FORMATIVE RESEARCH FINDINGS ON PRIMARY AUDIENCES: *H. PYLORI* INITIATIVE

This document represents a synthesis of the data collected on knowledge, beliefs, attitudes, perceptions, and practices of the general public and individuals who suffer from some type of gastrointestinal (GI) condition. The data on individuals focus on those who may be self-diagnosed or doctor-diagnosed with peptic ulcer disease (PUD) or dyspepsia, or who are self-treating with over-the-counter (OTC) medications to relieve their GI conditions. Information about these audiences is a crucial component for the development of an educational campaign on ulcers and *H. pylori* that aims both to inform and to motivate people to action.

Data sources include a focus group study and a mall intercept study conducted by the Ketchum Public Relations Research and the Measurement Department for the American Digestive Health Foundation (ADHF), a telephone survey conducted by Opinion Research Corporation (ORC) for ADHF, a telephone survey conducted by Abbott Laboratories, a journal article by Sonnenberg and Everhart on the prevalence rates of ulcers using National Health Interview Survey (NHIS) data, and a self-administered survey conducted by Synergy Health Care, Inc.

General Public

Accessible data on the general public and their knowledge, beliefs, attitudes, perceptions, and practices regarding peptic ulcer disease and *H. pylori* are scarce. However, those data that are available provide some important insights. They are especially vital in showing the degree to which misconceptions and misunderstandings about PUD and *H. pylori* exist.

Knowledge and Beliefs

What does the general public know about ulcers and *H. pylori*?

The knowledge data come primarily from the six items that the National Center for Infectious Diseases (NCID) of the Centers for Disease Control and Prevention (CDC) purchased in the spring of 1997 for the Healthstyles survey (Porter/Novelli, 1997). Healthstyles is an annual telephone survey that is used to collect knowledge and behavioral data from the general public on various health topics. For this year's survey, respondents were asked to state the degree to which they agreed with six different statements related to ulcers. The number of respondents to each of the six statements ranged from 2,429 to 2,477. The data are broken down by the respondent demographic characteristics of gender, race/ethnicity, age, marital status, and household income.

In addition, Porter/Novelli provides information on the responses of individuals as grouped by one of seven Healthstyles. A Healthstyle is a detailed profile of a person's typical health-

related beliefs, perceptions, behaviors, etc. known by such names as Decent Dolittles, Tense But Trying, and Physical Fantastics. Ideally, results will reveal differences in responses among the various Healthstyles groupings so that program planners can more efficiently target audiences. For instance, if individuals classified as Physical Fantastics consistently differ in their knowledge from those in other Healthstyle groups, program planners can look to the descriptions of the category for insights as to how these people tend to behave and what motivates them. Unfortunately, the Healthstyles cluster data were not very revealing because responses were similar for all six statements across the seven clusters.

The overall results and the demographic breakdowns are useful. Noticeable differences were found among the variables of race/ethnicity, household income, and age, but not for marital status or gender. The data consistently show that basic knowledge about the cause of ulcers and the best treatment options for ulcers among the general public regarding peptic ulcer disease and *H. pylori* is very limited.

Perhaps the most important finding is the degree to which Americans believe that stress is the primary cause of ulcers. In response to the statement, **"Stomach or intestinal ulcers are most likely caused by too much stress in your life,"** over half (59 percent) of all respondents regardless of gender, age, race/ethnicity, marital status, or household income agreed to some degree. Misunderstanding was greatest among the youngest respondents. Seventy-eight percent of respondents aged 18-24 agreed, whereas the percentage of agreement among older persons ranged from 52 percent to 61 percent.

