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➲ Publish articles on issues, practices, research theories, solutions to problems, ethics, and opportunities related to effective medical communication

➲ Enhance theoretical knowledge as well as applied skills of medical communicators in the health sciences, government, and industry

➲ Address the membership’s professional development needs by publishing the research results of educators and trainers of communications skills and by disseminating information about relevant technologies and their applications

➲ Inform members of important biomedical topics, ethical issues, emerging professional trends, and career opportunities

➲ Report news about AMWA activities and the professional accomplishments of its departments, sections, chapters, and members

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The Eisai Medical Communications (Information) department in the United States was receiving an increasing number of requests from colleagues at other Eisai companies around the world for copies of literature. Eisai (US) had a domestic license agreement with the Copyright Clearance Center (CCC), a service organization based in the United States that coordinates rights and permissions and the payment of royalties for almost 10,000 publications. According to this license agreement, Eisai staff members were able to share research and product-related literature files only with some colleagues in other locations in the United States. They were not able to send a copy of any of these files to Eisai in the United Kingdom or Japan and remain in compliance with international agreements for protection of intellectual property. Because Eisai companies in other parts of the world were not permitted to have access to these data, distribution and royalty fees for the same journal articles and conference abstracts were being paid at each Eisai location globally. More importantly, information silos (single databases) were created instead of networked shared literature. These silos resulted in isolated pockets of published information and company proprietary files that were not cataloged or indexed, even though material might directly support the same globally marketed products. Common questions from customers in Germany might not receive the same answer as that given to an American customer.

As its literature collections continued to grow, the department was faced with the challenge of finding a way to overcome this barrier to sharing information and find a way to support the company's products and customers. With the goal of becoming a fully globalized organization, members of the department were determined to find a way to share and disseminate literature resources among the company's international sites and grow its knowledge base worldwide.

Through research, the department discovered that there was indeed a way to share literature globally. Eisai (US) needed to obtain multinational license (MNL) agreements with the CCC that would extend the coverage of its annual copyright license to employees located outside the United States. These MNL agreements would allow Eisai to share knowledge, pool literature resources, and break down the information silos that had been created throughout the world in separate literature databases. Global database sharing would also encourage and

A Case Study at Eisai Inc.*

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*Based on a poster presented at the 2006 AMWA Annual Conference, October 26-28, 2006, Albuquerque, NM.
promote learning and communication about the company's products and its competitors' products.

To start the process, a representative from the Medical Communications department in the United States formed a working group with a representative from the legal department and the company's research librarian. The team worked with colleagues in the United States, the United Kingdom, and Japan, as well as with a CCC representative to ensure that the lines of communication were open and that all questions were answered. The CCC agreed that the holding company in the United States (Eisai Corporation of North America) would serve as the corporate headquarters for the purpose of obtaining global copyright licenses. The fees for the MNL agreements were based on the number of full-time research employees in each country. The cost of the MNL agreements was to be shared among the global affiliates.

Eisai Corporation of North America signed 2 new MNL agreements with the CCC in November 2005. Because digital coverage is not available as a stand-alone without photocopy coverage, Eisai has both the multinational photocopy license and the multinational digital amendment, which allows for the sharing of literature globally among all affiliates. By being allowed to share literature globally, the Medical Communications department at Eisai in the United States realized a cost savings of almost $2,000 when comparing document delivery expenditure for the first quarter of 2006 and the first quarter of 2006 (Figure 1). Also as a result, 80 fewer pieces of literature were ordered through document delivery vendors (see Figure 2). Similar monthly savings and staff time savings are expected to continue.

Eisai is one of several pharmaceutical companies to obtain global copyright coverage through CCC's MNL agreements. The MNL agreements are key components for greatly expanded information-sharing throughout Eisai. The Medical Communications department in the United States has created an intranet resource library that allows affiliates in the United States real-time access to all literature files. This link will help to encourage and promote learning about Eisai's products, competitive marketing environments, and important information needed by internal and external customers.

Eisai employees worldwide can lawfully reuse content in a variety of ways, including collaboration on projects, by sending industry news and scientific articles by e-mail to coworkers and distributing journal articles and abstracts at internal meetings. The license agreements also permit the posting of industry research on corporate intranet sites, printing and photocopying of journal articles to share with colleagues, and electronic downloading of content that can be used in company presentations. Employees must always check the CCC database at www.copyright.com to verify title and permission coverage of each journal article they want to share. Checking the CCC database is a primary requirement of the MNL agreements.

The one notable exception to the information-sharing rights under the MNL agreements is that the Eisai sales force is excluded from direct access to the publications, both in terms of the new licensing agreements with the CCC and as required under the guidance of US and international regulatory agencies with regard to the promotion of marketed products. Eisai sales representatives must contact the Medical Communications department with any questions about literature that they are not allowed to distribute to health care professionals.

By accomplishing this significant task of instituting MNL agreements, Eisai now has the opportunity to break down the literature silos that have been created throughout Eisai globally and pool its literature to directly benefit customers. The new MNL agreements also further support Eisai's commitment to intellectual property compliance. In this digital world, where the distance between parties is minimized, these contracts provide for the unification of and improved communication among all of Eisai globally by enabling the sharing of copyright-protected works. Allowing for the added benefits for cost savings in the way of labor costs and literature savings, the MNL agreements proved to be a valuable resource in many respects.
This article is the second article providing an overview of human anatomy and physiology, to be used as a starting point to develop a writer’s knowledge of the field of medical science. Part 1 covered anatomical direction and basic design, levels of organization, and the integumentary, skeletal, muscular, and nervous systems. Described here are the general and special senses and circulatory, hematopoietic, lymphatic, respiratory, urinary, endocrine, and reproductive systems. Underlined words are defined in the glossary. We suggest referring to the first article for words and terms that may not be defined in this article.

**General and Special Senses**

As described in Part 1, the nervous system comprises the brain, spinal cord, nerves, and specialized sensory organs (e.g., eyes). The primary functions of the nervous system include the sensation of internal and external environments, integration of sensory input, coordination of motor output, and regulation or control of peripheral systems.

**General Senses**

Receptors for the general senses are scattered throughout the body as receptors for pain, cold, heat, touch, etc. Receptors may be categorized as exterceptors, proprioceptors, or interceptors. A more detailed breakdown includes nociceptors, chemoreceptors, thermoreceptors, mechanoreceptors, and photoreceptors (Table 1). The receptor may be a free nerve ending, an encapsulated nerve ending, an accessory cell, or a modified neuron. Differences in membrane structure account for the differences in receptor sensitivity, and each receptor responds best to certain stimuli and not to others.

**Special Senses**

The special senses are located in relatively small and specialized areas, such as the eyes, inner ears, and tongue.

**The Eye**

The eye has 3 layers: a fibrous tunic, a vascular tunic, and a neural tunic (Figure 1). The fibrous tunic comprises the 

<table>
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<th>Table 1. Types of Receptors for General Senses</th>
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<td><strong>Type</strong></td>
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<td>Nociceptors</td>
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<td>Chemoreceptors</td>
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<td>Thermoreceptors</td>
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<td>Mechanoreceptors</td>
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CNS = central nervous system

The authors are the leaders of the AMWA workshop, "Basics of Human Anatomy and Physiology," which is offered at this year’s annual conference.
The eye consists of 3 tunics (coats). The fibrous tunic comprises the sclera (white overcoat) and cornea (transparent). The vascular tunic comprises the iris (colored part of eye), pupil, and choroid. The neural tunic contains the retina, which contains the rods (receptors for movement and shades of grey) and cones (color vision receptors). The lens focuses light on the retina of the eye in front of the lens and contains the aqueous humor, cornea, iris, ciliary body, and lens. The posterior chamber is the two-thirds of the eye behind the lens and contains the vitreous humor, retina, choroid, and optic nerve. The retina is composed of rods (photoreceptors for movement and shades of grey) and cones (photoreceptors for color). The impulses triggered by the rods and the cones are sent by the optic nerve to the visual interpretation part of the brain. The visual image arrives at the retina upside down, and the brain adjusts to this positioning without our conscious knowledge of the adjustments.

Sight occurs when light enters through the cornea and pupil which can contract and relax like a camera shutter, allowing in more or less light as needed for clear focusing of an image on the retina. Next, the lens focuses the image onto the retina; the lens is attached to the ciliary body by a ring of suspensory ligaments and the ciliary muscle. Distant objects do not require a change in shape of the lens, but close objects require the ciliary muscle to contract, pull on suspensory ligaments, and change the shape of the lens. (This muscle action is part of the reason reading text is more tiring to the eyes than gazing out a window for the same length of time.) As humans age, the lens becomes less flexible, leading to presbyopia. (See sidebar, “Common Refraction Errors.”)

