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Public Perceptions of Digestive Health and Disease

Survey Findings and Communication Implications

Digestive disease is one of the nation's most serious health problems—1 in 10 Americans is affected. However, recent research indicates that Americans say they have little knowledge of digestive diseases compared to other disorders, do not consider digestive diseases and disorders to be a serious health problem, and are uncomfortable discussing digestive health openly. The findings underscore the many needs and opportunities for improving the public's knowledge and attitude relative to digestive health and disease, and suggest the need for increased attention to health communication on all levels to address these issues.

It is estimated that 1 in 10 Americans suffers from digestive problems (1). Some 20 million people have chronic forms of digestive disease, and another 14 million suffer from acute episodes of digestive disease (2). Digestive diseases are responsible for approximately 15% of all admissions to general hospitals (3), 9% of all deaths, 10–15% of all hospital admissions, and over 25% of all surgical operations excluding tonsillectomies (4,5). More individuals are hospitalized for digestive disorders than for any other single group of disorders (2). Additionally, some 200,000 employees are absent from work because of digestive problems, and 50 billion dollars are lost annually because of these disorders (3).

These statistics come as no surprise to members of the digestive health and disease community. Digestive diseases are obviously a significant and pervasive health problem. Is the public aware of the magnitude of the problem? How much knowledge do Americans have about digestive health and disease? What are Americans' attitudes regarding digestive health problems? Where does the public get its information regarding digestive health-care? These were the questions that

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...in terms of knowledge and attitudes, there are very few differences between those who have had direct experience with digestive diseases and the general public.

prompted efforts to conduct a national survey to study Americans' perceptions of digestive health and disease. *

METHOD
The study consisted of telephone interviews with 1,250 United States citizens, 18 years old or older. All interviews were conducted from New York City between May 12 and May 20, 1983. The survey was based on a nationwide sample of the civilian population of the United States, including Alaska and Hawaii. Individuals in prisons, hospitals, and religious or educational institutions were not included. The sample was based on census information from each state, updated annually by estimates generated by the Bureau of Census. The sample was stratified to ensure representativeness in terms of geographic region and metropolitan/non-metropolitan residency. Households to be included in
and diseases; and (4) perceived usefulness of sources of information about digestive health and disorders.

Responses were analyzed in terms of subgroups based on the following demographic variables: region of residence, size of resident area, age, sex, education, race, income, Indicated level of knowledgability about digestive diseases, indication of having seen a physician for a digestive health problem, and indication of having been hospitalized for a digestive health problem. †

FINDINGS
Knowledge of the Digestive System and Digestive Organs
Survey findings indicate that Americans: (1) generally know which organs are part of the digestive system and which are not; (2) do not consider themselves knowledgeable about the purpose and function of many digestive organs; (3) do not consider themselves to be knowledgeable about specific digestive diseases; and (4) indicate a lack of knowledge regarding diagnostic procedures used for digestive disorders.

As noted above, the survey findings suggest that the public is generally able to identify digestive organs correctly. Of those surveyed, 86% identified the stomach as part of the digestive system. Intestines were correctly identified by 96% of those surveyed, the esophagus by 71%, the rectum by 69%, the pancreas by 68%, and the liver by 65%. It is interesting to note that a majority of those interviewed (58%) incorrectly identified kidneys as a digestive organ. The ability to make correct identifications increased with educational level. Although Americans are generally able to identify digestive organs correctly, they are less informed with regard to the purpose and function of these organs. While 70% of all Americans say they are at least fairly

A majority of interviewers were unfamiliar with stool tests and endoscopic exams.

Results suggest that the public is captive to a number of myths.

the sample were selected through random-digit dialing, to ensure inclusion of individuals with unlisted phones and those with new numbers not yet listed in published directories.

The interviews consisted of a series of questions that focused on the following areas: (1) Understanding of the digestive system and digestive organs; (2) perceived knowledge of digestive disorders and digestive diagnostic procedures compared to other health problems and procedures; (3) attitudes toward digestive health

* The survey was supported by educational grants to the Coalition for Digestive Disease Organizations from A. H. Robins Company Inc., Rorer Group Inc., and Smith Kline & French Laboratories, with supporting contributions from Hoffman-LaRoche Inc. and Weiz Allyn Inc. The study was conducted by the National Digestive Diseases Advisory Board. Brent D. Ruben, Ph.D., and Suzanne Rosenthal, Co-Chairmen of the Education and Information Committee of the National Digestive Diseases Advisory Board, served as Project Coordinators. Field work and data analysis were carried out by Louis Harris and Associates Inc., with Merl Baker serving as their Project Director.

† Maximum sampling error at the 95% confidence level in the total sample (sample size: 1,250) is slightly under 3 percentage points. The maximum sampling error within subgroups varied as a function of the respondent group. For example, for digestive disease patients, sampling error is less than 3.5 percentage points (sample size: 324); women, 4 percentage points (sample size 645); Americans 20-49 years of age, just over 4.5 percentage points (sample size: 371); college graduates, just under 5 percentage points (sample size: 232). Additional details on the sample profile, other facets of the methodology, and a complete set of tables of response patterns to each interview question can be obtained by requesting a copy of the full survey report from the National Digestive Diseases Advisory Board, P.O. Box 30877, Bethesda, MD 20814.