The misconception that spicy foods cause ulcers was most common among black respondents, the youngest respondents, and those in lower income groups. Over a third (34 percent) of black respondents agreed with the statement, **"Stomach or intestinal ulcers are most likely caused by eating spicy foods,"** compared to only 14 percent of whites, and 18 percent of Hispanics. A third (33 percent) of respondents aged 18-24 agreed, while older respondents were less likely to agree (15 percent of persons aged 25-34 agreed, as did 12 percent of persons aged 35-54 and 17 percent of persons 55 and older); however, this does not imply that the remaining two-thirds are aware that spicy foods are not the cause of ulcers. A large number for all groups reported that they "did not know." Only 15 percent of those aged 25-34, 12 percent of those aged 35-54, and 17 percent of those aged 55 reported any level of agreement. Lastly, more respondents in lower income brackets (under $15,000 and $15,000-29,900), agreed with the statement than those earning $30,000-49,900 and those earning $50,000 or more. Twenty-six percent of respondents earning under $15,000, and 24 percent of those earning $15,000-$29,900 agreed with the statement to some degree. Eleven percent of respondents earning $30,000-49,9000 and only 9 percent of those earning $50,000 or more agreed.

Respondents also demonstrated low levels of understanding about the bacterial cause of ulcers and the treatment regimens using antibiotics. Although levels of understanding were very low across all variables, age clearly stood out among the others. The younger respondents were more likely to be uninformed that a bacterium is the cause of ulcers. Only 12 percent of those aged 18-24 agreed with the statement, **"Stomach or intestinal ulcers are mostly likely caused by a bacterial infection."** Twenty two percent of those aged 25-34, 29 percent of those aged 35-54, and 33 percent of those aged 55 or older agreed. With regards to treatment

regimens, over 34 percent of all respondents disagreed to some degree with the statement, **"Antibiotics can be used to cure stomach or intestinal ulcers."**

When compared to other issues, the level of awareness was generally higher about the usefulness of OTC medications and other aids, such as antacids, to treat ulcers; however, it was still fairly low. The number of respondents who were correctly informed about the use of antacids was especially low among younger respondents and black respondents. Twenty-four percent of black respondents, compared to 12 percent of whites and 18 percent of Hispanics, stated any level of agreement with the statement, **"Stomach or intestinal ulcers can be treated best with antacids, like Tums or Mylanta."** Only 12 percent of respondents 55 and older agreed with the antacid statement, whereas 29 percent of those aged 18-24 agreed.

No notable differences were found among the demographic variables for the sixth statement, **"New drugs, like Pepcid AC or Tagamet are the most effective treatment for stomach or intestinal ulcers."** A third of all respondents disagreed to some degree, half that many (17 percent) agreed with the statement, and half stated that they did not know.

The second source of data was the July 1995 mall intercept survey of 60 respondents conducted by the Ketchum Public Relations Research and ADHF. Study participants were in one of three categories: a member of the general public, an OTC user for dyspepsia for the past 2 years, or a PUD sufferer who had been diagnosed by a doctor within the past 2 years.

Results showed that 80 percent of all participants, regardless of whether they had a stomach condition or not, believed that ulcers were caused by stress or worry; 57 percent

believed diet played a role; and 30 percent believed ulcers could be inherited. Those with ulcers (80 percent), and those who treat their stomach pain with OTCs (88 percent), were more convinced than the general public (70 percent) that ulcers could be caused by stress or worry. Those with ulcers (40 percent) showed the greatest tendency to believe they might be caused by inherited traits. Seventy-five percent of those with ulcers and 68 percent of those who treat their stomach pain with OTCs believed diet plays a role, but 35 percent of the general public shared that belief. These data are consistent on the general public differ somewhat from the Healthstyles respondents, 59 percent of whom agreed that stress is the cause of ulcers, and 17 percent of whom believed spicy foods cause ulcers. These differences may be due to the small sample size in the Ketchum study and the differences in how the questions were worded. The Healthstyles statement did not include fatty and/or fried foods, in addition to spicy foods, as the Ketchum study did.

When probed about *H. pylori* specifically, 40 percent of the general public said they had "seen, heard, or read" something about a type of bacteria that is thought to play a role in peptic ulcer disease," while 30 percent of the general public reported "seeing, hearing or reading" something about a specific "stomach bacterium called *Helicobacter pylori* or *H. pylori*."

Researchers also assessed participants' levels of familiarity with ADHF and member organizations. Large majorities were "not at all familiar" with the American Gastrointestinal Association (AGA) (65 percent), the American Society of Gastroenterologists (80 percent), and/or the ADHF (82 percent).