The Ear

The ear is responsible for the senses of hearing and equilibrium (Figure 2). The external ear consists of the pinna and the external acoustic meatus, which ends at the tympanic membrane (eardrum). The middle ear has 3 auditory ossicles or ear bones: malleus (hammer), incus (anvil), and stapes (stirrup). The ossicles are attached to the tympanic membrane and the oval window of the inner ear. The eustachian tube opens into the middle ear and serves to equalize all pressure on both sides of the tympanic membrane. The inner ear has the cochlea (which contains the actual organ of hearing, the organ of Corti), the vestibule (which contains the organs of equilibrium housed in 2 chambers, the saccule and the utricle), and the semicircular canals.

Hearing occurs when sound travels through the air in a series of pressure waves, which are funneled through the external and middle ear, and reach the tympanic membrane. The membrane vibrates the auditory ossicles that amplify the degree of motion and convey the movement of the tympanic membrane to the oval window. The vibrations of the oval window are transported through the fluid of the inner ear and distort hair cells of the cochlea by pushing them against the tectorial membrane of the cochlear duct. Sensory neurons on this membrane pick up the vibrations of the organ of Corti. The neural impulses can then be processed into sound by the brain.

**COMMON REFRACTION ERRORS**

Vision occurs when light focuses on the retina. Good clear vision requires a good clear refraction through the cornea, lens, and humors. For several reasons, refraction may not be clear, leading to the following:

- **Presbyopia**: the inability to focus on nearby objects due to inflexible lens
- **Myopia**: the inability to focus on distant objects due to long length of eyeball
- **Hyperopia**: the inability to focus on nearby objects due to short length of eyeball
- **Astigmatism**: blurry vision due to irregularities in the cornea, lens, or both

These categories are general and many other factors, including disease, age, and genetics, can be involved.

**Figure 1.** The eye consists of 3 tunics (coats). The fibrous tunic comprises the sclera (white overcoat) and cornea (transparent). The vascular tunic comprises the iris (colored part of eye), pupil, and choroid. The neural tunic contains the retina, which contains the rods (receptors for movement and shades of grey) and cones (color vision receptors). The lens focuses light on the retina.

**Figure 2.** The external ear comprises the pinna (ear flap) and auditory canal. The middle ear has the 3 auditory bones (malleus [hammer], incus [anvil], and stapes [stirrup]) and ends at the tympanic membrane (eardrum). The eustachian tube opens into the middle ear and serves to equalize pressure on both sides of the tympanic membrane. The internal ear contains the organ of Corti (the actual organ of hearing) and the sense organs of equilibrium.
and pass them along the cochlear branch of the acoustic nerve to the brain, which interprets the vibrations as voices, noise, or music.

The 3 semicircular canals are housed in the inner ear but are not involved in the sense of hearing; they are responsible for sensing and maintaining equilibrium and are arranged in such a way as to respond to movement in a single plane. Fluid within the inner ear distorts hair cells that pick up messages about gravity, acceleration, or position in space and pass them along the vestibular branch of the acoustic nerve to the brain for interpretation.

The Nose
The nose is part of both the respiratory system and the olfactory system. In its role of the special sense of smell, the nose has olfactory receptors that lie in the olfactory mucosa of the nasal cavity. Olfactory receptors are chemoreceptors and are very sensitive, but they become fatigued very easily. The receptors are almost "hidden" in the nasal cavity, removed from the general inflow of air during breathing. Hence, humans do not have as good a sense of smell as many other animals have. To get a good "whiff" of a smell, we usually deeply inhale or sniff repeatedly. (See sidebar, "Why Smell?") The sense of smell occurs when molecules strike the olfactory cilia of the olfactory cells in the nose. The olfactory cells are embedded in the mucous membrane lining of the nasal cavity and respond to the presence of chemical particles dissolved in the mucus. The subsequent impulse is passed along the olfactory nerve to the brain for interpretation.

Gustation
Taste is the sense that occurs in response to the contact of dissolved material with specialized nerve receptors. Impulses are sent along cranial nerves VII, IX, and X to the brain for interpretation. The receptors for taste are the taste buds, found mainly on the tongue but also scattered in the pharynx and larynx. Each taste bud contains gustatory cells with sensory microvilli (taste hairs). Much of the sensation of taste is due to the central integration in the brain of both gustatory and olfactory information. The 5 taste sensations are sweet, sour, salt, bitter, and umami. Some tastes, such as chocolate, are a combination of these 5, plus smell.

Circulatory System
The heart is the pump that keeps blood circulating throughout the body (Figure 3), carrying oxygen and nutrients to tissues and removing waste products. It is a triangular, muscular organ the size and shape of a closed fist. The heart has 4 chambers: 2 superior atria and 2 inferior ventricles. The atria are thin-walled and receive blood, whereas the ventricles are thick-walled and muscular because they must pump blood to all parts of the body. The bulk of the heart consists of contractile myocardium. The endocardium lines the internal chambers and the epicardium covers the external surface. A fibrous skeleton provides strength, elasticity, and support for the contractile myocardial cells and valves of the heart. The pericardium is a 2-layered fibrous sac with lubrication between the 2 layers; the heart is contained within the pericardium.

Figure 3. The heart muscle is divided into 2 upper chambers called the left and right atria and 2 lower chambers called the left and right ventricle. Venous blood enters the right atrium by way of the vena cavae and flows to the right ventricle and then through the pulmonary arteries to the lungs, where it is oxygenated. The oxygenated blood enters the left atrium and flows to the left ventricle, from which it enters the aorta and is pumped to the body.

Four valves keep blood flowing in the correct direction through the heart and prevent back flow. The tricuspid valve lies between the right atrium and right ventricle, and the mitral (bicuspid) valve lies between the left atrium and left ventricle. The pulmonary semilunar valves are at the beginning of the pulmonary artery, and the aortic semilunar valves are found at the beginning of the aorta. The closing of the valves produces the characteristic heartbeat sound. Every heartbeat has 2 distinct heart sounds. The first sound ("lup") is caused by vibration and closing of the tricuspid and mitral valves during contraction of the heart. The second sound ("dup") is caused by the closing of the semilunar valves when the heart muscle relaxes.

The heart acts as 2 separate pumps, the right pump and the left pump, separated by a thick septum of fibrous material. In an adult, systemic blood circulates in the following sequence:

- Into the right atrium through the superior and inferior vena cavae

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**WHY SMELL?**

Smell is not a sense that is only concerned with esoteric things such as flowers and perfume. People without the sense of smell are unable to note changes in the environment, which include smoke, toxic chemicals, fire, or food gone rancid. Smell does have a survival component.

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• Through the tricuspid valve to the right ventricle
• From the right ventricle through the pulmonary semilunar valve to the pulmonary artery to the lungs
• From the lungs to the left atrium and through the bicuspid valve to the left ventricle
• From the left ventricle through the aortic semilunar valve into the aorta and out to the body

The heart pump maintains its rhythmic beat through specialized masses of cardiac tissue. The sinoatrial (SA) node, the pacemaker for the heart, is located in the wall of the right atrium near the opening of the superior vena cava. Another node, the atrioventricular (AV) node, is located in the right atrium along the lower part of the interatrial septum. The AV bundle, also called the bundle of His, is located in the septum of the heart, and Purkinje fibers are located in the walls of the ventricles. The sinoatrial node depolarizes first, and from here the impulse travels to the AV node, through the bundle of His, the bundle branches, and the Purkinje fibers before stimulating the myocardial cells of the ventricles and resulting in the contraction of the heart.

Blood is transported throughout the body by a series of closed vessels—an estimated 62,000 miles of them. The arteries are thick-walled and elastic and transport the blood away from the heart under high pressure. Veins are thin-walled and transport blood to the heart under low pressure. Because pressure is low in veins, they have valves to ensure that blood continues to move only forward toward the heart. Capillaries connect arteries and veins; gas and nutrient exchange occurs in capillaries. Capillaries are so small that red blood cells must line up single file to move through; this single-file flow of red blood cells through capillaries facilitates exchange through the process of diffusion and osmosis.

**Hematopoietic System**

Blood transports dissolved gases, nutrients, waste products, enzymes, and hormones; regulates the pH and electrolyte concentration of body fluids; restricts fluid losses; defends against pathogens and toxins; and regulates body temperature. Blood is a type of connective tissue with a variety of cells (erythrocytes, leukocytes, and thrombocytes) widely spaced from one another and an intercellular matrix that includes several important proteins. Plasma accounts for 55% of the volume of whole blood and is approximately 92% water; the remaining 8% consists of electrolytes and dissolved organic compounds of various kinds. Plasma resembles interstitial fluid except for its relatively high concentration of dissolved proteins, including albumins, globulins, and fibrinogen. Albumin, the most abundant plasma protein, contributes to the osmotic pressure of the blood and provides a transport mechanism for insoluble materials in the blood. Globular proteins bind and transport hormones, lipoproteins, and metalloproteins. The immunoglobulins (antibodies) are proteins that attack antigens. Under the proper stimulation, fibrinogen molecules aggregate to form large insoluble strands of fibrin that establish the basis for a blood clot. The removal of fibrinogen from plasma leaves a fluid called serum.

