See physician	5.0	47.5	35.0	2.5
Self-care at home	0.0	32.5	35.0	52.5

¹Totals do not add to 100% as there were some responses classified as 'other' that are not presented in the table.

Table 14. Comparison of Original Inclination, Recommendation and Action Taken, by Age Group

	Original Inclination ¹	HealthLine Recommendation	Recalled Recommendation ¹	Action Taken ¹
	%	%	%	%
Total				
Call 911/go to ED	56.9	23.5	35.6	38.4
See physician	11.4	47.3	31.4	14.9
Self-care at home	5.9	29.2	29.5	39.4
18 years or younger				
Call 911/go to ED	59.7	11.5	16.5	26.6
See physician	10.1	41.0	29.5	15.8
Self-care at home	2.2	47.5	52.5	55.4
19-59 years				
Call 911/go to ED	53.4	28.6	42.7	45.1
See physician	13.6	50.5	36.4	16.0
Self-care at home	10.2	20.9	18.9	30.1
60+ years				
Call 911/go to ED	62.7	33.9	55.9	42.4
See physician	6.8	50.8	18.6	8.5
Self-care at home	0.0	15.3	11.9	33.9

¹Totals do not add to 100% as there were some responses classified as 'other' that are not presented in the table.

Adherence

Adherence to HealthLine advice was measured in terms of self-reported adherence, actual adherence and perceived adherence. Self-reported adherence was the proportion of callers who answered 'yes' when asked if they followed the nurse's advice. The response to this question showed an overall self-reported adherence level of 89.9%. Actual adherence was determined by comparing the HealthLine recommendation to the actual action taken while perceived adherence was determined by comparing the recalled recommendation to the action taken. If the action taken was at the same level of care as that recommended, respondents were deemed to be 'adherent'. Actual adherence (57.9%) was lower than perceived adherence (65.8%) and varied between health authorities (Table 15) and patient age groups (Table 16). Overall, residents who were 'non-adherent' with nurse advice were more likely to seek a lower level of care than was recommended. The main reasons given for non-adherence among individuals that self-reported that they did not follow the HealthLine recommendation included a change in symptoms (34.1%) and disagreement with nurse recommendations (24.4%).

Table 15. Adherence with HealthLine Recommendations, by RHA

	Province	Eastern	Central	Western	Labrador – Grenfell
	%	%	%	%	%
Actual Adherence¹					
Yes	57.9	59.0	57.4	58.0	52.5
Sought lower level of care	19.3	16.7	21.3	22.2	25.0
Sought higher level of care	15.8	15.3	11.5	18.5	20.0
Unknown ²	6.9	9.0	9.8	1.2	2.5
Perceived Adherence³					
Yes	65.8	65.3	63.9	74.1	55.0
Sought lower level of care	15.6	13.1	14.8	18.5	25.0
Sought higher level of care	9.7	9.5	8.2	7.4	17.5
Unknown ²	8.9	12.2	13.1	0.0	2.5
Self-reported Adherence⁴					
Yes	89.6	90.5	88.5	85.2	95.0
No	10.1	9.0	11.5	14.8	5.0
Don't Know	0.2	0.5	0.0	0.0	0.0
Of those that reported that they didn't adhere⁵					
Why not adhere					
Condition changed	34.1	35.0	42.9	16.7	100.0
Disagreed/sought other resource	24.4	25.0	42.9	16.7	0.0
Transportation	12.2	5.0	0.0	33.3	0.0
Wait time/unable to get appointment	12.2	15.0	0.0	16.7	0.0
Other/Don't know	17.0	20.0	14.3	16.7	0.0

¹Actual adherence compares the recommendation that was recorded by FONEMED to the action that the caller reported taking.

²Unknown occurred when respondents stated that they called the emergency department or a physician's office (or if they could not recall). Because calling does not signify that they actually sought that level of care, the adherence could not be assessed.

³Perceived adherence compared the recommendation that was reported by the survey respondent to the action that the caller reported taking.

⁴Adherence (self-report) is the response to the question "Did you follow the nurse's recommendation?"

⁵Refers only to those who answered "no" to the question: "Did you follow the nurse's recommendation?" and therefore does not represent the reasons for non-adherence among all respondents who did not adhere to the nurses' advice.

