

five, cookies by five, lemonade by four, potato chips by four, corn chips by four, and ham sandwiches by three), and none of these items were significantly associated with illness.

There was an inverse relationship between the number of tuna salad sandwiches consumed and the length of the incubation period (Spearman correlation coefficient = -0.81 , $p = 0.027$) (Figure 1). There was no apparent relationship between the dose and severity of disease as manifested by length of jaundice, number of symptoms, or time lost from work.

All ill persons, including the index case, had specimens positive for IgM-specific anti-HAV. One asymptomatic person had a specimen negative for anti-HAV, one was positive for IgG-specific anti-HAV, and a specimen collected two months after the picnic from a well person, the 6-year old son of a case, was positive for IgM-specific anti-HAV. We believe this represents a secondary case.

The tuna salad had been prepared using commercial canned tuna, mayonnaise, celery, and spices. The index case had mixed the salad with his bare hands, until it was a homogeneous mixture of the ingredients. He did not remember whether he had washed his hands before preparing the salad. An approximately equal amount of tuna salad was spread onto each sandwich, which was then cut in half.

Discussion

The inverse relationship between dose and incubation period has been documented for salmonellosis,³ but, to our

knowledge, this is the first outbreak of Hepatitis A which has shown a possible relationship. Early studies showed no difference in incubation periods for humans who were fed various quantities of fecal material from persons with infectious hepatitis.⁴ However, Krugman, *et al*, found that the incubation period was longer for subjects inoculated with diluted serum from infected persons than for subjects inoculated with undiluted serum.⁵ In most investigations of outbreaks of Hepatitis A, the long incubation period of the disease hinders accurate recall of specific food consumption among cases. While recall bias may have been present in the outbreak presented here, we believe it was minimal since limited food items were served in well-defined quantities. The data suggest that the incubation period for Hepatitis A may be related to the dose of virus consumed. We hope this observation will stimulate others to consider the effect of dose upon the incubation period when evaluating other common source outbreaks of Hepatitis A.

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Physicians' Attitudes and Practices toward CPR Training in Family Members of Patients with Coronary Heart Disease

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Abstract: A survey of 482 physicians practicing in central and western Massachusetts was carried out to examine attitudes and reported practices toward cardiopulmonary resuscitation (CPR) training for family members of patients with coronary heart disease (CHD). Seventy-nine per cent of physicians felt that CPR training was important for the family members of patients with CHD yet only 6 per cent actually provided information about CPR to families. Further studies are indicated to determine why physician behavior is at odds with their stated beliefs and to guide appropriate remedial action. (*Am J Public Health* 1985; 75:281-283.)

Introduction

The importance of bystander-initiated cardiopulmonary resuscitation (CPR) in improving the prognosis of out-of-

hospital cardiac arrest has been demonstrated repeatedly.¹⁻⁴ Bystander CPR followed by advanced life support has been shown to be the most effective treatment of sudden cardiac death.⁵⁻⁷

Due to the increased risk of sudden death among patients with known coronary heart disease (CHD), and with the knowledge that the majority of unexpected cardiac arrests occur at home, family members of such patients, particularly those patients with a recent acute myocardial infarction or survivors of a cardiac arrest, have been identified as high priority groups for CPR training.^{8,9} We have previously demonstrated the relatively low rate of CPR instruction and emergency preparedness among family members of CHD patients.¹⁰ The present survey was undertaken to examine the attitudes and reported practices concerning CPR training among physicians practicing in six central and western Massachusetts communities.

Materials and Methods

A questionnaire was sent to 655 family and general practitioners, internists, and cardiologists practicing in two urban (Worcester and Springfield) and four suburban/rural (Framingham, Milford, Leominster, Pittsfield) Massachusetts communities. These practitioners were identified from various sources including hospitals, district medical societ-

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ies, and telephone listings. Information was collected concerning the physicians' attitudes and reported practices concerning the regular (>50 per cent of the time) provision of information about CPR training to patients with CHD and their families. After three mailings, an overall response rate of 73 per cent (482/655) was achieved. There were no significant differences in response rates by physician specialty or by age.

Results

The majority of physicians reported that they regularly counsel their patients and their families with regard to coronary risk factor modification, warning symptoms of myocardial infarction, and the natural history of coronary artery disease (Table 1). Fewer physicians reported they routinely discuss awareness of emergency telephone numbers (53 per cent).

Seventy-nine per cent of the physicians thought it important to recommend CPR training for the family members of patients with CHD and were aware of CPR courses taught in their communities because of the high risk of sudden death in these patients (73 per cent) and to involve the family in making necessary health promotional changes (53 per cent). Moreover, these physicians reported that CPR training would be appropriate for nearly all (96 per cent) family members of patients with coronary heart disease.

Despite their attitudes regarding CPR training, only 6 per cent of the physicians regularly recommend CPR training to the family members of their CHD patients (Table 1).

Physician age, sex, type of practice, and personal basic or advanced life support training were unrelated to their behavior regarding the importance of CPR and its training recommendation (Table 2). Physicians who had personally performed CPR outside of the hospital setting were more likely (10 per cent) to recommend CPR training than those physicians who had never performed CPR outside of the hospital (4 per cent).