Two kinds of connective tissue, myeloid tissue and lymphoid tissue, make blood cells for the body. In adults, myeloid tissue, the red bone marrow, is located chiefly in the sternum, ribs, and hip bones, although some other bones (eg, vertebrae, clavicles, cranial bones) also contain a small amount of red marrow. The myeloid tissue produces all types of blood cells except some lymphocytes and monocytes. Lymphoid tissue is found chiefly in the lymph nodes and produces lymphocytes and monocytes.

**Hematopoiesis** is the formation of blood cells. During hematopoiesis, early stem cells with the potential for renewal, proliferation, and differentiation give rise to large numbers of mature cells through a series of intermediate cells influenced by specific hematopoietic growth factors. Approximately 20 hematopoietic growth factors have been identified. They are active in extremely low concentrations and usually act at several points throughout hematopoiesis, facilitating a stem cell's change to a mature functional cell.

Blood types are identified by the presence of certain antigens in the red blood cells. Every person's blood belongs to 1 of 4 types (A, B, O, or AB) (“A” stands for the A antigen on the red blood cell membrane, etc.). A person with type A blood (about 41% of white Americans are classified as such) has plasma with anti-B antibodies. If a person with type A blood is given type B blood in a transfusion, the donor's red cells will become agglutinated by the recipient's antibodies, and this can lead to harmful effects or even death. Type O blood, without A or B antigens, is often called universal donor blood because it can be used as donor blood without the danger of anti-A or anti-B antibodies clumping its red blood cells. Universal recipient blood is type AB because it contains neither anti-A nor anti-B antibodies in its plasma. Therefore, it cannot clump any donor's red blood cells containing A or B antigens.

**Lymphatic System**

The lymphatic system is 1 component of the immune system, and it defends the body and maintains tissue homeostasis. The lymphatic system includes a network of lymphatic vessels that carry lymph, a fluid similar in composition to interstitial fluid. The lymphatic system returns interstitial fluid to the general circulation, prevents local variations in the composition of tissue fluids, and provides specialized defenses against infection. Lymphocytes are the cells of the lymphatic system and comprise 3 distinct populations: T cells, B cells, and natural killer cells. T cells attack invading, infected, or abnormal cells and are responsible for cellular immunity. B cells are concerned with the production of antibodies, and they provide what is known as humoral immunity. Natural killer cells detect the presence of abnormal antigens on cell membranes; they are responsible for immunological surveillance and the removal of cancer cells from normal tissues.
A lymphatic nodule consists of a dense aggregation of lymphocytes in an area of loose connective tissue, usually beneath an epithelium. The pharyngeal (adenoid), palatine, and lingual tonsils are large lymphatic nodules embedded in the walls of the pharynx, and Peyer’s patches are lymphatic nodules beneath the epithelium of the small intestine. Large lymphatic nodules are also found beneath the epithelium of the appendix and large intestine.

Lymphatic organs have a clear internal organization, and they are surrounded by a dense fibrous capsule. Lymphatic organs include the thymus, lymph nodes, and the spleen. The thymus lies within the mediastinum behind the sternum. It reaches its maximal size during puberty and slowly decreases in size thereafter. Epithelial cells scattered among the lymphocytes produce the hormone thymosin, which stimulates the division of stem cells in the thymus. Lymph nodes are encapsulated masses of T cells and B cells, with blood vessels, nerves, and lymphatics. Lymph arrives at a lymph node through lymphatics: the lymph flows through a network of spaces in the node where lymphocytes and macrophages monitor the contents of the lymph as it proceeds toward the lymphatic ducts and the venous system.

The spleen is another organ of the lymphatic system and contains the largest mass of lymphatic tissue in the body. It is located in the upper part of the abdominal cavity, and its shape is primarily determined by its relationship with adjacent structures. The cellular components of the spleen comprise the pulp of the spleen: red pulp contains large numbers of red blood cells, whereas white pulp resembles lymphatic nodules.

**Respiratory System**

Of all the substances that cells must have to survive, oxygen is the most crucial. A person can live only a few minutes without oxygen. Of equal importance is the removal of carbon dioxide from the body; too much carbon dioxide in the blood alters the pH of interstitial fluid and blood and leads to cell death. The organs of the respiratory system are designed for air distribution and gas exchange (Figure 4). Other functions of the respiratory system are to filter, warm, and humidify the air before it reaches the lungs. Respiratory organs are closely associated with speech or sound production and olfaction.

Air enters through the external nostrils (nares) and then flows into the 2 nasal cavities, separated by the nasal septum. In the nasal cavities, air is filtered, warmed, and humidified. The pharynx is divided into 3 parts: nasopharynx, oropharynx, and laryngopharynx. The pharynx is a pathway for the digestive system as well. The larynx is inferior to the pharynx and is composed of several pieces of cartilage, the largest being the thyroid cartilage or Adam’s apple. Short fibrous bands, the vocal cords, stretch across the interior of the larynx. As air passes over these bands, sound is produced. Another cartilage, the epiglottis, partially covers the opening into the larynx. The epiglottis closes off the larynx during swallowing and prevents food from entering the trachea or windpipe.

Because the trachea serves to channel air into the lungs, it is vital that this passageway stay open. The structures of the trachea—15 to 20 rings of c-shaped cartilage—prevent the trachea from collapsing. One way to picture the tubes that make up the lungs is to think of an upside down tree. The trachea is the main trunk of the tree, and the right and left bronchi (primary bronchi) enter the right and left lungs, respectively. In each lung, the primary bronchi branch into secondary bronchi and then into bronchioles. The smallest bronchioles end in the alveoli.

The lungs are rather large organs: their apices are under the collarbone and their bases are on the diaphragm. The outer layer of the lung—the pleura—is a serosal membrane that also covers the inner surface of the rib cage. The lungs are contained in a closed cavity, which is important for the process of breathing.

Breathing involves the organs of the respiratory system, as well as the brain, spinal cord, nerves, some skeletal muscles, and even some bones. Breathing is mechanical and relies on the law of nature that air moves from an area of higher pressure to an area of lower pressure. Nerve impulses from the brain stem stimulate the diaphragm to contract and flatten and the ribs to move up, which makes the pleural cavity and its attached lungs bigger. The air pressure inside the lungs is less than the air pressure outside the lungs, allowing air to rush in. Air pressure then becomes greater inside the pleural cavity than outside in the atmosphere. The muscles of the diaphragm and ribs relax, which
Digestive System

The digestive system includes the elongate digestive tract and the associated accessory organs. The functions of the digestive system include ingestion, mechanical processing, secretion, digestion, absorption, compaction, and defecation. The organs of the digestive system form an irregularly shaped tube that is open at both ends (mouth and anus). This tube is the alimentary canal or gastrointestinal (GI) tract. Material (ie, food) in the tube is not “inside” the body. Foodstuffs must be broken down (digested) and then absorbed through the walls of the GI tract before they can actually be metabolized and used by cells. Digestion is both mechanical and chemical.

The main organs of the digestive system are the mouth, pharynx, esophagus, stomach, small intestine (with duodenum, jejunum, and ileum), and large intestine (with cecum, colon [ascending, transverse, descending, and sigmoid], rectum, and anal canal). Accessory organs include teeth, tongue, salivary glands (parotid, submandibular, and sublingual), liver, gallbladder, pancreas, and vermiform appendix.

Although the digestive tract is described as a “tube,” it has 4 layers of tissues (from the lumen to the outer layer): mucosa, submucosa, muscularis, and adventitia or serosa. The same 4 coats form the various organs of the GI tract, but their structures vary in different organs, depending on the function of the organ. For example, the stomach has a thicker muscularis to aid in digestion.

Digestion begins in the mouth, which performs mechanical processing, lubrication, and initiation of digestion by salivary enzymes. The pharynx is a muscular tube that is part of both the digestive and respiratory systems. Food passes from the pharynx into the esophagus, another muscular tube that is simply a passageway to the stomach with no digestive functions. The stomach is an expanded part of the digestive tube, no larger than a small sausage when empty. Contractions of the stomach's muscular walls mix food with hydrochloric acid and gastric enzymes, breaking the food material down into smaller molecules. After food has been in the stomach for about 3 hours, it passes through to the small intestine. The small intestine, almost 20 feet long, contains thousands of microscopic glands (intestinal glands) that secrete intestinal enzymes, which complete the digestion or breakdown of the food material (Table 2). The lining of the small intestine is folded into multiple pleats called plicae, which are covered with thousands of villi. This modification enormously increases the area available for absorption of digested nutrients to an estimated 100 square feet. Undigested and unabsorbed food material enters into the large intestine, where water and salts are resorbed during the formation of feces. Feces contain not only undigested and unabsorbed food but also discarded cells from the lining of the digestive tract and bacteria. The bacteria live in the large intestine and can digest materials that escape digestion in the small intestine. Additional nutrients may be released by this breakdown, and the bacteria synthesize vitamin K needed by the body.