Table 16. Adherence with HealthLine Recommendations, by Age Group

	Total	0-18 years	19-59 years	60+ years
	%	%	%	%
Actual Adherence¹				
Yes	57.9	64.7	57.8	42.4
Sought lower level of care	19.3	16.5	18.4	28.8
Sought higher level of care	15.8	16.5	15.5	15.3
Unknown ²	6.9	2.2	8.3	13.6
Perceived Adherence³				
Yes	65.8	73.4	67.5	42.4
Sought lower level of care	15.6	11.5	15.0	27.1
Sought higher level of care	9.7	11.5	8.3	10.2
Unknown ²	8.9	3.6	9.2	20.3
Self-reported Adherence⁴				
Yes	89.6	92.1	91.3	78.0
No	10.1	7.9	8.7	20.3
Don't Know	0.2	0.0	0.0	1.7
Of those that reported that they didn't adhere⁵				
Why not adhere				
Condition changed	34.1	54.5	38.9	8.3
Disagreed/sought other resource	24.4	18.2	22.2	24.4
Transportation	12.2	0.0	5.6	12.2
Wait time/unable to get appointment	12.2	9.1	16.7	12.2
Other/Don't know	17.0	18.2	16.7	17.0

¹Actual adherence compares the recommendation that was recorded by FONEMED to the action that the caller reported taking.

²Unknown occurred when respondents stated that they called the emergency department or a physician's office (or if they could not recall). Because calling does not signify that they actually sought that level of care, the adherence could not be assessed.

³Perceived adherence compared the recommendation that was reported by the survey respondent to the action that the caller reported taking.

⁴Adherence (self-report) is the response to the question "Did you follow the nurse's recommendation?"

⁵Refers only to those who answered "no" to the question: "Did you follow the nurse's recommendation?" and therefore does not represent the reasons for non-adherence among all respondents who did not adhere to the nurses' advice.

Summary and Recommendations

This evaluation of the Newfoundland and Labrador HealthLine sought to determine how useful the service is to the people of the province and assess the impact it has had on the province's health care system. A key component of the work was to examine caller compliance with nurse advice to ascertain whether HealthLine is effectively and appropriately recommending callers to lower levels of care than they would have otherwise sought had the service not been available.

Overall, residents that use HealthLine are receiving timely access to health services with an overwhelming majority of callers indicating they are satisfied with the service, would use the service again and would recommend the service to others. Any public awareness efforts undertaken to promote the service should take into account the resources individuals are likely to use to access the service. For instance, the promotion of the service to seniors would best be done through the use of marketing materials, such as fridge magnets, bookmarks etc., as reference to these items is the most common means by which seniors report obtaining the number to the service.

Although users of the HealthLine report accessing lower levels of care than they would have used had the service not been available, stronger adherence to nurse advice would ensure that residents receive the most appropriate level of care. The comparison of the recommendations provided to and recalled by callers implies there is an issue with caller comprehension of nurse advice. Since adherence is at least partially linked to caller comprehension of nurse advice, the service should endeavor to increase the level of understanding among callers of the advice provided to them, particularly among older patients. A comparison of the recommendations reported by callers who complete the service provider's monthly satisfaction surveys to the advice recorded by HealthLine staff at the time of the call would assist in monitoring caller comprehension of nurse advice and enable the Department of Health and Community Services to better identify reasons for non-compliance. Given that self-reported adherence levels have been shown to be unreliable, a modification to the user feedback surveys to include a question about action taken would enable more accurate measurement of adherence and allow for ongoing monitoring of the impact of the HealthLine service on the health care system.

Appendix A – Evaluation Framework

1.0 Introduction

The HealthLine was first introduced in September 2006 as part of the Self-Care/Telecare priority identified in the Department of Health and Community Service's (the Department) Telehealth Strategic Plan. Originally funded through the Primary Health Care Transition Fund, the HealthLine was intended to provide Newfoundlanders and Labradorians with access to toll-free health information and advice 24 hours a day, seven days a week. This fell under one of the goals of Primary Health Care in the Primary Health Care framework document, "to enhance accessibility and sustainability of primary health care services". As an alternative delivery model, the HealthLine has three primary functions; to improve access to service, to encourage self-care, and to reduce unnecessary or inappropriate physician and emergency department visits. Services delivered through the HealthLine include the assessment of non-urgent symptoms to recommend a course of action and the provision of health information. The HealthLine operates out of a base contact centre in St. Anthony and has satellite sites in Stephenville and Corner Brook.

The Newfoundland and Labrador Centre for Health Information (the Centre) completed an evaluation of the HealthLine in 2008 which included a review of evaluations of teletriage services carried out in other jurisdictions and a descriptive report based on an analysis of call data collected by the HealthLine service provider (Clinidata/Sykes) between September 2006 and October 2008. A second phase of the evaluation, which was to possibly include caller surveys, could not be conducted because the Department issued a request for proposals for a five-year service provider contract. The contract was awarded to FONEMED North America Inc. which took over operations of the HealthLine from Clinidata/Sykes in September 2009. In 2010-11, at the Department's request, the Centre updated the review of current evidence and conducted a second analysis of call data considering the change in service provider. The second report was provided to the Department in September 2011.

