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PUBLIC AWARENESS OF THE NEBRASKA REGIONAL
POISON CONTROL CENTER

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ABSTRACT

A Poison Control Center needs to continually update its impact on the community it serves. At the Nebraska Regional Poison Control Center, a telephone survey was performed to ascertain baseline data for ongoing poison awareness programs. Our data shows that 36.6% of the population would call the PCC in the case of acute poisoning. There is a need to stress that the PCC is not only a center for information but also for treatment at home. Distribution of the PCC phone number to be attached to the phone needs to be increased. Many people obtained the phone number through time consuming methods which would increase the anxiety of the caller. Despite past programs, 63.9% of the respondents were not familiar with Syrup of Ipecac, and overall out of 608 people, 91.1% did not have Syrup of Ipecac at home in case of poisoning. In distributing poison information to the public, the pre-school and other school programs seem to be very effective. Newspapers and television also are an integral part in distributing poison information. With the help of the networks and newspapers in devoting time and space to poison prevention more households can be reached. There is a need to involve the pharmacist in distribution of poison information. Being the major supplier of Syrup of Ipecac, pharmacists can take a more active role by always carrying Syrup of Ipecac, and displaying it so that patrons may be reminded that they should have it at home.

The functions of a regional poison control center are diverse and unlimited in scope.¹ A primary function of poison control centers is the area of poison education and prevention.² The effectiveness of poison awareness programs are in continual need of re-evaluation to ascertain new baselines of public awareness and new target populations for these programs.³ Without these baselines and periodic updates, public awareness programs can easily become outdated and thus meaningless.

The Nebraska Regional Poison Control Center at Childrens Memorial Hospital, located in Omaha, Nebraska, has conducted several poison awareness programs since its establishment in 1957. No study has been conducted recently to evaluate the effectiveness of these programs. In an effort to establish current baseline data concerning public awareness of the Poison Control Center and Syrup of Ipecac, a telephone survey was conducted in November, 1979 of a sample of residents of the Omaha Metropolitan Area. The data collected was compared to demographic information such as whether children under six years of age were in the home, age, sex, and education level of the respondent. With this information, poison awareness programs can be more effectively concentrated on target groups.

METHODS

The telephone survey was conducted on a sample of households in the City of Omaha and its surrounding suburbs (Douglas County).

This sample population is the most affected by poison awareness projects due to the location of the Nebraska Regional Poison Control Center at Childrens Memorial Hospital in Omaha. The sample was selected from the City of Omaha telephone directory. The directory represents 94% of the area households. The other 6% of the households have either no telephones or an unlisted number. Using a table of random numbers, a two-stage probability sampling procedure was conducted. Random numbers were assigned to pages of the telephone directory and then from selected pages, random numbers were assigned to telephone numbers. The total size of the sample was 708, which is 0.6% of approximately 120,000 households in this area.

The survey format is shown in Figure 1. The questionnaire underwent preliminary testing before being implemented. The telephone surveys were conducted by professionally trained interviewers at the Center for Applied Urban Research at the University of Nebraska at Omaha in November, 1979. The survey was conducted during the day and evening. If a household could not be reached during the day, a second call was made during the evening hours and vice-versa. All respondents were asked questions 1, 5, 8, 9, and 10. The answers of the respondents to questions 1 and 5 determined whether questions 2, 3, 6, and 7 were asked.

Statistical significance between demographic variables and survey variables was determined by Chi-square analysis.

POISON CONTROL AWARENESS SURVEY

Hello, I'm _____ from the University of Nebraska at Omaha. We're doing a short survey on poisoning and would like to ask you a few question.

- 1. If you or one of your family members accidentally swallowed something harmful, what would you do?

(do not read:)

CALL:

Poison Control Center 223

M.D. _____ 2 SEE TABLE #1
Hospital or E.R. _____ 3
Pharmacist _____ 4
Spouse _____ 5
911 _____ 6
Other _____

- 2. Do you know the number of the Poison Center?

Yes 42 No 181

- 3. Are you aware of or familiar with the Poison Control Center at Children's Memorial Hospital?

Yes 260 No 127

- 4. How would you Obtain the number? (do not read)

Phone book 68
On wall 25
On phone 63
Direct asst 12
911 11
Other 2

need phone at number in alpha.

see page 2 why not call-er

- 5. Do you know what Syrup of Ipecac is?

Yes 220

No 390

- 6. How did you learn about it?

M.D. _____
Hospital _____ 2
Pharmacist _____ 3 SEE TABLE #2
Poison Center _____ 4
Spouse _____ 5
Other _____

- 7. Do you have it at home? Only 218 Respondents

Yes 54 No 164

Just a few questions for classification purposes:

- 8. Do you have any children under 6 years of age? Yes 151 No 459

- 9. Is your age: under 35 261 35-60 221 over 60 128

- 10. What was the last grade you completed in school?