Although not part of the digestive tube, the liver, gallbladder, and pancreas play important roles in digestion. The liver is the largest gland in the body and its most important biochemical-processing organ. The liver produces bile, an emulsifying agent (not an enzyme) that is stored in the gallbladder. Additionally, the liver plays a major role in maintaining normal blood glucose concentration, carrying out the first steps of protein and fat metabolism and synthesizing several proteins, including prothrombin and fibrinogen needed for blood clotting. Liver cells detoxify various poisonous substances and store several substances, primarily iron and vitamins A, B2, and D.

The pancreas has exocrine and endocrine functions. Pancreatic juice, the exocrine gland product and one of the most important digestive juices, contains enzymes that digest proteins, carbohydrates, and lipids. It also contains sodium bicarbonate, an alkaline substance that neutralizes the hydrochloric acid from the stomach.
### Urinary System

The integument, respiratory system, and digestive system assist the urinary system in excreting wastes and regulating the water and electrolyte composition of body fluids, but the urinary system has the dominant role in this process through its influence on the composition of the circulating blood. The urinary system, which includes the kidneys, ureters, urinary bladder, and urethra, preserves homeostasis by adjusting the composition of the circulating blood by conserving water, excreting metabolic wastes, reabsorbing useful compounds, and regulating the pH and electrolyte profile.

The kidneys are located just above the waistline, with the right one generally a little lower than the left, due to the size and position of the liver. The kidneys are attached under the muscles of the back. A heavy cushion of fat surrounds each kidney and helps hold it in place.

The nephron is the basic functional unit of the kidney and is composed of the glomerulus and renal tubule that empty into a collecting tubule, a small tributary of a collecting duct. Other important structures include the proximal and distal convoluted tubules and the loop of Henle. The proximal convoluted tubule actively reabsorbs nutrients, plasma proteins, and electrolytes from the filtrate. The loop of Henle includes descending and ascending limbs; the ascending limb delivers the urine to the distal convoluted tubule. The distal convoluted tubule opens into a collecting tubule that joins its neighbors to form a collecting duct.

The kidneys form urine by 3 processes that occur in successive parts of the nephron. (See sidebar, “Countercurrent Multiplier System.”) The first step is filtration. Filtration is a continuous process in the glomerulus, a network of blood capillaries in Bowman’s capsule (a cup-shaped top of the nephron). Glomerular blood pressure causes water and dissolved substances to filter out of the glomeruli into Bowman’s capsule. The second step is resorption, the movement of substances from the renal tubules into blood peritubular capillaries. Substances that are reabsorbed include water, nutrients, and various ions. The third and final step is secretion, or the movement of substances into the urine in the distal and collecting tubules from blood in the peritubular capillaries. Hydrogen ions, potassium ions, and certain drugs are secreted by active transport, while ammonia is secreted by diffusion.

The ureters are narrow, long tubes with expanded upper ends that are located inside each kidney. The function of the ureters is to drain urine from the renal pelvis to the urinary bladder. The urinary bladder is an elastic muscular organ that is capable of great expansion and stores urine before voiding. The urethra, a narrow, short tube that extends from the urinary bladder to the exterior, serves as a passageway for urine to leave the bladder and also as a passageway by which sperm and semen leave the body of men.

### Table 3. Summary of Endocrine Glands

<table>
<thead>
<tr>
<th>Gland</th>
<th>Hormone (abbreviation)</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pituitary (anterior)</td>
<td>Growth hormone</td>
<td>Stimulates general body growth</td>
</tr>
<tr>
<td></td>
<td>Thyroid-stimulating hormone (TSH)</td>
<td>Stimulates thyroid to increase secretion of thyroid hormone</td>
</tr>
<tr>
<td></td>
<td>Adrenocorticotropic hormone (ACTH)</td>
<td>Stimulates adrenal cortex to increase in size and to secrete more of its hormone</td>
</tr>
<tr>
<td></td>
<td>Follicle-stimulating hormone (FSH)</td>
<td>Stimulates production of ova and sperm</td>
</tr>
<tr>
<td></td>
<td>Luteinizing hormone (LH)</td>
<td>Stimulates ovulation, causes ovulation, promotes testes to secrete testosterone</td>
</tr>
<tr>
<td></td>
<td>Melanocyte-stimulating hormone (MSH)</td>
<td>Causes rapid increase in synthesis and dispersion of melanin</td>
</tr>
<tr>
<td></td>
<td>Prolactin (PRL)</td>
<td>Stimulates breast development and milk secretion postnatally</td>
</tr>
<tr>
<td>Pituitary (posterior)</td>
<td>Antidiuretic hormone (ADH)</td>
<td>Accelerates resorption of water from urine in kidney tubules</td>
</tr>
<tr>
<td></td>
<td>Oxytocin (OCT)</td>
<td>Stimulates uterine contraction and causes release of breast milk</td>
</tr>
<tr>
<td>Thyroid</td>
<td>Thyroxine (T₄)</td>
<td>Stimulates cellular metabolism</td>
</tr>
<tr>
<td></td>
<td>Triiodothyronine (T₃)</td>
<td>Stimulates cellular metabolism</td>
</tr>
<tr>
<td></td>
<td>Calcitonin (CT)</td>
<td>Decreases calcium concentration of blood</td>
</tr>
<tr>
<td>Parathyroid</td>
<td>Parathyroid hormone (PTH)</td>
<td>Increases calcium concentration of blood</td>
</tr>
<tr>
<td>Adrenal</td>
<td>Mineralocorticoid (MC)</td>
<td>Controls minerals in blood</td>
</tr>
<tr>
<td></td>
<td>(ie, aldosterone)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Glucocorticoid (GC)</td>
<td>Helps maintain normal blood glucose concentration</td>
</tr>
<tr>
<td></td>
<td>(ie, hydrocortisone)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sex hormones</td>
<td>Responsible for secondary sexual characteristics</td>
</tr>
<tr>
<td></td>
<td>Epinephrine/norepinephrine</td>
<td>Stimulates general adaptation syndrome</td>
</tr>
<tr>
<td>Pancreas (islets of Langerhans)</td>
<td>Glucagon</td>
<td>Accelerates change of glycogen to glucose and increases blood glucose level</td>
</tr>
<tr>
<td></td>
<td>Insulin</td>
<td>Accelerates movement of glucose into cells and decreases blood glucose level</td>
</tr>
<tr>
<td></td>
<td>Thymus</td>
<td>Promotes immunity</td>
</tr>
<tr>
<td></td>
<td>Thymosin</td>
<td></td>
</tr>
<tr>
<td>Pineal</td>
<td>Melatonin</td>
<td>Mediates sleep and ovulation cycles</td>
</tr>
<tr>
<td>Placenta</td>
<td>Estrogen</td>
<td>Mediates development and maintenance of accessory sex organs; stimulates reproduction of uterine lining</td>
</tr>
<tr>
<td></td>
<td>Progesterone</td>
<td>Decreases uterine contraction and stimulates secretion of epithelial cells of uterine lining</td>
</tr>
<tr>
<td>Ovary</td>
<td>Estrogen</td>
<td>Same functions as in placenta</td>
</tr>
<tr>
<td></td>
<td>Progesterone</td>
<td>Same functions as in placenta</td>
</tr>
<tr>
<td>Testes</td>
<td>Testosterone</td>
<td>Promotes masculinization; promotes and maintains development of accessory sex organs</td>
</tr>
</tbody>
</table>

**Endocrine System**

The endocrine system comprises specialized glands that secrete hormones (chemicals) directly into the blood. These glands do not have ducts, hence the name “endocrine” or “ductless.” The organs of the endocrine system have the same general functions as the nervous system: communication, integration, and control. Whereas the nervous system provides rapid, brief control by fast-traveling nerve impulses, the endocrine system provides slower but longer lasting control through the secretion of hormones. The nervous system helps to maintain homeostasis by providing responses for immediate changes. The endocrine system controls the rate of development and maturation by the slow secretion of hormones over a long period of time.

The endocrine glands are widely distributed within the body (Table 3). Because hormones are needed in minute amounts, any excess or deficiency is quickly noted. Hormones need to be secreted at proper times during growth and development.