2.0 Evaluation

A more comprehensive evaluation of HealthLine is required to determine the effectiveness of the service in carrying out its primary functions. The current evaluation will determine how useful the HealthLine service is to the people of the province and the impact it has on the health care system. A key component of the evaluation will be to assess caller compliance with nurse advice to determine whether the HealthLine service is effectively and appropriately recommending callers to lower levels of care than callers would have sought had the service not been available. The evaluation will fulfill a commitment made by the Department in its *Evaluation Plan 2012-13* and its findings will be used to monitor and improve the HealthLine service for the benefit of the people of Newfoundland and Labrador.

2.1 Evaluation Objectives

The objectives of the evaluation are to determine the value/usefulness of the HealthLine service to the people of the province and the impact of the service on the health care system, specifically emergency department visits and visits to physician offices.

The proposed evaluation will focus on measuring the following indicators:

- Access to the service
- Compliance with advice given
- Caller satisfaction
- Initial inclination vs. recommendation vs. action

2.2 Key Evaluation Questions

The evaluation will aim to address the following key questions:

- Do callers have any issues accessing the HealthLine service?
 - Finding the number to call HealthLine and getting through to a nurse
 - Understanding the nurse and the recommendations/information provided
- Are callers compliant with the advice provided?
 - If not, why
- How satisfied are callers with the HealthLine service?
 - With information / advice provided
 - With the skills of the nurses (knowledge, communication skills, professionalism)
 - With the call process (wait time, length of call)
 - Overall satisfaction
- How do callers' initial inclinations compare to nurse recommendations and actions taken?
 - What would callers have done instead of calling HealthLine if the service was unavailable
 - Are callers recommended to seek a higher or lower level of service than they originally intended
- Have the number and types of calls to HealthLine changed over time?
 - By regional health authority, age group, and sex
 - Percentage of repeat callers

The objectives, indicators, questions, and data sources are outlined in Table 1.

Table 1. Evaluation Framework

Objective	Indicator Category	Questions	Data Source
Usefulness/Value of service to people of NL	Access	Did you know the number to call HealthLine or was it easy to find when you were looking for it?	Survey
Usefulness/Value of service to people of NL	Access	Were you able to reach a nurse?	Survey
Usefulness/Value of service to people of NL	Access & Satisfaction	If you had to wait for a call back, was the wait time for a call back reasonable?	Survey
Usefulness/Value of service to people of NL	Access	What percentage of calls are answered by a nurse initially?	Data
Usefulness/Value of service to people of NL	Access	What percentage of calls are called back within 30 minutes?	Data
Usefulness/Value of service to people of NL	Access	Was there a language barrier when speaking with the nurse?	Survey
Usefulness/Value of service to people of NL	Access	Did you have any issues with understanding the information provided by the nurse?	Survey
Usefulness/Value of service to people of NL	Satisfaction	Were you satisfied with the information provided by the nurse?	Survey
Usefulness/Value of service to people of NL	Satisfaction	Were you satisfied with the knowledge level of the nurse?	Survey
Usefulness/Value of service to people of NL	Satisfaction	Was the nurse clear in the information he or she provided?	Survey

Objective	Indicator Category	Questions	Data Source
Usefulness/Value of service to people of NL	Satisfaction	Was the nurse clear in his or her recommendations?	Survey
Usefulness/Value of service to people of NL	Satisfaction	Were you satisfied with the length of the phone call?	Survey
Usefulness/Value of service to people of NL	Satisfaction	Overall, are you satisfied with the HealthLine service?	Survey
Usefulness/Value of service to people of NL	Satisfaction	Would you use HealthLine again?	Survey
Usefulness/Value of service to people of NL & Impact on Healthcare System	Satisfaction	Has the number of calls to HealthLine changed over time?	Data
Usefulness/Value of service to people of NL & Impact on Healthcare System	Satisfaction & Access	What percentage of the population uses HealthLine?	Data
Usefulness/Value of service to people of NL	Satisfaction	What is the percentage of repeat callers?	Data
Impact on Healthcare system	Inclination versus recommendation versus actions	What would you have done instead of calling HealthLine? (This is asked during the call, but can be asked during the survey as well)	Survey & Data

