

## Dial-A-Nurse A Triage Pilot Project in Northern Ontario

*You are having trouble breathing, or maybe you are having a reaction to a prescribed drug, or your child has a fever. Should you go to the emergency department at the nearest hospital? Should you wait until the next chance to see your family physician? Or is there something you can do on your own to alleviate the situation?*

Many people are not sure what to do in such circumstances, especially when their doctor's office is closed or if they have no family physician. Residents of Ontario can now dial a toll-free number and get help from registered nurses (this process is called "teletriage"). In fact, more than a million Ontarians did just that during the first year (2001–2002) of Telehealth Ontario.

Before teletriage services were available province-wide, a bilingual pilot project called Direct Health/ Télésanté operated out of North Bay for residents of northern Ontario. The Direct Health service processed over 101,200 calls during its 22 months of operation from June 1999 to March 2001. Approximately 8% of the eligible population of northern Ontario called in the last year of the pilot project. As is the case with Telehealth Ontario, Direct Health was managed by Clinidata Corporation.

Two main goals of the Direct Health service were: 1) to reduce unnecessary demand on existing health care resources, such as hospital emergency departments, primary care physicians and walk-in clinics; and 2) to promote patient independence and self-confidence in their decision making regarding their symptoms. There was also an intent to improve access to health care services for those whose access is limited by distance or shortages of health personnel. Rural and remote communities in northern Ontario typically have limited services and access.

Trained registered nurses were available by phone 24 hours a day, 7 days a week. They used computer-assisted, medically approved guidelines and their nursing experience to assess patients' symptoms and suggest the most appropriate type of care. Depending on the nature and severity of the patients' symptoms, the nurses provided recommendations to conduct informal care, visit a family doctor or walk-in clinic, or visit the nearest emergency department. Nurses also provided basic information about diseases, medications, tests, procedures and treatments.

This issue of Research in FOCUS on Research is based on the study *Evaluation of a Triage Pilot Project in Northern Ontario* (September 2002) by John C. Hogenbirk, Raymond W. Pong, Benjamin T.B. Chan, David R. Robinson, Virginia McFarland, Sandra Lemieux and Linda J. Liboiron. The study was conducted by the Centre for Rural and Northern Health Research (CRaNHR), Laurentian University.

CRaNHR and the research team gratefully acknowledge the funding support provided by The Richard Ivey Foundation.

The interpretations, views and conclusions expressed here are those of the authors, and no endorsement by Laurentian University, the funding agency or the participating organizations is intended or should be inferred.

## Evaluation of the Pilot Project

The Centre for Rural and Northern Health Research (CRaNHR) at Laurentian University conducted an evaluation of this teletriage pilot project. CRaNHR used information from approximately 28,000 call records from consenting callers, collected between July 11, 2000, and March 31, 2001. These represent 59% of all the calls processed over this period.

Between February and June 2001, researchers also mailed out questionnaires. They analysed 2,390 responses (response rate was 44%) from people who had called Direct Health (“callers”) and compared them with 2,440 responses (response rate was 26%) received from randomly selected households across Ontario (“non-callers”). Most of the results presented below are responses from these questionnaires.

### The Calls

#### When?

- ▶ Peak time for calls was between 4 p.m. and 8 p.m. – 27% of calls occurred in this period.
- ▶ Between 19% and 24% of calls came in each of the following time periods: 8 a.m. to noon, noon to 4 p.m., and 8 p.m. to midnight.
- ▶ Only about 10% of calls were made between midnight and 8 a.m.
- ▶ There was no evidence of an increased number of calls during weekends or holidays.

#### Why?

- ▶ 90% of calls were for advice on symptoms.
- ▶ 7% were for information only.
- ▶ The remaining 3% were for both advice on symptoms and information.

#### Who?

- Callers called either for themselves or for their children or partners.
- ▶ The majority of callers were 17–34 years old (50%) or 35–49 years old (33%). Fewer than 5% of callers were 65 or older.
  - ▶ Most callers (89%) were female.
  - ▶ 78% of callers were married or living with a partner.

