FIRST-EVER GLOBAL SURVEY ON UNMET NEEDS IN ASTHMA TREATMENT 
REVEALS ISSUES THAT MAY AFFECT PATIENT OUTCOMES

Asthma Medication Side Effects and Physician-Patient Communication Gaps
Impact Patient Treatment Compliance

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[Milwaukee, WI; 6 December 2005] – Results from the first-ever global quantitative survey on unmet needs in asthma treatment, unveiled today in London, demonstrate significant discrepancies between physician and patient assessments of current asthma treatment on issues that may affect health outcomes, including medication side effects, patient education and physician-patient communication. The Global Asthma Physician and Patient (GAPP) Survey, a 16-country worldwide research study, was conducted to highlight the impact of asthma globally, a disease that is growing in prevalence by approximately 50 percent every decade.

“Ongoing physician-patient communication is essential in treating chronic conditions such as asthma, and the GAPP Survey reveals there is much room to improve this dialogue in every country we studied,” stated G. Walter Canonica, MD, University of Genova, Genova, Italy, for the World Allergy Organization. “One place to start is in the area of side effects, where results demonstrate significant disconnects between physicians and patients.”

A disparity exists between actual patient awareness of side effects and perceived patient awareness of side effects among physicians. Findings suggest that almost one-third (31%) of patients say they are “unaware” of the potential for long-term side effects associated with inhaled corticosteroid steroid (ICS) asthma treatments, while physicians believe patient awareness of side effects is much higher. Only three percent of physicians believe patients are “unaware” of the potential for short-term side effects, and seven percent for long-term side effects.

Experience with Side Effects Impacts Medication Compliance
Thirty-four percent of patients who have taken medication believe to have experienced short-term side effects, including oral thrush, pharyngitis or hoarseness from their asthma medications, and 19% believe to have experienced long-term side effects.

Patients who have experienced side effects frequently cite them as a reason for non-compliance with treatment; only 26% of patients report that they are compliant at least half the time. Patients who did not comply with their treatment regimens report a greater impact on their health and quality of life, including increased symptoms (69%) and more frequent asthma attacks or exacerbations (41%). Physicians significantly over-estimated how often their patients comply with treatment regimens.
“These findings reveal clearly defined unmet needs in the asthma treatment category,” said Dr. Carlos E. Baena-Cagnani, Catholic University of Córdoba, Córdoba, Argentina, for the World Allergy Organization. “Patients who did not take their asthma medication as instructed report that their asthma has a greater impact on their health and quality of life. Better patient education and new treatments may address some of the issues raised in this survey and, potentially improve patient outcomes.”

Inconsistent Reports on Amount of Time Spent Educating Patients
In each country surveyed, patients and physicians report dramatically different assessments of how much time is spent on education during office visits: 23% of patients globally estimated that no time during their office visits is spent discussing techniques for successful asthma management; yet, 87% of physicians estimated that up to one-half of their office visits with asthma patients is spent on the topic.

Another noteworthy finding is that up to one-half of patients report never discussing short- or long-term side effects with their physicians; however, an overwhelming number of physicians state they discuss side effects with their patients.

The GAPP Survey not only defines a clear unmet need in asthma treatment, but also reveals that there is direct relationship between physician-patient communication and treatment compliance. Patients who report having more discussions with their physicians about techniques for successful asthma management report greater compliance with treatment regimens.

Patients and Physicians Agree There is a Need for an Improved Asthma Medication
Although patient and physician assessments of asthma management differ, they do agree that currently available asthma treatments are less than ideal. While physicians overwhelmingly (95%) believe ICS are the “gold standard” for asthma treatment, they report being least satisfied with “side effects” of currently available ICS.

Physicians would likely (85%) prescribe a new ICS if it included an improved safety and tolerability profile. In particular, a new ICS with comparable efficacy and an improved tolerability profile is widely supported by a variety of patient subgroups, for whom asthma has had a particularly acute effect on their lives.

About the GAPP Survey Advisory Board
The GAPP Survey Advisory Board is comprised of the following professional organizations and patient advocacy groups:

- **World Allergy Organization**
  The World Allergy Organization (WAO) is an international umbrella organization whose members consist of 80 regional and national allergology, asthma, and clinical immunology societies from around the world. By collaborating with member societies, WAO provides direct educational outreach programs, symposia and lectureships to members in 92 countries. The organization was founded in 1951 and has successfully organized 18 major congresses.