Attitudes

In the Ketchum/ADHF mall intercept study, participants were shown an educational video featuring "Dr. Dan," an animated doctor who briefs his audience on *H. pylori* and suggests people see their doctors for more information. After viewing the video, participants were asked to state how credible they would consider information they might see, read, or hear on digestive disorders, such as the public service announcement (PSA) they just viewed, if they knew it came from the ADHF and were 1-800 number for more information at the conclusion of the PSA. Credibility ratings were consistently high: 90 percent reported that they would consider this information credible, as did 95 percent of those without GI problems, 92 percent of those who take OTCs for the treatment of dyspepsia, and 85 percent of ulcer patients.

Persons With A GI Condition

Prevalence (Doctor-diagnosed)

Who is more likely to have an ulcer?

According to Sonnenberg and Everhart (1996), higher prevalence rates of PUD are found among older individuals, those in lower income groups, and those who have lower levels of education. To form these conclusions, the authors assessed the digestive diseases data from the 1989 National Health Interview Survey (NHIS), a nationwide survey conducted annually for the National Center for Health Statistics (NCHS). The data were obtained through in-person

interviews conducted with 41,457 randomly selected individuals. Sonnenberg and Everhart use a point graph to display the age distribution of patients with a lifetime history of any PUD confirmed by a diagnostic procedure within the last year. The graph demonstrates a steadily increasing rate of persons with ulcers, rising from 5 percent of persons aged 18-24 to a peak of 17 percent for persons aged 65-74. There is a small decline to 16 percent at age 75 and older. Point graphs are also used to describe the inverse relationship between prevalence and family income and prevalence and education level. As family income increases, the prevalence of ulcers decreases. About 13 percent of persons at the $10,000-$14,999 level have PUD; so do about 11 percent of persons at the $25,000-$34,999 level, and about 10 percent at the over $50,000 level. Similarly, as education level increases, the prevalence of ulcers decreases, except among those who have 17 or more years of education. There is a slight increase in prevalence among the highly educated. Sonnenberg and Everhart also found that the prevalence rates of ulcers among men and women are quite similar.

Abbott Laboratories has also recently collected data on the prevalence of ulcers. In 350 telephone interviews conducted using a nationwide random sample, 200 of had a doctor-diagnosed ulcer; the remaining 150 respondents were self-diagnosed. Abbott found that the overall prevalence rate of a doctor-diagnosed ulcer among the general U.S. population is 10 percent, and the mean age of an ulcer sufferer is 47 years. Another characteristic of ulcer sufferers was that 81 percent of them have some type of health insurance and an estimated 20 percent are receiving either Medicare or Medicaid coverage. These data on overall health insurance coverage are proportionally similar to the general U.S. population (U.S. Census data, March, 1996); but, the number of ulcer sufferers that are receiving Medicare or Medicaid coverage is higher than the U.S. population. While 85 percent of the U.S. population has health

insurance, only 13 percent receives Medicaid or Medicare coverage. Sonnenberg and Everhart do not provide any data about health insurance or Medicare/Medicaid coverage. Abbott researchers provide prevalence data consistent with Sonnenberg and Everhart's regarding low-income level, low-education level, and older age, but they added that doctor-diagnosed patients were more likely than self-diagnosed to be older. Abbott found that 70 percent of respondents who had been diagnosed by a doctor were 35 or older, and 60 percent of women and only 40 percent of men have an ulcer. These data on gender do not match Sonnenberg and Everhart's findings, but because the difference is minimal, it does not suggest that different educational materials should be designed for men and women.

Knowledge and Beliefs

Data on knowledge levels of persons of doctor-diagnosed and self-diagnosed ulcer patients were available from four sources. In addition to the Abbott telephone interviews and the Ketchum mall intercept survey, two other studies contained data on this population: a Ketchum focus group study (seven groups with 8 to 10 participants in each) conducted in December 1994 and January 1995); and a telephone survey using a random nationwide sample conducted by Opinion Research Corporation (ORC) in June and July 1995. Two of the focus groups were conducted with white participants (10 persons each), two with black participants (10 persons each), and three with Hispanics (two of the groups had 10 participants each, and one group had only 8 participants). The 68 focus group participants had either been treated for PUD, had sought treatment for dyspepsia, or had treated themselves with OTC medications for dyspepsia. The telephone interviews were conducted with 409 persons who were identified as PUD sufferers or at risk of being diagnosed because of their symptoms of stomach pain.