**Reproductive System**

While the other body systems are concerned primarily with survival of the individual, the reproductive systems are concerned with survival of the species. The human reproductive system produces, stores, nourishes, and transports functional gametes. Components of the system include the gonads, ducts, accessory glands, and external genitalia. The male reproductive system includes the testes, epididymis, ductus deferens, ejaculatory duct, seminal vesicles, prostate, and bulbourethral glands. The female reproductive system includes the ovaries, uterine tubes, uterus, vagina, and various accessory glands.

Testosterone is the primary male sex hormone; it masculinizes. Male characteristics, such as deep voice, occur because of testosterone. Testosterone also promotes and maintains the development of the male accessory organs and stimulates protein metabolism. Estrogen and progesterone are the primary female sex hormones. Estrogen develops and maintains female characteristics, such as breasts. It also stimulates epithelial cells to reproduce breasts, especially the lining of the uterus. Progesterone stimulates secretion by epithelial cells of the uterine lining, if estrogens have previously acted on them, and decreases contractions by uterine muscles.

**Summary**

The 2 articles in this series emphasized basic adult human anatomy and physiology; fetal anatomy and physiology have distinct differences, particularly in the respiratory, cardiac, reproductive, and digestive systems.

The bulk of knowledge of anatomy and physiology can hardly be summarized in 2 short articles. We hope that we have addressed the major points and encourage you to explore other resources to further your knowledge.

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**Acknowledgment**

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**References**


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**Countercurrent Multiplier System**

The physiology of the kidneys is one of the most difficult processes to understand, but one of the most elegant designs of the body.

- The loop of Henle has 2 parts, a thin descending limb and a thick ascending limb. The purpose of this anatomical structure is to allow both concentration and dilution of the urine, by way of the influence of hormones on distal structures.
- A sodium-potassium-chloride pump actively extracts these electrolytes from the tubular fluid in the thick ascending limb, which is impermeable to water, but the descending limb is permeable. Sodium and chloride are actively pumped out of the fluid, such that the fluid arriving at the distal tubule is hypotonic (dilute).
- The presence of these electrolytes in the interstitial tissue increases tissue osmolality, and water flows along the osmotic gradient from the descending limb into the interstitium.
- The fluid left in the tubule becomes hyperosmolar (in relation to normal plasma).
- The result of this “countercurrent multiplier” system is 3-fold:
  - The high concentration of sodium and chloride (and urea) in the medullary interstitium makes this part of the kidney hyperosmolar.
  - Fluid delivered to the distal convoluted tubule is hypotonic. So, as this fluid passes down through this tubule and the collecting duct, it is exposed to very high osmolar pressures in the surrounding tissues.
  - Extracellular fluid volume depends on the amount of sodium in the body, so it is essential that the kidney be capable of conserving sodium. If the extracellular volume drops, a complex series of neurohormonal interactions lead to the release of aldosterone, which makes the collecting ducts permeable to sodium, which is absorbed.
**Glossary**

- **alveolus** - tiny air sacs in lungs where the exchange of oxygen and carbon dioxide occurs; plural form is alveoli

- **antibody** - complex molecule (immunoglobulin) produced by lymph tissue in response to an antigen

- **antigen** - any large molecule or small organism whose entry into the body provokes synthesis of an antibody or immunoglobulin (ie, an immune system response)

- **aortic semilunar valve** - heart valve with 3 half-moon-shaped cusps, located between the left ventricle and aorta; prevents backflow of blood from aorta to heart

- **aortic valve** - heart valve with 3 leaflet cusps, located between the left ventricle and aorta; prevents backflow of blood from aorta to heart

- **aorta** - blood vessel that carries blood away from the heart

- **artery** - blood vessel that carries blood away from the heart

- **atrioventricular node** - area of specialized heart muscle located in the septal wall of the right atrium that receives impulses from sinoatrial node and transmits them to the Bundle of His

- **atrium** - upper chamber of the heart; plural form is atria

- **Bowman's capsule** - cup-shaped structures in the kidney; each capsule contains a glomerulus that filters wastes from the blood

- **bundle of His** - small group of atypical cardiac muscle fibers that propagates the atrial contraction rhythm

- **capillary** - tiny blood vessels connecting arterioles and venules

- **chemoreceptor** - specialized cells that sense chemical stimuli; eg, taste buds

- **choroid** - membrane in eye between retina and sclera; very vascular

- **ciliary body** - thick part of vascular tunic joining iris and choroid of the eye

- **cochlea** - snail-shaped part of inner ear where sensory cells are stimulated by sound waves

- **cornea** - outer, transparent portion of the eye through which light passes

- **cortical substance** - outer layer of brain

- **cortex** - outer layer of brain

- **cricoid cartilage** - the cartilage forming the anterior part of the larynx

- **cruor** - blood

- **cuneate nucleus** - part of the brainstem that processes sensory information from the skin

- **dram** - unit of weight

- **ductus arteriosus** - blood vessel that connects the pulmonary trunk and the aorta; present in the fetus and usually closes after birth

- **entrapment syndrome** - condition where nerves or blood vessels are compressed or pinched by other structures

- **epicardium** - innermost of the 2 layers of the pericardium; the membranous covering of the heart

- **erythrocyte** - mature red blood cell that contains the pigment (hemoglobin)

- **eustachian tube** - mucous membrane-lined tube that connects the nasopharynx to the middle ear

- **exocrine** - gland that discharges its secretion through a duct

- **external acoustic meatus** - ear canal

- **exteroceptor** - specialized cells that sense changes in external environment

- **fece** - excrement discharged from the intestines, consisting of bacteria; cells exfoliated from the intestines; secretions, chiefly of the liver; and a small amount of food residue

- **gland** - structure involved in secretion

- **glomerulus** - cluster of capillaries in the Bowman's capsule of a kidney nephron that is the main site of filtration

- **gonad** - gamete-producing gland (ie, ovary or testes)

- **hematopoiesis** - formation and development of blood cells

- **hematopoietic growth factor** - one of approximately 20 biochemi-
cals that stimulate hematopoiesis (ie, the renewal, proliferation, or differentiation of blood cells)

- **hormone** - secretion of an endocrine gland that regulates the functions of other organs

- **interoceptor** - specialized cells in internal organs that respond to stimuli within the body (eg, blood pressure)

- **interstitial** - pertaining to or situated in the spaces or gaps of a tissue; intercellular

- **iris** - circular, colored part of the eye suspended in the aqueous humor and perforated by the pupil

- **lens** - transparent, crystalline structure of eye that helps focus light onto retina

- **leukocyte** - white blood cell; 5 types are neutrophils, basophils, eosinophils, lymphocytes, and monocytes; involved in defense of body

- **mechanoreceptor** - specialized cells that respond to mechanical pressures or distortions; eg, those created by sound, touch, and muscular contractions

- **mitral valve** - heart valve with 2 cusps, located between the left atrium and the left ventricle; allows blood to flow from atrium to ventricle and prevents backflow; also called bicuspid valve

- **myocardium** - thick, middle layer of the heart wall composed of cardiac muscle

- **nephron** - structural and functional unit of the kidney, consisting of the renal capsule, the proximal convoluted tubule, the descending and ascending limbs of Henle's loop, and the distal convoluted tubule

- **nociceptor** - specialized cells that sense injury or pain

- **oval window** - an oval opening in the inner ear attached to the base of the stapes; transmits vibrations from tympanic membrane to cochlea

- **oxyhemoglobin** - complex of hemoglobin and oxygen that is the form in which oxygen is transported from the lungs to the cells of the body

- **pericardium** - fibrous sac surrounding the heart

- **photoreceptor** - specialized cells in eyes that detect changes in light

- **pinna** - outer visible part of the ear

- **plasma** - fluid portion of the blood that contains water, electrolytes, and glucose; blood cells are suspended in plasma

- **plica** - general term for a ridge or fold, as of peritoneum or other membrane

- **proprioceptor** - specialized cells in muscles, tendons, and other organs that respond to internal stimuli regarding body position and movement