- **American College of Allergy, Asthma & Immunology**
  The American College of Allergy, Asthma & Immunology (ACAAI) organization is a U.S. professional association of 4,900 allergists/immunologists established in 1942. ACAAI is dedicated to improving the quality of patient care in allergy and immunology through research, advocacy and professional and public education.
• **Allergy Asthma Network/Mothers of Asthmatics**
  The Allergy Asthma Network/Mothers of Asthmatics (AANMA) organization was founded in 1985. AANMA is a U.S. non-profit network of families who strive to overcome, not cope with, allergies and asthma.

**The GAPP Survey Working Group**
- Michael S. Blaiss, University of Tennessee Health Science Center, Memphis, TN, USA, for the American College of Allergy, Asthma & Immunology
- Carlos E. Baena-Cagnani, Catholic University of Córdoba, Córdoba, Argentina, for the World Allergy Organization
- G. Walter Canonica, University of Genova DIMI, Genova, Italy, for the World Allergy Organization
- Ronald Dahl, Aarhus University Hospital, Department of Respiratory Diseases, Aarhus, Denmark, for the World Allergy Organization
- Michael A. Kaliner, Institute for Asthma & Allergy, Chevy Chase, MD, USA, for the World Allergy Organization
- Nancy Sander, The Allergy and Asthma Network Mothers of Asthmatics, Fairfax, VA, USA
- Erkka J. Valovirta, Turku Allergy Center, Turku, Finland, for the World Allergy Organization

**Study Design/Methodology**

Harris Interactive® conducted the survey on behalf of the GAPP Survey Advisory Board via online, telephone and face-to-face interviews between May 18 and August 24, 2005. A total of 3,459 interviews were conducted (1,726 adults age 18+ who have been diagnosed with asthma and 1,733 generalist or specialist physicians who treat adults) in 16 countries: Australia, Belgium, Brazil, Canada, France, Germany, Ireland, Italy, Japan, The Netherlands, Poland, South Africa, Spain, Switzerland, the UK and the U.S. Sample sizes for each country were about 100 each for patients and physicians, except in the U.S., where the sample sizes were about 200 for each group.

Physicians had to meet the following criteria: currently practicing medicine for 3-30 years, sees at least three adult asthma patients per week, writes at least one prescription for asthma medications per week. Generalists include family practitioners, general practitioners, internal medicine practitioners, and specialists include allergists, pulmonologists and respirologists.

The U.S. data were the only data weighted. Physician data were weighted by physician specialty, gender and years in practice to reflect the characteristics of physicians in the master file of physicians in the American Medical Association. Patient data were weighted by gender, education, age, household, income and region to reflect the characteristics of adult asthma patients from the National Health Interview. Data from the other countries surveyed were not weighted.

The GAPP Survey was underwritten by a grant from ALTANA Pharmaceuticals.

**About Asthma**
Asthma is a chronic lung disease caused by airway inflammation and results in airway obstruction in response to certain stimuli. Allergy is responsible for more than 50 percent of asthma in adults. Atopic individuals - those who have a personal or familial tendency to become sensitized and produce IgE antibodies to allergens - frequently experience more than one allergic disease, and allergic rhinitis, allergic conjunctivitis and atopic eczema frequently co-exist with allergic asthma. It is characterized by a variety of symptoms including wheezing, coughing and a tightening of the airways, which causes shortness of breath and can be life-threatening. According to the Global Initiative for Asthma (GINA), more than 300 million people worldwide have asthma. Worldwide deaths from asthma total more than 180,000 annually.

**About Harris Interactive®**
Harris Interactive Inc. (www.harrisinteractive.com), based in Rochester, New York, is the 13th largest and the fastest-growing market research firm in the world, most widely known for The Harris Poll® and for its pioneering leadership in the online market research industry. Long
recognized by its clients for delivering insights that enable confident business decisions, the Company blends the science of innovative research with the art of strategic consulting to deliver knowledge that leads to measurable and enduring value.

Harris Interactive serves clients worldwide through its United States, Europe (www.harrisinteractive.com/europe) and Asia offices, its wholly-owned subsidiary Novatris in Paris, France (www.novatris.com), and through an independent global network of affiliate market research companies.

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