Individuals with GI problems who responded to the ORC telephone survey and the Ketchum mall intercept study were asked if they believed ulcers *could be* caused by stress or worry, by diet or eating certain types of food, or by genetics. Large majorities (89 percent ORC telephone survey; 84 percent Ketchum mall intercept survey) believed that stress can cause ulcers and many also believed that diet plays a role (60 percent, telephone survey; 71 percent mall intercept survey). In terms of race or ethnicity, the largest segments of those believing diet could cause ulcers were among blacks (75 percent) and Hispanics (72 percent), while 56 percent of Whites believed diet played a role (ORC telephone survey, 1995).

When probed about *H. pylori*, about a third (28 percent, ORC telephone survey; 41 percent Ketchum mall intercept) of those with GI problems in each of the studies had some familiarity with an unspecified bacterium; and even fewer had "seen, read, or heard" something about a specific "stomach bacterium called Helicobacter pylori or *H. pylori*" (32 percent Ketchum mall intercept [excludes general public]); 11 percent ORC telephone survey). Individuals who did have some knowledge of an unspecified bacterium or of *H. pylori* specifically tended to be those who had been treated for an ulcer or dyspepsia (50 percent familiar with unspecified bacteria; 40 percent knowledge of *H. pylori*, Ketchum mall intercept) and those who had higher levels of education.

Abbott researchers also collected data on whether ulcer sufferers knew about the bacterial link to PUD in general and/or *H. pylori* specifically. In contrast to the Ketchum studies and the ORC telephone survey in which respondents had the opportunity to agree or disagree with a series of statements, Abbott left the question open-ended by asking people what they

believed was the cause of their ulcers. This difference in approach to data gathering may be the explanation for why results that vary dramatically. Whereas about one-third of the respondents in the Ketchum and ORC studies seemed to know about the role of a bacterium in ulcers, less than 1 percent of the Abbott respondents attributed their condition to a bacterial cause. The combined findings suggest that individuals may recall hearing something about *H. pylori* if prompted, but the information is either not memorable or not perceived as relevant to one's own situation. Abbott's data clearly show that campaign planners have a long way to go to motivate people to action. However, the data from some of the other studies indicate that there is at least a soft foundation from which to build.

Levels of familiarity with ADHF and member organizations were very low. Only 10 percent of telephone survey respondents (ORC) and 9.3 percent of mall intercept survey respondents (Ketchum) were somewhat or very familiar with ADHF. Even fewer respondents were familiar with member organizations such as the AGA.

Synergy Health Care administered a survey to members of two managed care organizations who fell into one of two categories either: (1) patients who had been diagnosed with PUD on their medical claims, and (2) patients who were chronic users of H2 or PPI medications (defined as usage over a 9 to 12 month period). Survey respondents were asked to answer questions about their quality of life with respect to eight topics, including General Health Status (SF-12), Quality of Life (QoL), PUD Pain, Function at Work or School, Treatment Received, General PUD Health Status, Satisfaction, and Demographic Information. A total of 1,994 persons returned the survey and among them, over half (62%) felt that their ulcer had a somewhat negative or very negative impact on their overall health or state of well-being. When

asked about they were bothered by the need to take ulcer medicines, almost half (49%) of the participants responded that they had been bothered at least some of the time by the need to take ulcer medications, with 26% stating it bothered them most of the time. Despite, the bother the majority (87%) of the respondents felt that their ulcer medicines provided at least some relief from their ulcer symptoms.