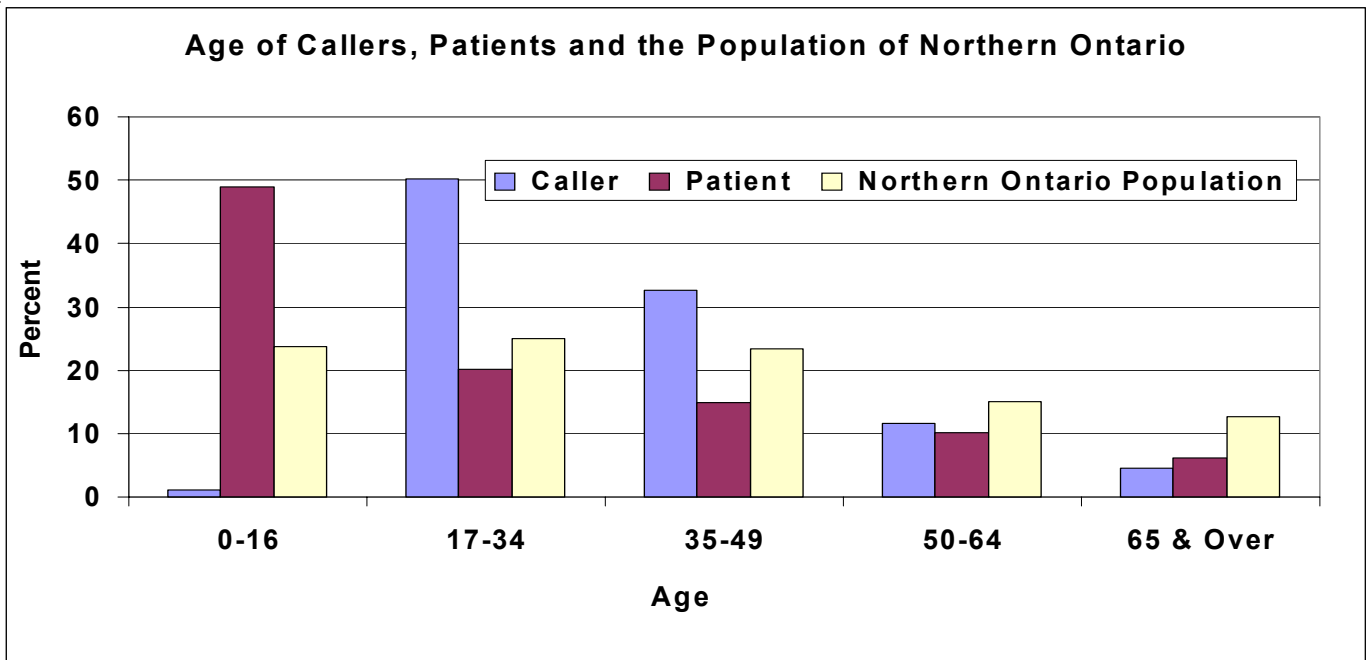
- ▶ 97% of callers spoke English during the call, the rest French.
- ▶ 86% of surveyed callers reported that they spoke English at home, 12% French, and 2% another language.
- ▶ Callers who completed the questionnaire were slightly more educated than the general population.
- ▶ Just over half of the callers had a total household income between \$40,000 and \$59,999. Very few had total household incomes below \$20,000. Callers’ incomes were on average slightly higher than those of the general population.
- ▶ The majority (54%) of callers who completed the survey were from Sudbury, Thunder Bay, Sault Ste. Marie, North Bay, Timmins and Elliot Lake. Another 28% were from northern towns, and 19% were from First Nations communities, townships, unorganized districts and villages. People living in cities were more likely to use teletriage services than those in small towns and rural areas.
- ▶ 93% of callers had a family physician, compared with 96% of the non-callers from northern Ontario who were surveyed.

### Compared with the population of northern Ontario, callers to Direct Health were more likely to be:

- ☞ from 17 to 49 years old
- ☞ female
- ☞ married
- ☞ English-speaking

#### For whom?

- ▶ 44% of callers called for themselves.
- ▶ 56% of callers were calling on behalf of another person, typically a son or daughter under age 16.
- ▶ Women were more likely than men to be calling on behalf of their child or their parent; men were more likely than women to be calling on behalf of their partner.