(do not read:) less than 12 110 12 249 more than 12 251

THANK YOU FOR YOUR TIME

- 11. Male 161 Female 446 Only 607 respondents

Date _____ Phone # _____

RESULTS

Of the total size of 708 of the sample, 98 either had no adult at home, there was no answer after the second call, the phone was disconnected, or the person refused to participate in the survey. This resulted in a no response rate of 13.8%. Figure 1 lists the demographic data (Questions 8-11) of the respondents in this survey and also responses to survey questions 1-7. Of the 610 respondents, 223 (36.6%) would call the Poison Control Center in a case of poisoning, while the remaining 387 (63.4%) gave the alternative answers listed in Table 1. Responses which were considered "Other" are as follows: call spouse, take antacid, swallow oil, trust in God, pray, squeeze stomach. Of the 387 respondents with alternative responses, 260 (67.2%) were aware of the Poison Control Center at Childrens Memorial Hospital (Question 3).

The 223 respondents who would call the Poison Control Center (PCC) in an acute situation, 42 (18.8%) knew the telephone number of the center by memory. The remaining 181 (81.2%) respondents would obtain the telephone number by other means as listed in Figure 1.

In response to their knowledge of the Syrup of Ipecac, 220 (36.1%) of the respondents had prior knowledge, while 390 (63.9%) replied negatively. When asked how they learned about Syrup of Ipecac, the 220 respondents were distributed amongst the responses listed in Table 2. Only 218 respondents of the

220 eligible answered Question 7, about whether they had Syrup of Ipecac in the home. Of the 218 respondents, 54 (24.8%) had Syrup of Ipecac at home, while 164 (75.2%) did not have it at home.

DISCUSSION

The utilization of the Poison Control Center (PCC) by the public in the area it serves is reflected in the number of cases treated per year. Before the PCC may be utilized, the public must be aware of its existence and its ability to provide poison information and treatment over the phone. The information provided by this random telephone survey is important in that it is used to measure the public awareness of the PCC and use this information to concentrate on target populations in future community poison awareness programs. This type of information is more essential to the functioning of the PCC than the number of cases per year treated.

In response to an acute poisoning, parents who had children under six years of age at home were more likely to call the PCC for information (83/151 or 53.9%). In comparison, only 30.5% (140/459) of the adults with children over six years of age or with no children at home would call the PCC. The fact that parents with children under six years of age would most likely call the PCC in an acute situation reflects that these parents are more aware of the fact that younger children are

more susceptible to accidental poisoning. Both groups of respondents are in need of improvement in their actions to these acute situations as exhibited by the numerous alternatives these respondents would take.

The age of respondent shows that utilization of the PCC in an acute poisoning decreased with an increase in age ($p < .001$). This result is understandable since the majority of poison awareness programs are aimed towards the school children and their parents which would reflect the familiarity of the PCC program with younger respondents. Education of the older age groups is essential, since many may be grandparents or watch children while parents are at work. The homes of many of these older people contain multiple medication vials, plants, and sprays involved in childhood poisonings. The proper use of safety closures on medicines and household products has been shown to decrease also with age.⁴ Poison awareness programs should not be isolated to any one age group, but there is a need to extend more informative and preventive programs aimed at the older age groups. This may be accomplished by presenting these programs at geriatric health fairs and church groups.

Utilization of the PCC increased with an increase in educational background ($p < .001$). Of interest is the increased use of poison charts, package labeling, and other alternatives for treating poisonings by the over 12th grade level respondents. Therefore, emphasis on the proper use of poison charts and labeling, and the use of the PCC, should be extended to the

TABLE 2
Responses to Question #6.

<u>Response</u>	<u>No.</u>	<u>Percent</u>
Written or TV	36	16.4
Do Not Know	31	14.0
School	29	13.2
M.D.	29	13.2
Family or Friend	24	11.0
Poison Center	14	6.4
Experience	13	5.9
Hospital	9	4.0
Pharmacist	8	3.6
Others	27	12.3
Total	220	100.0

TABLE 3

Demographic responses to Question #5.

	Children under	Children over	AGE			EDUCATION			<u>Total</u>	<u>Percent</u>
	<u>6 years</u>	<u>6 years</u>	<u>35</u>	<u>35-60</u>	<u>60</u>	<u>12</u>	<u>12</u>	<u>12</u>		
Yes	71	149	84	101	35	20	81	119	220	36.1
No	80	310	177	120	93	90	168	132	390	63.9
Total	151	459	261	221	128	110	249	251	610	100.0

whole population. This also points out the need for the PCC to act as consumer advocates. Poison Control Centers should work with manufacturers and the government to see that proper and adequate poison treatment information is contained on product labels.

There was no real significant difference ($p > .05$) between the responses of males and females in an acute situation.