Attitudes

Attitudinal data were available from the same five sources that were mentioned above for knowledge/beliefs. Respondent attitudes towards health care professionals and pharmaceutical companies were collected in the Ketchum focus groups. The participants who had seen physicians for their stomach disorders were generally pleased with the quality of care they had received. Others said that managed care systems had virtually destroyed the concept of "family doctor," and that since they often saw different doctors, they no longer had a one-on-one relationship with the same doctor at each visit. In each session, specialists were identified by the patients as secondary level care givers to whom they turned for testing and diagnostic purposes alone, and solely at the recommendation of their primary practitioners. There were few complaints regarding interactions with specialists, who were, on the whole, viewed as being sympathetic and informative. The time actually spent with specialists was described as being minimal by most focus groups participants. Similar to the Ketchum focus groups data, positive attitudes towards health professionals were revealed in the Synergy survey results. The majority (82%) were somewhat or very satisfied with the quality of care they received for their ulcer and 88% were confident in their doctor's ability to manage their ulcer.

In general, there were few racial/ethnic differences with regard to attitudes. Hispanic focus group participants did say they were quite receptive to treatment from non-Hispanic physicians, if these doctors were trained to be sensitive to their cultural background and had bilingual capabilities, but they also reported that their older relatives might have a preference for physicians who understood their language and culture. Some participants in the Hispanic groups complained that their physicians knew little about their culture and diet, and that this lack of awareness caused them to be somewhat callous when giving advice. This could be an important concern for targeting Hispanics. Those who believe that ulcers are caused by diet, may be reluctant to accept conflicting information from a non-Hispanic physician.

When questioned on the credibility of various information sources on medical advances, focus group participants were asked to name the sources they consider the most trustworthy when it comes to finding out information about new medical advances. The most frequently cited source was the patients' own physicians. Many said they "had to rely on" these practitioners, and added that if they did not trust them, they "would not go to them." As an alternative, they would simply change doctors. The focus group participants were also strongly in favor of printed information disseminated in doctors' offices, especially if the material was provided by a pharmaceutical company. Pharmacists were also viewed as being important providers of information to a wide variety of the participants. Many respondents claimed they go to their doctors for treatment and/or prescriptions but do not ask these practitioners many questions as they ask pharmacists, who were praised as dispensing "free advice" to customers. Broadcast media was also seen as a credible source, especially programs such as *20/20* and *60 Minutes*. Finally, another racial/ethnic difference among focus group participants was that Hispanics were in disagreement with black and white participants on the issue of friends and

relatives being important sources of information on new medical advances. Hispanics said that they did tend to rely on their family and friends for medical information. This might suggest that family and friends should not have high priority as an important secondary audience for a campaign targeted to Hispanics.

One of the most important sources of data comes from the part of the Ketchum focus groups in which respondents were informed about *H. pylori* and its treatments. The amount of detail provided in the report is less than desired for use in developing message concepts, but there are some insights to be gained for what might motivate people to action. After focus group participants were asked about their familiarity with *H. pylori*, the moderator read participants detailed information about *H. pylori* and asked them for their reactions. Respondents generally were very enthusiastic about the information provided. There was little discernible skepticism regarding the information, although some questioned why their physicians had not discussed these developments with them.

Many focus group participants, particularly those with ulcers, were quick to ask questions regarding the diagnosis and treatment of patients and about the transmission of infection. Reactions and questions asked in each session ranged from “To be cured of something that has been attacking you for half of your life is great,” to ”I always thought it was diet!” to “Doctors aren’t aware of this.” After the moderator read the participants additional information regarding *H. pylori* related to diagnostic testing, all were asked if they would, hypothetically, want their physicians to perform these tests, or if they would prefer going to a specialist. Generally, participants felt that their own doctors would be capable of performing the tests as described.

Some participants did voice cynicism regarding the financial motivations of some physicians today, and how their views toward a cure may be influenced by greed.

After an explanation of current *H. pylori* antibiotic treatment regimens, participants in the focus groups were asked how they feel about the regimens. Overall, there was a high degree of interest, especially among persons who had been diagnosed and treated for PUD. More often than not, the participants who had been diagnosed and treated for PUD were very receptive to the concept of undergoing an antibiotic treatment of *H. pylori*, if they had been diagnosed with the same, and if there was a high demonstrable potential for a cure. Others were more reticent and expressed their concerns. These individuals felt that they would have great difficulty ingesting up to 20 pills per day for 2 weeks, even if the rate of cure was proven. Some of these individuals were also concerned that they would not be able to keep track of their dosing schedule and might jeopardize their treatment by mistake. A smaller group mentioned concerns about taking such large doses of antibiotics, because they thought it may weaken their immune systems. When participants were asked whether they would discuss *H. pylori* with their primary care physicians, virtually all the participants said they would be happy, if not eager, to do so. The questions and concerns they would address with their doctor included how much it cost, what the side effects were, and if there were any drug contraindications (Ketchum focus groups, 1994-95). Although there were individuals that raised concerns, the good news is that there was little evidence that their apprehensions would actually prevent them from seeking and complying with treatment if they had a choice between a short-term treatment and a lifetime of chronic suffering. Results from the Synergy survey indicated that although 53% of the respondents (some of whom had taken one or more antibiotics specifically to treat their ulcer)