Objective	Indicator Category	Questions	Data Source
Impact on Healthcare System	Inclination versus recommendation versus actions	What were the nurse's recommendations?	Survey & Data
Usefulness/Value of service to people of NL	Compliance & Satisfaction	Did you follow the nurse's recommendations?	Survey & Data
Impact on Healthcare system	Inclination versus recommendation versus actions	Why did you not follow the nurse's recommendations?	Survey
Impact on Healthcare system	Inclination versus recommendation versus actions	If you did not follow the nurse's recommendations, what did you do instead?	Survey
Impact on Healthcare system	Inclination versus recommendation versus actions	Of those whose initial inclination was ER, what number (%) of callers were provided with a recommendation other than ER?	Data & Survey
Impact on Healthcare system	Inclination versus recommendation versus actions	Of those, who went to ER anyway? (This will only be applicable to a small percentage of people surveyed)	Survey
Impact on Healthcare system	Inclination versus recommendation versus actions	Of those whose initial inclination was to see a physician, what number (%) of callers were provided with a recommendation other than to see a physician?	Data & Survey
Impact on Healthcare system	Inclination versus recommendation versus actions	Of those, who went to see a physician anyway (This will only be applicable to a small percentage of people surveyed)	Survey

Objective	Indicator Category	Questions	Data Source
Impact on Healthcare system	Inclination versus recommendation versus actions	Of those whose initial inclination was self care, what number (%) of callers were provided with a recommendation other than self care	Data

2.3 Methodology and Data Collection Tools

The evaluation will employ a mixed methods approach and will include both quantitative and qualitative techniques. The evaluation will include both primary data, collected through telephone surveys with a sample of callers to the HealthLine service, and secondary data (call data provided by the HealthLine service provider).

2.3.1 Telephone Survey

A geographically representative sample of callers to the HealthLine service will be contacted via telephone to take part in a survey related to their call experience. Only those callers who consented to be contacted for a follow-up survey will be eligible for the survey.

To reduce recall bias the telephone surveys will be conducted as soon as possible after the index call to HealthLine was made. Since one of the possible call dispositions is for callers to see a physician within two weeks, it is recommended that the telephone surveys be conducted between two to three weeks following the call to HealthLine.

Caller information including names, telephone numbers, postal codes, and dates of calls, will have to be provided to the Centre weekly until the desired sample is reached. The survey script will be developed and appended at a later date.

2.3.2 Sampling

The sample will be randomly selected from the pool of HealthLine callers who agreed to be contacted at a later date for a follow-up survey. The sample size required is dependent upon the level of analysis requested. Given the time and resources available for the evaluation, it is suggested that the stratification of the data be limited to two to four groupings. A minimum of 400 callers should be included in the telephone survey so that the results can be considered representative of the population of callers that use the HealthLine service. The final sample size will be determined in consultation with the Department.

2.3.3 Call Data

Data collected by FONEMED can be used to answer some questions related to access, compliance, and impact on the healthcare system. In addition, the call data can be used to describe all calls to the HealthLine service over time. A descriptive report using call data was compiled as part of the report submitted to the Department in September 2011; however, given the analysis included only 12 months call data collected from September 2009 to August 2010, during which time the H1N1 pandemic occurred, the Department may wish for the Centre to conduct another analysis using additional data collected over a more extended period of time.

2.4 Ethical Considerations

All data and information used for the purposes of the evaluation will be kept confidential. The storage, use and disclosure of information related to the evaluation will be in keeping with the Newfoundland and Labrador Centre for Health Information policies IP-05 to IP-35.

3.0 Data Analysis and Reporting of Findings

Data from the surveys will be entered into a SPSS database and analyzed using appropriate statistical techniques to identify correlations or variations among groups.

The evaluation will be conducted between October 1, 2012 and March 31, 2013. A draft report will be written and submitted to the Department by February 28, 2013, with a final report produced by March 31, 2013.

Appendix B – Telephone Survey

Hello,
May I please speak to <insert name of respondent>?

My name is <insert name of surveyor> and I am calling on behalf of the Newfoundland and Labrador Centre for Health Information. We are conducting a telephone survey of callers to the Newfoundland and Labrador HealthLine as part of an evaluation of the HealthLine service. This evaluation is being carried out by the Centre for Health Information on behalf of the Department of Health and Community Services. The results from the survey will be used to help determine the value and usefulness of the HealthLine to the people of the province and the impact of the service on the health care system.

During your recent phone call to the HealthLine on <insert date> you indicated that you would be willing to participate in a short survey regarding your experience with the service. We are calling at this time to ask you some questions related to your call experience on <insert date>. The survey should take approximately 10 minutes. Is now a good time for you?