The majority of the respondents who would call the PCC in an acute situation, 181 out of 223 did not know the PCC telephone number by memory. These people would get the number as listed in Figure 1. What is gratifying to know is that 34.8% (63/181) of the households had the number posted by the phone. The other responses are time consuming and may increase the anxiety of the caller to the PCC. Despite programs to distribute stickers with the PCC phone number through the awareness programs and pharmacies, many households still do not have the number posted by the phone.

In those households in which calling the PCC was not the first choice, when asked if they were aware of the PCC, 67.2% (260/387) responded that they were. We did not question why they did not call the PCC first, but it could be one of a number of possibilities. The obvious one is that without reminders such as the PCC telephone stickers posted by the phone, they had nothing to prompt them to call. Secondly, many households may have personal physicians in which they may feel more comfortable calling. Thirdly, people may not be aware of the

capabilities of the PCC in treating poisonings over the phone. Only 20.8% (127/610) of the households surveyed were not aware of the PCC.

The treatment of selected acute poisonings under professional supervision by ipecac-induced emesis has been demonstrated to be effective in a large majority of cases. Evaluation of the public's knowledge before the acute situation about Syrup of Ipecac and using this information to educate the public, will increase the public's acceptance of this emergency treatment during the acute poisoning.⁵ In our survey, only 36.1% of the households were familiar with the emetic Syrup of Ipecac. The breakdown by the demographic data is listed in Table 3. In households with children under six years of age, the responses were divided at about 50%. Households where there were no children under age six, 67.5% (309/458) were not familiar with Syrup of Ipecac ($p < .05$). In relationship with the age of the respondent, the 35-60 age group were the most familiar with Syrup of Ipecac (45.9%), followed by the under 35 age group (38.2%), then the over 60 age group (15.9%) ($p < .001$). This result is understandable since the 35-60 age group can be a collection of parents with children under six years of age and this group would be parents longer, and be more knowledgeable about Syrup of Ipecac by experience. With an increase in years of education, the familiarity of the respondents to the Syrup of Ipecac increased ($p < .001$).

Developing multiple media in which to present information to the public is very important. This study (Table 2) shows that the majority of respondents either read about Syrup of Ipecac or learn of it thru TV programs, the school system programs, the physician, or friends. The majority of the households with children under six years of age received their information from the school, while households without children received information from written material and TV (p .05). Written material (handouts, newspapers, magazines), TV, and the school programs seem to offer the most accessibility to the public. The pharmacist, who is the major supplier of Syrup of Ipecac to the community, did not prove to be an important source of information about the emetic. State boards should be urged to include in the Practice of Pharmacy Acts, that Syrup of Ipecac be carried by all pharmacies. Pharmacists should take the initiative to make displays so that patrons can be exposed to Syrup of Ipecac. Many pharmacies still stock the emetic behind the counter where it does not stimulate question on poison prevention and does not increase its familiarity.

Of the respondents who were familiar with Syrup of Ipecac (36.1%), only 24.8% of these households had the emetic at home. This result is not different from that found at other centers.⁶ Despite years of community education and the availability of purchasing Syrup of Ipecac, most households are unprepared to treat an acute poisoning when instructed to use Syrup of Ipecac.

With increases in age, these would be a decrease in the chances of having Ipecac at home. However, even in the under 35 age group, only 38.8% (33/85) had it at home.

CONCLUSION

A Poison Control Center needs to continually update its impact on the community it serves. At the Nebraska Regional Poison Control Center, a telephone survey was performed to ascertain baseline data for ongoing poison awareness programs. Our data shows that 36.6% of the population would call the PCC in the case of acute poisoning. There is a need to stress that the PCC is not only a center for information but also for treatment at home. Distribution of the PCC phone number to be attached to the phone needs to be increased. Many people obtained the phone number through time consuming methods which would increase the anxiety of the caller. Despite past programs, 63.9% of the respondents were not familiar with Syrup of Ipecac, and overall out of 608 people, 91.1% did not have Syrup of Ipecac at home in case of poisoning. In distributing poison information to the public, the pre-school and other school programs seems to be very effective. Newspapers and television also are an integral part in distributing poison information. With the help of the networks and newspapers in devoting time and space to poison prevention more households can be reached. There is a need to involve the pharmacist in distribution of poison information. Being the major supplier of Syrup of Ipecac, pharmacists

can take a more active role by always carrying Syrup of Ipecac, and displaying it so that patrons may be reminded that they should have it at home.

Poison prevention, which includes being prepared to treat a poisoning, involves exposing the public to poison information. With the involvement of newspapers, TV, and medical professionals, the goals of a Poison Control Center can be achieved. In an effort to develop new goals, Poison Control Centers are urged to determine new baselines of public awareness on a regular basis to effectively meet the requirements of the community it serves.

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