were very or extremely pleased with the results of their most recent ulcer medicines, cost was an issue with 47% reporting that the cost they had to pay was a burden.

Abbott researchers explored possible barriers to treatment by questioning respondents about their attitudes towards their stomach conditions. The available data focus on the 34 percent of self-diagnosed patients who had never talked to a doctor about their condition because they felt the condition was not serious enough, it is too costly to see a doctor, they prefer to self treat, and they do not trust doctors. This audience is obviously one that would be very difficult to motivate to change. These people probably resist visits to their doctor for all except the most serious of health problems, and minimal effort should be expended in trying to reach them.

Practices

Practices discussed in this section include actions taken to relieve stomach pain (use of OTCs, elimination of spicy food), the length of time patients had suffered from their condition before seeing a doctor, and the length of time ulcer patients/sufferers had waited before they saw their doctor specifically about their stomach problems.

Results from the ORC telephone survey indicate that when asked what actions they have taken to relieve their stomach pain in the two-year period prior to data collection, 81 percent of respondents had taken OTC medications such as Tagamet, Zantac, Pepcid, or Axid to relieve their stomach pain. Abbott researchers asked participants to “Please tell me all the brands you

are currently using to treat your stomach condition," and then read respondents a list of medications including Alka-Seltzer, Axid, Maalox, Pepcid, Pepto Bismol, Tums, and Zantac. Abbott also asked participants, "Has your doctor ever recommended 'lifestyle modifications' such as reducing stress, changing your eating habits, etc. to treat your stomach condition?" and "Are you following your doctor's recommendations regarding these modifications?" Researchers concluded that 38 percent of doctor-diagnosed and self-diagnosed ulcer sufferers use OTCs to treat their condition, while 29 percent use prescription medications, 3 percent use milk, and 30 percent did not specify a specific product. OTC use was also a common practice of the Synergy respondents. Tagamet was the medicine taken most frequently (36%) followed by Pepcid, Zantac, Tums and Mylanta. Over half (58%) of the respondents reported that they avoided pain relievers such as aspirin, Advil, Motrin, Nuprin or Aleve at least some of the time because of their ulcer, with 33% stating they avoided them all of the time.

Dietary changes made by respondents were reflected in the ORC telephone survey and in the Synergy self-administered survey. In the ORC study, 50 percent of respondents reported they had eliminated fried or fatty foods from their diet for any length of time. Those who had been treated for ulcers were far more likely than the rest (those who were self-treating with OTCs for dyspepsia or had been diagnosed with dyspepsia) to have made these changes in their diet. The ORC telephone survey also revealed that 74 percent of ulcer patients had eliminated fatty or fried foods from their diets, and 78 percent of ulcer patients had eliminated spicy foods from their diets for some amount of time. The majority (68%) of the Synergy survey respondents stated they have avoided food(s) or drink(s) at least some of the time because of their ulcer. We do not know if these individuals noticed a change in their condition that they could attribute to their actions, nor do we know specifically what motivated them to change.

Black respondents claimed they eliminated fatty or fried foods from their diet in greater number (57 percent) than other racial or ethnic groups (21 percent for other and 48 percent for Hispanic). In addition, higher rates of both blacks and Hispanics reported that they had eliminated spicy foods from their diets (56 percent and 54 percent, respectively) compared to 49 percent of other racial or ethnic groups. This behavioral finding, combined with the Healthstyles data that show that blacks are more likely to believe that eating spicy foods causes ulcers, suggests that messages targeted to minority populations should include information that combats the erroneous belief about the role of food.