- **pulmonary semilunar valve** - specialized cells that sense injury or pain

- **Purkinje fiber** - modified cardiac muscle fibers that rapidly transmit impulses in the heart
retina – multilayered light-sensitive layer of the eye
rods – pigment-containing cells in retina that function in detecting low light and movement
saccule – smaller of 2 pouches in membranous labyrinth of ear; helps maintain balance
sclera – tough, opaque covering of the posterior of the eye
semicircular canals – any of 3 bony, fluid-filled loops in osseous labyrinth of inner ear concerned with sense and maintenance of balance
serum – clear, thin fluid of blood; contains no cells or fibrinogen
sinoatrial node – modified cardiac muscle fibers that rapidly transmit impulses in the heart
taste bud – special sensory nerve ending that responds to different materials, triggering impulses that are conducted to the taste center in the brain
tectorial membrane – a gelatinous membrane that overlies the spiral organ in the inner ear and connects with hair cells of the cochlea
thermoreceptor – specialized cells that detect changes in temperature
thrombocyte – blood platelet, a disc-shaped small cellular element responsible for blood clotting
tricuspid valve – heart valve with 3 cusps, located between the right atrium and the right ventricle; allows blood to flow from atrium to ventricle and prevents backflow
tympanic membrane – thin, semitransparent membrane that separates the outer ear from the middle ear; also called the eardrum
umami – fifth taste sensation; savory taste imparted by glutamate and ribonucleotides, including inosinate and guanylate, which occur naturally in many foods such as meat, fish, vegetables, and dairy products
utricle – larger of 2 pouches in membranous labyrinth of ear; helps maintain balance
vein – vessel that carries blood toward the heart; blood may be oxygenated or not
ventricle – either of 2 lower chambers of the heart
villus – minute fingerlike projection of the mucosa into the lumen of the intestine; plural form is villi
vitreous humor – transparent, semigelatinous substance that fills the posterior chamber of the eye

GUIDEBOOK TO BETTER MEDICAL WRITING
by Robert L. Iles

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Applying Adult Learning Principles to Continuing Medical Education (CME): Importance and Opportunities
John R. Delfs, MD, Blythe M. Fichtenholtz, BA, and Elizabeth A. Stueck, BA, Upper Saddle River, NJ

Continuing medical education (CME) should be a critical factor in improving quality of patient care and outcomes; however, CME appears often to be relatively ineffective in changing practice behaviors. Although much is known about the methods by which adults learn and adopt new behaviors, this knowledge has not been consistently applied to CME. It is our belief that an opportunity exists to improve the effectiveness of CME by applying what is known about the psychology of adult learning.

The process of acquiring new learning—or changing one’s existing behaviors—is complex and challenging. It can be difficult to relinquish “old truths” and base new behaviors on evidence-based knowledge. To increase the effectiveness of our CME initiatives, we have formulated an approach to program design, development, and implementation that incorporates important insights from adult learning and behavior theory.

In this poster, we review five different theories, each of which has informed our crafting of educational strategies and upon which we base both the development of content for and the implementation of our CME activities. These theories include:

- Piaget and Cognitive Structures, which emphasizes the importance of building mental maps through experiences that support learning;
- Behaviorism, which focuses on the importance of conditioning of a behavior through reinforcement;
- Choice Theory/Control Theory, which describes the role motivation plays based on what a person wants most at any given time;
- Communities of Practice, which emphasizes the importance of social process in the acquisition of knowledge; and
- Self-Efficacy, which describes the importance of the belief in one’s own capabilities as a critical element in effective empowerment and constructive change.

If CME is to fulfill its promise, it must do more than acknowledge the needs of adult learners; it must harness the power of adult learning theory at a foundational level.

Creating the Multi-Investigator Grant Application: Marrying Science with Project Management for a Streamlined Process
Helen Chan, PhD, and Jodi Braunton, MA, Toronto, ON

The international research community has grown and advanced significantly over the last few years. As a result, the number of granting opportunities for groups of researchers to create ‘teams’ or ‘networks’ or ‘consortia’ has increased dramatically. These initiatives allow for researchers to align themselves with their colleagues in various disciplines—to create unique and innovative multidisciplinary projects, to pool their resources and expertise, and to take advantage of the strongest curricula vitae. In addition, these initiatives are often prime opportunities for young investigators to form new allies and establish themselves alongside the scientific leaders in their fields.

Creating the multi-investigator grant application, however, is not a straightforward process. By encouraging researchers to design projects for teams/networks/consortia, the level of complexity associated with the single investigator (or small group) grant development process escalates.

This poster represents our institution’s recent experience with the development of a number of multi-investigator grant applications. It will outline a proposed strategy to facilitate an effective development process that produces high quality applications for multi-investigator grant initiatives. This strategy will present an approach that combines modern day project management with the scientific rigor expected of multi-investigator projects.
management tools with the scientific grant development process—it will identify the life cycle of grant development and present a number of tools to use for the planning process including work breakdown structures and critical path scheduling. Namely, it will demonstrate how the lead researcher/ coordinator can “manage” the grant creation process using this hybrid approach to facilitate a more streamlined process.

**The Dangers of Polarization in Publications**
Dan Donovan, Southport, CT

As the profession of publication planning has risen in importance in pharmaceutical and biotechnology companies, some of the good, the bad, and the ugly practices and perceptions around the development and production of publications have also emerged. These practices and perceptions include:
- Publication of negative results
- Conflict of interest
- Complete disclosure
- The value of industry-sponsored trials
- Ghostwriting

Unfortunately, we have entered into an era in which the key stakeholders: industry, academia, government, medical publishers, and patients alike are increasingly at odds in their opinions about these and other publication-related issues. More distressing perhaps is that the positions taken by the interested parties to advance solutions to the perceived flaws with the publishing system are, in themselves, biased. Furthermore, interested parties are becoming more and more extreme in their positions. These positions can often be characterized by intolerance, extreme cynicism, and mistrust. They can involve a profound misunderstanding and simplistic characterization of someone else’s positions or intentions, castigating the good for the misguided actions of the few. The characterizations that are relayed in the lay press offer black and white positions, breeding an “us-against-them” attitude and a “my-way-or-the-highway” approach to the exchange of ideas. In doing so, we are seeing these groups isolating themselves and digging their heels in around their own single-minded opinions, rather than coming to the table, trying to understand the positions of all of the players involved, and coming up with a solution that seeks to respect the position of the various groups and respond to the issues at hand.

**Design of an E-room Database to Manage Medical Communication Projects**
Heleen H. DeCory, PhD, Rochester, NY

Keeping track of and managing multiple medical communication projects, be they outsourced or in-house, is a time-intensive activity. At Bausch & Lomb we have designed an e-room database to track and manage our communications projects. Using EMC Documentum we have created a collaborative e-room enabling product teams to work more efficiently. Members can access relevant medical communication projects, review their status and view tasks, thereby accelerating and improving the development and delivery of medical communication projects. The design of our Medical Communications e-room will be reviewed.

**Marketing Your Skills as a Scientific Writer**
Nicola Bond, Thousand Oaks, CA

Scientific Writing is a critical component in a scientist’s career, whether it’s publishing a manuscript, writing a report, creating a presentation or documenting a procedure. But for many scientists, getting the document project started can be a very time-consuming and often daunting task. Some of the reasons include: lack of confidence in writing ability, inexperience with the writing process, and use of unfamiliar document management tools.

Although scientific writers are often consulted to review, edit and proofread a final draft, an experienced writer has a lot more to offer even before the document is written to facilitate the writing process. This poster will describe the issues that scientists face, and the document management services that a writer may be able to provide to support the scientific author.

**Expanding Health Literacy for All: Best Practices for Improved Patient Understanding with English Language Learners**
Michael R. Cruse and Kate Singleton

Faced with the realities of a multicultural and multilingual U.S. population, medical writers involved in the development of patient education materials must recognize the needs of English Language Learners. This poster presentation outlines fundamental considerations for medical writers when planning and writing materials for a linguistically-diverse patient population. Implications of adult learning and English as a Second Language teaching practice have informed the development of classroom curricula that medical writers must understand in order to write reading level appropriate materials. A discussion of the stylistic and practical differences between academic and communicative English will inform those responsible for writing patient education materials with a foundation for developing a scaled-literacy approach in their writing. This approach to meeting many of the cognitive and cultural demands of adult English Language Learners will improve the overall effectiveness of institutional health literacy programs within healthcare facilities, community service agencies and other public health interests. The goal of this poster is for medical writers to understand best practices for teaching English Language Learners and to develop a toolkit of resources for working with this patient population.

**Research Protocols: the Foundation for Dissemination**
Michael A. Weiser, MS, Athens, OH

The research protocol offers a start-
Training Non-specialist Editors in Medical Editing: Editage’s Experience in India
Shreya Baliga and Elvira D’Souza, Mumbai, India

Editage edits medical manuscripts written by non-native-English-speaking authors from Asia using an in-house medicine and life sciences team. While experienced medical editors are scarce in India, authors demand editors who understand their subject. We therefore took up the challenge of training individuals with general biology or even humanities backgrounds in medical editing. Our editor training program teaches comprehension, advanced language, attention to detail, and communicating with authors. Comprehension training prevents non-specialist editors from changing meaning, content, or impact. Editors must prepare a “technical checklist,” a list of scientific terms and expressions they are not familiar with and/or have edited, after extensive referencing through scientific search engines and databases, medical dictionaries, textbooks, and style guides. Referencing is targeted at understanding a term’s usage, rather than its meaning; it reflects the editor’s understanding of the document and prevents incorrect edits that occur because certain technical expressions sound awkward to the non-specialist ear. This training continues on the job—editors with less than 6–8 months of experience must prepare technical checklists and get their documents reviewed for meaning changes before sending them to authors. Further, through our quality check system, editors receive an “errors per thousand words” score for each of the four categories they were trained in. Quality scores form the basis of training and editor career progression (comprehension EPTWs matter significantly in an editor’s promotion to reviewer).