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Figure 1. Knowledge of purpose and function of body organs.

knowledgeable about the heart and 54% make this claim for the kidneys, only 32% say so for the gallbladder, 36% for the colon, 41% for the liver, and 46% for the intestines. As indicated in Figure 1, the stomach is the only digestive organ about which a majority (58%) say they are at least fairly knowledgeable.

Respondents were asked whether they agreed or disagreed with a series of specific statements regarding digestive health and disorders. Results suggest that the public is captive to a number of myths. For instance, 62% versus 36% of the public believes that "a bowel movement each day is necessary to good digestive health," and 52% versus 25% believes that "ulcerative colitis and Crohn's disease are usually brought on by emotional stress," assertions with which most medical experts disagree. Also, 52% versus 45% of those interviewed indicated that "high-powered business executives are more likely than most people to develop ulcers," a position with which most medical experts disagree.

However, 83% versus 12% of the respondents agreed that "high-fiber foods help relieve and prevent digestive problems." Respondents also recognized that "problems other than alcohol abuse often lead to cirrhosis of the liver," agreeing with this proposition by 65% versus 28%. And, by 47% versus 40%, respondents said they disagreed with the statement that "the most common case of rectal bleeding is cancer of the colon," although 13% were uncertain.

Perceived Knowledge of Digestive Diseases and Diagnostic Procedures

When asked to assess their own knowledge of digestive diseases compared to other disorders, digestive diseases rank below cancer, heart disorders, respiratory diseases, and circulatory disorders in terms of how much Americans say they know about the nature and symptoms of these diseases. Of the six classes of disease/disorder considered, only disorders of the nervous system were rated lower than digestive diseases—33% of the respondents indicated having at least a fair amount of knowledge about digestive diseases, compared with 32% for nervous disorders.

Respondents were also asked about their knowledge level regarding nine specific disorders, seven of which were digestive in nature. While 63% of all respon-

Figure 2. Knowledge of specific digestive diseases.

dents considered themselves at least somewhat knowledgeable about arthritis, only 10% make this claim for Crohn's disease, 18% for diverticulitis, 20% for colitis, 36% for hepatitis, 37% for cirrhosis, 45% for ulcers, and 50% for hemorrhoids. Of the respondents, 27% indicated that they were at least fairly knowledgeable about multiple sclerosis, the other disease considered (Figure 2).

Consistent with the generally low level of knowledge regarding digestive health and disease are findings that the public generally lacks familiarity with several diagnostic procedures used for digestive disorders as compared with techniques used in diagnosing other disorders. While 79% of those surveyed were familiar with electrocardiograms, only 54% indicated being familiar with the GI series. A majority of interviewers (52%) were unfamiliar with stool tests and with endoscopic exams (60%) (Figure 3).

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who have had direct experience with digestive diseases and the general public. Considering the respondent group as a whole, 9% said that they knew "a great deal about" the nature and symptoms of digestive diseases, and an additional 24% said they knew "a fair amount." Among those who had seen a doctor or who had a member of their household see a doctor for a digestive disorder, the levels were 11% and 27%, respectively. The levels were 13% and 18% for those who had been hospitalized for digestive disorders or who had a household member who had been hospitalized. The differences between these two subgroups and the population as a whole are insignificant statistically.

This same pattern occurred throughout the survey findings; individuals with direct experience varied insignificantly from the respondent group as a whole in terms of how much they said they knew about digestive organs and digestive diseases. And, like other Americans, these subgroups ranked digestive disorders last of those listed, in terms of seriousness. Also surprising is the finding that those with direct experience were no more comfortable discussing digestive problems than the public as a whole. Respondents with direct experience did differ significantly from the broader group in their level of familiarity with diagnostic procedures.

Sources of Information About Digestive Health

Interviewees were asked to rate the usefulness of eight sources of information about digestive health and disease. The findings indicate that all of the sources listed are regarded as useful. Table 1 provides rankings from those sources thought to be most useful to those which were considered least useful, and the percentage of respondents so indicating.

CONCLUSIONS AND IMPLICATIONS

The consequences of the public's knowledge and atti-
Collectively, the findings also point to potential limitations in the American public's ability to take a useful role in the maintenance of their own or other's digestive health-care, to recognize signs that indicate potential disorders of the digestive system, to know when the assistance of a medical professional is needed, or even to discuss comfortably their problem with others.

Digestive Health Information and Communication

By implication, the survey findings suggest that the factors involved in the communication process as it affects the diffusion of digestive disease information are numerous. In addition, the relationships between these factors are mutually inhibiting in many respects (Figure 4).

Among members of the public, there is a general lack of knowledge. In part, this lack is manifested in misinformation and myth. This lack of knowledge is also apparent in dysfunctional attitudes, whereby digestive diseases are regarded as nonserious, and an uncomfortable and embarrassing topic of discussion. These dysfunctional attitudes lead to a lack of receptivity to information about the topic and encourage distortion of information that may be provided. And, in turn, this resistance to new information perpetuates the lack of knowledge, with little or no outside influence on what is essentially a closed loop.

Given the number of digestive diseases, disorders, and organs, the stigma, and the lack of clearly defined and measurable preventative measures, the communication and information problem—the task of "opening the closed loop"—is a very difficult one. Yet in terms of improved public understanding and more effective digestive health-care, the development and implementation of strategies to change these information-processing and communication patterns must certainly be one of the major challenges confronting the digestive disease community.

References