Key data emerged from the Abbott research when interviewers asked respondents how long they had suffered from their condition before seeing a doctor, or how long it had been since the last time they had been or talked to their doctor about their condition. Findings suggest that many respondents have fatalistic views of their condition and they have the misconception that they are going to be taking OTC medications for the rest of their lives to relieve their pain. These data strongly reinforce other findings on low levels of understanding and awareness among persons with GI conditions about ulcers and *H. pylori*.

The Abbot survey asked two similar questions to respondents related to length of time the patient has suffered from his/her stomach condition, and length of time the patient has waited before talking to or seeing a doctor about the condition. The first question in this series, **"How long did you suffer from your condition before going to the doctor?"** showed that over half of the respondents had suffered for 6 months or less, while approximately one-fifth had suffered 2 or more years. When asked, "**When was the last time you went to your physician specifically about your stomach condition?"** only a third of sufferers had either discussed

their condition with their physician or were examined by their physician in the past year. The remaining two-thirds hadn't seen or talked to their doctor about their condition for more than a year and more than a third of these individuals waited 10 years or more.

Conclusions

General Public

- Regardless of demographic classification or Healthstyle, the vast majority of Americans hold a strong belief that stress is the primary cause of ulcers.
- The misconception that spicy foods cause ulcers is most common among blacks and persons in the younger age and lower income groups.
- Relatively small percentages of individuals know of the bacterial link to ulcers in general and to *H. pylori* specifically. Although the percentages are still somewhat low, the older age respondents are the most informed.
- The public seems most informed about the fact that OTC medications are not the most effective treatments for PUD.
- An educational video format such as the "Dr. Dan" video developed by ADHF has the potential to be highly credible with the public, but the data are sketchy in explaining why the format would be effective.

Persons with a GI Condition

- The average age of an ulcer sufferer is 47 years of age.

Eighty-one percent of ulcer sufferers have some type of health insurance, and 20 percent are receiving either Medicare or Medicaid coverage.

- Data consistently show that PUD prevalence is associated with low-income level, low-education level, and older age.

- Older PUD sufferers are more likely to have been diagnosed by a doctor than those in younger age groups. Seventy percent of respondents who have been diagnosed by a doctor are 35 or older.

- Data are conflicting as to whether PUD is more prevalent among men or women.

- Just like the general public, a large majority of individuals with GI problems believe that stress can cause ulcers.

- Black and Hispanics with GI problems are more likely than whites to believe that diet plays a role in causing ulcers.

- When asked in an open-ended format, virtually no PUD sufferers will identify a bacterial cause of their own condition.

- In general, individuals with GI problems express satisfaction with the quality of care they receive from their physicians for their stomach conditions.

- Both doctors and pharmacists are considered credible sources of medical information. Individuals with GI problems often feel more comfortable asking their pharmacists about treatments and prescriptions than they do asking their physicians.

- Printed information disseminated in physician offices is a desired source of health information.

- When presented with information about *H. pylori* and its treatment, individuals with PUD generally are very enthusiastic about the news.

- Concerns about the *H. pylori* antibiotic treatment include the need to ingest up to 20 pills per day for 2 weeks, the ability to keep track of their dosing schedule, the concern about cost, and the side effects of large doses. However, there is little evidence that apprehensions would prevent many people from seeking and complying with treatment if they had a choice between a short-term treatment and a lifetime of suffering.

- The approximately one-third of self-diagnosed PUD sufferers who have not talked to their doctors about their condition will likely be the most difficult to motivate to change. The reasons they cite for not consulting a physician include not viewing the condition as serious enough, concern about the cost, preference to self-treat, and distrust of doctors.

- OTCs are the most common treatment that PUD sufferers use for their ulcers.

- Having an ulcer motivates a large number of individuals to eliminate spicy foods from their diets. What we don't know is what factors motivate a change in their behavior. For example, is there a particular message format or message source that has persuaded them to change behavior?

- Data strongly suggest that a large number of PUD sufferers view their condition as chronic. Many will treat their ulcers for years without any regular consultation with their physicians.