Supplementary means of knowledge-building include a monthly paper reading, presentations by editors on medicine and life sciences topics, and a “Word of the Fornight” that familiarizes editors with medical terms and procedures. Our approach is counter-intuitive in that it trains individuals in editing more than in science. Proof that this system works is reflected in our client complaint ratio—less than1% for all subjects.

Writing a Manuscript Discussion in Clinical Medicine
Anne M. Wolka, RPh, PhD, and Gordon B. Cutler Jr, MD, Indianapolis, IN

For many medical writers, the discussion section of a clinical manuscript is the most challenging, for the discussion is where the writer should put the study’s results into a context meaningful to the journal’s readers. Unfortunately, some authors may use the discussion simply to restate the study’s findings. A discussion written in such a manner lacks depth and omits information that is important to the journal’s readers. Here, we propose a template for writing clinical manuscript discussions. The template includes four major areas, to be addressed in the following order, or with the middle two items reversed: 1) Conceptual Summary of the Study; 2) Flies in the Ointment (describing limitations of the study); 3) Comparison to the Current Literature; and 4) The Bottom Line. The template—which is consistent with both the Uniform Requirements for Manuscripts Submitted to Biomedical Journals and the Consolidated Standards of Reporting Trials statement—breaks the sometimes daunting process of writing a clinical manuscript discussion into smaller, more manageable portions, and also focuses the medical writer’s attention on information that is most relevant to readers. The medical writer may also use the template to generate discussion and debate within his or her writing teams regarding study findings and their clinical implications. Lastly, the template is useful both as a coaching tool for new writers, and as a reminder to more experienced writers. The discussion template we propose provides a framework to evaluate the clinical relevance of new research findings in an accurate, balanced, and objective manner in order that they may be of greatest benefit to patients and future researchers.
Incorporating Humanities into Medical Education

Harry Potter and the Silver Shield: Vaccines from a Magical Perspective

By Alisa Gayle Mayor, PhD, ELS
North Wales, PA

Over the past century, education for medical doctors has turned into an unceasing race to stay abreast of new physiologic terms and processes, drugs, diagnostic tests, and surgical procedures. Understandably, little time has remained for the hazier, so-called humanistic subjects that used to make up a larger part of physicians’ education. Although medical schools have made a strong effort in recent years to humanize medicine with bioethics courses and grading systems that also consider future physicians’ ability to listen to patients before making a diagnosis, the arts and humanities aspects of education have largely remained on the periphery of medical sciences and medical sciences instruction.

This state of affairs harms both patients and physicians alike. Physicians and medical school instructors need to understand that both the sciences and the arts and humanities have equal value in health education. Subjects such as literature, history, art, foreign languages and cultures, and philosophy can do much more than merely teach physicians to maintain a good bedside manner or to ask patients questions about their symptoms in different languages. These subjects give physicians a sophisticated framework for understanding their field of expertise in the context of a world that is far more complex than any diagnostic test can explain.

Nevertheless, the problem of incorporating humanities subjects into an already jam-packed schedule of primary medical education or continuing medical education courses remains unresolved. Although one elective course on bioethics or on the “physician’s perspective” in the works of Anton Chekhov would be quite valuable in itself, such a solution would still fail to reflect or encompass the full impact of humanities-related subjects and issues on the entire course of a physician’s life and work. For this reason, the best solution for the problem is to find creative ways to incorporate subjects from the humanities realm into medical education itself.

To illustrate the added value of incorporating humanities material into medical training, I will discuss and compare 2 seemingly unrelated subjects: basic concepts of immunology/vaccines and some magical concepts from J. K. Rowling’s Harry Potter novels, which are justifiably some of the most-read works worldwide. More specifically, I have chosen the novel Harry Potter and the Prisoner of Azkaban, one of whose major themes is how young wizards and witches learn to defend themselves against harmful magic. The choice of this novel is an especially timely one as well; in the next 5 or 10 years, premedical, medical, and science students will probably know the Harry Potter series by heart. Furthermore, Harry Potter and the Prisoner of Azkaban has appeared as a film for audiences worldwide.

The Boggart as a Model of the Ideal Vaccine

In Harry Potter and the Prisoner of Azkaban, Professor Lupin, the instructor of defense against the dark arts, uses practical exercises to train Harry and the other students to defend themselves against harmful spells and creatures. Professor Lupin’s best teaching tool is the boggart, a shape-shifting ghost that takes the form of anything that an individual person fears most. Professors Lupin teaches the students a simple magic spell to neutralize the boggart by changing it from something frightening into something harmless or laughable (eg, from a roaring lion into a purring domestic kitten).

Just as the boggart trains the young witches’ and wizards’ minds to prepare for and react to harmful spells and creatures, a vaccine trains the human body’s immune system to handle dangerous pathogens.

To illustrate the added value of incorporating humanities material into medical training, I will discuss and compare 2 seemingly unrelated subjects: basic concepts of immunology/vaccines and some magical concepts from J. K. Rowling’s Harry Potter novels.
creatures, a vaccine trains the human body's immune system to handle dangerous pathogens. Some vaccines expose the body to either a miniature (weakened or attenuated) live form of the pathogen (such as measles virus) or an inactivated form of the pathogen (such as hepatitis A virus). Other vaccines expose the body to a form of a minimally dangerous pathogen that invokes an immune response that can then neutralize a more dangerous pathogen (eg, the minimally dangerous cowpox virus, which is used to vaccinate people against the more disfiguring and often fatal smallpox virus).

The most important philosophical similarity between the boggart and the vaccine is that both give people a way to recognize something fearsome or threatening and to mobilize their own resources (mental or physical) to conquer the miniature form of the threat, so that the full form of the threat or pathogen will not come as a surprise. The person whose training with the vaccine/boggart has enabled him or her to mobilize an immediate response has a strong chance of gaining the upper hand on the threat or pathogen, which will not have time to make a full-scale attack. In this way, the human mind and body are one and the same.

**The Patronus as a Model of the Human Immune Response**

In Harry Potter and the Prisoner of Azkaban, Professor Lupin teaches Harry the advanced Patronus charm. As Professor Lupin explains, a Patronus is a "guardian that acts as a type of shield" between the person and the threat. A key element of the Patronus is the most happy and empowering experience that the individual person has had in his or her life. As Professor Lupin explains, the Patronus is "a kind of positive force" that stands in for the person, but the Patronus is more powerful in that it "cannot feel despair, as real humans can." With the Patronus charm, Harry learns to create first an indefinite silvery cloud, then (much later) a silvery cloud in the shape of a stag. When the crucial time finally comes for Harry to deal alone with some of the creatures that he fears, he produces his own full-scale Patronus, which successfully drives the creatures away.

Much as the silvery cloud, the stag, and the memory of empowerment work together to drive away the harmful creatures that threaten Harry, humoral and cellular immunity work together to defeat the pathogens that attack the body. The silvery cloud is an equivalent of nonspecific interferons or B-lymphocyte-produced antibodies, while the stag is the equivalent of T-lymphocytes or macrophages, which directly kill the pathogen. If a person has exposure to the pathogen through the vaccine/boggart, then the person has an immune memory of the pathogen and is able to call upon that memory of defeating the miniature pathogen to neutralize the full pathogen.

In philosophical terms, the Patronus and human immunity are forms of self-empowerment. They require some stimulation from an outside source to emerge, but in both cases, the memory of a triumph against one form of a pathogen/boggart stimulates humans to fight ever harder and more valiantly against the next form. Just as the Patronus knows no fear or despair, our immune systems are, in miniature, the most sophisticated, noble, and valiant forms of our strongest selves.

Although we do not have magical powers in the sense of J. K. Rowling's Harry Potter books, the magic that our bodies and immune systems work every day to keep us alive should give us the desire to be and do our best.

A teaching approach that incorporates both scientific information and philosophical, literary, and historical concepts does much more than merely provide compelling ways to remember scientific information. In the light of other subjects and points of view, instructors and future physicians can look at their own work as if through a magical mirror that enables them to see the framework and structure that hold together what they are doing. Only by knowing the framework and structure can they then sort out the welter of details involving test results, cell counts, anguished patients, and ever-more-difficult choices. I therefore invite physicians, medical instructors, and medical writers to reach for their creative talents and to meet the challenge of educating themselves and their patients with the best of the magic inside themselves.