Specific information regarding what to do in the event of a suspected cardiac arrest was provided by only 32 per cent of the physicians. Of the physicians who provided such information, all recommended calling the emergency telephone number (usually 911), 65 per cent recommended starting CPR, and 28 per cent recommended calling the physician's office or hospital.

Discussion

Even though more than 12 million Americans have been trained in CPR, family members of high-risk CHD patients appear to be a neglected group for such training. We have previously demonstrated that the family members of patients with CHD were less likely to have had CPR training and to have taken these courses considerably further in the past

TABLE 1—Information Provided on a Regular Basis to Patients with Coronary Heart Disease and Their Families

Information Provided	Discussed >50% of Patient Visits (%) (n = 482)
Coronary Risk Factor Modification	95
Warning Symptoms of Myocardial Infarction	85
Coronary Heart Disease Prognosis	81
Emergency Telephone Numbers	53
Recommend CPR Training	6

TABLE 2—Physician Characteristics Concerning Importance of CPR and Its Training Recommendations for Families of Patients with Coronary Heart Disease

Physician Characteristics	Importance of CPR (%)	Recommend CPR Training (%)
Total	79	6
Male	77	7
Age (years)		
<40	83	6
40-49	71	6
50+	68	8
Family History of Cardiovascular Disease	79	5
Type of Practice		
Family/Primary Care	76	6
Internal Medicine	78	6
Cardiology	75	7
Personal Basic Life Support Training	80	6
Personal Advanced Life Support Training	82	6
CPR Course in Past 2 Years	81	7
CPR Performed Outside of Office or Hospital	82	10*

*p < .01. Percentage recommending CPR training who had ever performed CPR outside office or hospital setting as compared to those who had never performed CPR outside of these settings.

than hospital and neighborhood control groups of family members of patients without known heart disease.¹⁰

In a survey of selected physician groups in Seattle, most physicians (89 per cent) expressed support for citizen CPR training and agreed that the physicians' office was an appropriate site for promotion of emergency preparedness; however, only 40 per cent of the physicians routinely recommended CPR to spouses of high-risk patients.¹¹ While these findings are similar to ours, a much smaller proportion of the physicians in the present survey actually provide information regarding CPR training. In both surveys, the reasons for this discrepancy between reported belief and action are not known.

The majority of physicians surveyed in our study routinely provided information concerning life-style alterations. These recommendations are consonant with recent World Health Organization guidelines¹² and physicians' practice patterns in the care of patients with acute myocardial infarction.¹³ Other studies^{14,15} have indicated an increased interest of physicians in health promotion and recognition of their important role in these activities. Our study and the Seattle survey¹¹ of physicians' attitudes and reported practices with regard to CPR training indicate that physicians' interest in health promotion is markedly different from their actual behavior.

Several recent studies¹⁶⁻²⁰ have shown that a variety of approaches may be effective in influencing physicians' practice patterns. Studies seem indicated now to determine why physician behavior with regard to recommending CPR training to the families of patients at increased risk of sudden cardiac death is inconsistent with their stated beliefs and to recommend appropriate remedial action. The psychological impact of this training on family members is also worthy of study.

Physicians have been urged to receive CPR training on a regular basis.²¹ If they do receive this training and then urge their patients and their families to receive CPR training, a significant inroad will have been made in our attempts to deal with one of our most important public health problems—sudden cardiac death.

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Drug Product Selection: The Florida Experience Revisited

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Abstract: The comparison of drug product selection rates determined approximately one year and four years after passage of Florida's Drug Product Selection (DPS) Law indicates very little change in the product selection and brand interchange behaviors of Florida pharmacists. Lack of adequate guidelines from the state and the liability concerns of pharmacists appeared to limit an expected increase in the state DPS rate. (*Am J Public Health* 1985; 75:283-284.)

Introduction

In the 1977 survey on drug product selection (DPS) in the state of Florida,¹ the researcher found that, while 36.3 per cent of all new prescriptions issued in Florida were potentially eligible for product interchange, only 6.2 per cent of the eligible prescriptions were actually interchanged. Since the survey was conducted approximately one year after the enactment of Florida's Drug Product Selection Law,² the low rate of product interchange may have been due in part to a need for a longer period of time for

pharmacists, physicians, and consumers to adapt their behaviors to conform to the intent and specific provisions of the new law.

The purpose of the present study was to assess the long-term effects of Florida's Drug Product Selection Law on product selection and brand interchange. In assessing these effects it should be noted that, although the patient has the opportunity to prohibit DPS, pharmacists are not required under the terms of the Florida law to make any notation when patient refusal occurs.

Methods

In the 1977 survey, a stratified random sample of 60 Florida community pharmacies (3 per cent of total) were selected from a list of all community pharmacies obtained from the Department of Professional and Occupational Regulation. Resurvey approval was obtained from 52 (85 per cent) of these original pharmacies, hence the comparisons across studies could be somewhat biased by the fact that all of the original 60 pharmacies were not resurveyed.

The data collection process used in 1977 was repeated. Every effort was made to obtain the actual acquisition costs of both the products prescribed and the products dispensed. This was usually accomplished by looking at vouchers dated closest to the prescription filling date. In addition, the sampling frame was expanded from four months to a year to determine if there were any seasonal differences in the DPS rates. No such differences were found, however.

Results

The prescribing behaviors of Florida physicians during

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