If Yes, continue. If no, ask for a better time to call back.

<Record day/time here: _____ >

Just to let you know, your participation in this survey is completely voluntary. If you decide to take part, you can stop the survey at any time. In addition, we can skip any questions you do not wish to answer. All responses will be kept confidential. The information you provide will be combined with information provided by other survey participants and individual responses will not be identified. Do you have any questions before we begin?

I would like to start with a few questions related to accessing the HealthLine.

1. Did you have any problems finding the telephone number for the HealthLine?

- No
- Yes (specify)

2. Where did you find the telephone number?

- Already knew it
- Phone book
- Internet
- Friend/family member
- Marketing materials (magnet, brochure etc.)
- Other (specify) _____

3. Were you able to get through to a nurse when you first called in or did you have to wait for a call back?

- Got through to nurse (go to Question 3a and 3b)
- Had to wait for a call back (go to Questions 3c and 3d)

3a. How long did you wait on the line before you spoke to a nurse?

- Less than 5 minutes
- 5-10 minutes
- 11-15 minutes
- Other (specify) _____

3b. In your opinion, was this wait time reasonable?

- Yes
- No

3c. How long did you wait before you received a call back?

- Less than 30 minutes
- 30-60 minutes
- More than 1 hour
- Did not receive call back
- Other (specify) _____

3d. In your opinion, was this wait time reasonable?

- Yes
- No

4. Was there a communication barrier when speaking with the nurse? (I.e. did you have any difficulties understanding the nurse?)

- Yes (go to Question 4a)
- No (go to Question 5)

4a. Please specify what difficulties you had understanding the nurse.

5. Did you have any other issues accessing the HealthLine service?

- No
- Yes (specify) _____

For the next section I would like to ask you questions related to the advice provided by the nurse and what you did following your call to the HealthLine.

6. If the HealthLine service did not exist, what would you have done instead of calling the HealthLine?

- Would have done nothing/waited to see/treated at home
- Would have called a family member/friend
- Would have looked up information/advice on the Internet
- Would have called my family doctor/primary care provider
- Would have gone to my family doctor/primary care provider
- Would have called the Emergency Department
- Would have gone to the Emergency Department
- Unsure
- Other (specify) _____

7. What was recommended by the nurse?

- Call 911
- Go to Emergency Department
- See doctor in 4 hours
- See doctor in 24 hours
- See doctor in 2-3 days
- Self-care at home
- Other (specify) _____

Cannot recall

8. Did you follow the nurse's recommendations?

- Yes (go to Question 9)
- No (go to Question 8a)

8a. Why didn't you follow the nurse's recommendations?

- Condition changed
- Sought other resource
- Disagreed with recommendation
- No transportation
- Other (specify) _____

9. Following your call to the HealthLine, what did you do?

- Called 911
- Called Emergency Department
- Went to Emergency Department
- Called family doctor/primary care provider
- Saw family doctor/primary care provider
- Nothing / Self-care at home
- Other (specify)

Cannot recall

10. Why did you choose that course of action?

- It was the advice given to me by the nurse
 - Symptoms got better
 - Symptoms got worse
 - Disagreed with nurse's recommendation
 - No transportation
 - Other
-

The last section is related to your satisfaction with the HealthLine service.

For the next three questions, you will be asked to rate your level of satisfaction on a scale of 1 to 5 with 1 being completely dissatisfied and 5 being completely satisfied.

11. How would you rate your overall satisfaction with the HealthLine service?

1 2 3 4 5

12. How satisfied were you with the advice you were given by the nurse?

1 2 3 4 5
(Insert any comments here)

13. How satisfied were you with the conduct/ professionalism of the nurse?

1 2 3 4 5
(Insert any comments here)

14. Was the advice provided by the nurse easy to understand?

- Yes (go to Question 15)
- No (go to Question 14a)

14a. Why was the advice not easy to understand?

15. Were you satisfied with the length of the phone call?

- Yes (go to Question 16)
- No (go to Question 15a)

15a. Why were you not satisfied with the length of the phone call?

16. Would you use the HealthLine service again?

- Yes
- No (go to Question 16a)
- Not sure

16a. Why wouldn't you use the HealthLine service again?

17. Would you recommend the HealthLine service to others?

- Yes
- No

18. Do you have any additional comments that you would like to add about your experience using the HealthLine service?

That brings us to the end of the survey; I would like to thank you for your time.

Newfoundland and Labrador Centre for Health Information

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