### Who were the patients?

- ▶ About half of all patients were 16 years of age or younger. Fewer than 6% of patients were 65 or older. Patients were more likely to be under 17 years of age than the general population.
- ▶ The majority of patients (62%) were female.
- ▶ Patients had excellent (38%) or very good (32%) self-assessed health. This was somewhat higher than the health status reported by non-callers: excellent (13%) or very good (35%), possibly because there were so many children in the patient group. Similarly, 92% of patients were able to walk without mechanical support, compared to 88% of non-callers.

### Who didn't call?

Several groups of people who might have benefited most from a teletriage service were underrepresented among the callers. These included seniors, males, francophones, rural residents, and possibly members of First Nations. Several of these groups are known to have difficulties related to access and availability of health care services and may also have lower health status. The full benefit of the teletriage service may not occur until these groups are making greater use of the service. More research is needed to find out why these groups are less inclined to use teletriage services.

### Informal Care

One of the main objectives of teletriage is to empower and enable individuals to look after themselves and their loved ones (informal care). Direct Health provided callers with access to a large body of knowledge on health and informal care.

There were differences between the percent of callers and non-callers who gave various types of informal care. Both groups treated minor cuts or scrapes to the same degree. Callers were slightly more likely to treat cold symptoms or take or give over-the-counter drugs and slightly less likely to treat minor skin irritations, but the differences were only 2-3 percentage points. Non-callers were more likely (by 8-9 percentage points) to treat minor bruises or sprains, take or give complementary products, or take drugs for a long-term illness or disability.

The importance of these differences between callers and non-callers in providing informal care is not clear. Some of the differences are probably due to the fact that callers were more likely to provide informal care for children than were non-callers. Further study is needed to determine why there were differences between callers and non-callers in providing informal care and whether these differences can be influenced by a teletriage service.

## Effect of teletriage on informal care

Telephone triage appears to make a difference in the informal care that callers are providing.

About a quarter of callers who responded to the survey indicated that the *types* and *amount* of informal care they provided had increased after their call. The remaining three quarters reported that their call to Direct Health had not changed the *type* or *amount* of informal care that they gave to themselves or to others.

The effect on caller *confidence* in providing informal care was marked: half indicated an increase in their level of *confidence*, while the remainder reported no change. This increase may be of particular significance for rural areas, where there is a greater role for informal caregivers due to shortages of health care practitioners.

## Caller Satisfaction

Over 90% of surveyed callers indicated they were satisfied or very satisfied with the quality of the service, the attention, information, instructions and advice. They felt that the Direct Health service had met all or most of their expectations. Almost 99% reported that they would recommend the service to others, and in fact, 69% had already done so. Fewer than 3% were dissatisfied.

The majority of all respondents – callers and non-callers – said they would call Direct Health for information or advice to care for themselves (84%), a sick or injured child (71%), or a sick or injured adult (63%). Most would call for symptoms related to poisoning or for problems or questions about medications. Almost half would call for minor injuries

or accidents, vomiting or diarrhea, or fevers. About a quarter would call for minor cuts and bleeding, aches and pains, or advice about a long-term illness.

When asked what additional services they would like to see offered by the teletriage service, respondents requested more general information on a variety of health and medical topics, information about local health care services, and increased coordination with other health care providers. Additional information and services on medications has since been incorporated into the province-wide teletriage service, Telehealth Ontario, through referral to a medication information hotline operated by the Ontario Pharmacists Association.

## Summary

- ▶ The Direct Health teletriage service was used by 8% of the population of northern Ontario in its final year.
- ▶ Most calls were made in the evening.
- ▶ Callers were predominantly young women who were calling either for themselves or for their young child.
- ▶ Callers were very satisfied with the service.
- ▶ Using the service increased callers' confidence in providing informal care.
- ▶ There is a need to target certain groups who could benefit more from teletriage services.

Another issue of Research in FOCUS on Research looks at the study findings that relate to the quality of advice given by the nurses and the extent to which callers followed this advice.

03-A1

Research in **FOCUS** on Research is published by the Centre for Rural and Northern Health Research (CRaNHHR), Laurentian University. Each issue is a summary of a study conducted by CRaNHHR researchers. As a form of knowledge dissemination and transfer, it is intended to make research accessible to a wider audience.

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