**References**

Confirming documentation, known colloquially as fact-checking, is among the most important tasks for a medical communicator. Unfortunately, this task is cumbersome and expensive when done manually. Moreover, archiving the final product—for the most part, 3-ring binders—can take up valuable storage space. An easier method is to confirm documentation electronically, which can be done with use of a computer loaded with a word processing system and Adobe Acrobat Standard or Professional (Adobe Systems Inc, San Jose, CA). The final product is a portable document format (PDF) file rather than a heavy binder.

NB: If you are confirming documentation with journal articles, books, or online content, you may be required to pay a fee to the copyright holder. Contact the Copyright Clearance Center (http://www.copyright.com, 1-978-750-8400) for information on how to legally archive and distribute copyrighted materials. Also, see page 106 to read about the experience of one company in securing multinational licensing agreements to share documents globally.

Preparation
Before confirming documentation, you must prepare both the manuscript and its source documents.

- Create a directory and place a copy of the manuscript file in it.
- Use the word processing program’s highlight tool to mark all statements and numbers in the manuscript that need to be documented.
- Convert the manuscript to a PDF file.
- Gather all source documents that are already available as PDF files (eg, online journal articles) and place them in the same directory as the manuscript PDF file.
- Convert to all source documents in either print or other file formats to PDF (through the convert process or by scanning and then converting).

This process will take considerably less time if you routinely create and maintain an electronic repository of source documents.

Confirming Documentation
Once your source documents are collected, you can begin confirming documentation. This process involves the following:

- Search for the support for each statement or number in the source document.
  The Acrobat search feature (Ctrl-F in PC, Command-F in Mac) can expedite this task if the file was converted to a PDF rather than scanned and then converted.
- Highlight each supporting statement in the document. Use either the Rectangle Tool (for images and for text in files that were scanned to PDF files; Figure 1A) or the Highlight Text Tool (for text in files converted to PDF files; Figure 1B).

Figure 1A and 1B. Use the Rectangle Tool (1A) or the Highlight Text Tool (1B) to highlight images or text.

*Based on a poster presented at the 66th AMWA Annual Conference, October 26-28, 2006, in Albuquerque, NM.
When highlighting with the Rectangle Tool, set the fill-in opacity at 30%. This opacity level will allow the reader to view the highlighting on the printed manuscript without obscuring the text. Also, adjust the fill-in color of the Rectangle Tool so that it matches the color of the Highlight Text Tool.

- Insert the relevant PDF pages into the manuscript PDF. You can insert a page by dragging it from the navigation pane of the source PDF and dropping it into the navigation pane of the manuscript PDF (Figure 2). Supporting documentation should immediately follow each manuscript page. To reduce confusion, insert pages in order of reference on the manuscript page.
- If the process of confirming documentation raises concerns, such as errors in the manuscript, use the Note Tool to call attention to them.

Printing

Although this method allows electronic delivery and archiving, print copies may be needed for internal review. Moreover, the size of the final document may exceed limits placed on e-mail attachments by companies and Internet service providers.

When you print the final manuscript, select Document and Comments under the Print What pull-down menu at the bottom of the print dialog box to make sure that all comments, including highlighting and notes, are included. (These comments will not be included if you select Document only.)

If you used the Note Tool, you need to print the notes separately. The following is the process for printing notes:

- Click Show Comments List in the View menu or click the Comments tab at the bottom-left corner of the document display window
- Click the Show menu
- Click Show by Type
- Click Notes (All forms of commenting except notes will be removed from view)
- Click the Print Comments menu
  Click More Options
- Ensure that Comments Only and Only the Comments Currently Showing are selected, and click OK
- Click Print Comments menu
  Click Print Comments Summary
  Click OK

Your notes will print as a page-by-page summary.

Distributing and Archiving

Implementing this method of confirming documentation will, of course, entail a learning curve among clients, supervisors, and coworkers. Because Acrobat is so widely used, however, most computer-literate people will adapt quickly. Moreover, this method has distinct advantages compared with the manual method. The final product is a PDF file rather than a heavy binder and can be easily distributed. Telecommuters and their clients can, therefore, reduce overhead incurred by shipping and office supplies. Also, the PDF file can be archived electronically, which is more secure, cheaper, and more space-efficient than archiving large binders.

![Figure 2.](image-url)
How do I negotiate a fee?

First, I suggest you avoid quoting fees until you're fairly certain the project is "for real" and the client clearly wants you to do the job. Generally it's best to give a ballpark figure at first, eg, "The cost of each project varies depending on its complexity. I've charged between $X to $Y for similar projects in the past, but generally the cost depends on the quality, specificity, and quantity of the background material to be reviewed, the degree of organization by the Project Manager...", etc. Once the client is definitely giving you the project, discuss your charges carefully—consider a second meeting to finalize an estimate after you've had a chance to take home the material for review.

Estimating a Writing Project

Some clients accept an hourly rate, others insist on a fixed-fee bid. The latter can be risky. If you have to quote a fixed fee, be sure the client has been very specific about what he or she wants and what background material will be supplied. It's crucial to discuss the project in depth so you both have the same understanding of what is needed; for example, you should agree on the "outline" for the project. Before doing any work, review background material supplied by the client carefully and try to estimate how many hours you think it will take to do the job—then double that number and add 20-25% for profit.

Important: Be sure to have a written agreement clearly describing what the fixed fee will include. For instance, will the client provide an outline and all the background material, or will you do the research and develop the outline? Research and outlining can take as long as or longer than writing. Be clear about who is supplying the background material; your time for literature/Internet searches must be paid for, as should the cost of printing or copying the papers (libraries charge $10-20 per article).

Quote for a first draft plus 1 reasonable revision. A "reasonable revision" means editing and minor rewriting—it does not mean adding new material, new references, new tables! Changing the structure of a paper or adding new material should not be part of the fixed fee, because you agreed on an outline and background material at the outset, remember? Thus, charge hourly for major revisions that are not your fault or increase the fixed fee. Make certain you cover incidental costs: copying or printing articles, SAS files, and other material the client might supply electronically. This is an expense (!) and many people just assume you use your laser printer, paper, and toner for nothing. I charge $1 per page for printing files, which generally dissuades the client from sending volumes of indiscriminate material! For clinical study reports, I request data sent by FedEx as hard copy plus electronic files sent by e-mail so I can search them. Other expenses may include special searches, mileage, parking, travel expenses, specific supplies needed, or additional consultants you must hire (eg, to install extraordinary software) specifically for the project.

Another important caveat: specify the turnaround time you will allow for the client's review if a revision by you is to be included in the fixed fee. Some clients will take 6-9 months to review a first draft—then expect you to revise it free as part of your original fixed-fee agreement. This is unfair to the writer because you will have been immersed in many other (unrelated) projects during that time and may have completely forgotten much of the material (unless you're on retainer and work on this client's materials constantly), so the time it takes you to do the revision may be much greater than you estimated based on a reasonable timeframe between first draft and revision. Give the client 3-4 weeks (or a reasonable timeframe of your choice) for reviewing the first draft—and charge hourly for revisions that come later (or for second and third revisions).

When charging hourly, try to guesstimate the number of actual work-hours the project will require (and double it of course). If the client thinks your estimate is too high, suggest working a specific number of hours and meeting afterward to discuss progress; you may find your estimate was indeed high (or it may have been low). As with fixed-fee projects, don't forget to include incidental expenses in your description of charges.

There are pros and cons to fixed fees and hourly rates. Working by the hour can create more complicated billing because you must detail the time spent—but at least you're getting paid for all your time. Fixed fees can be dangerous because you can seriously underestimate how long the job will take. On the other hand, you may complete a job in fewer hours than projected, making your hourly rate higher for that job. [NOTE: For clinical study reports and other FDA-related projects, I always bill hourly, as it is almost impossible to estimate the unknown glitches that appear during these types of projects (again, this might not happen if you prepare scores of reports for a specific client in a specific therapeutic area). I also charge a higher rate for project management and consultation than for writing.]
Discussing and/or Explaining the Fees
Sometimes your price seems high in the client’s eyes and it’s necessary to explain. For instance, if you’re charging $100 per hr, the client adds that up and thinks, “Hmm . . . she’s making $4,000 a week; that’s $200,000 a year! I sure don’t make that! This price is too high.” So you need to do a little “selling” when price comes up.

Point out the invisible overhead costs involved in large companies—an employee’s salary, for example, can cost the firm 30% to 70% more than the person’s actual paycheck, depending on the company and its particular structure/benefits/overhead. Underscore the fact that you, as an outside contractor, charge only for productive time spent on a job, while employees are paid their salaries regardless of productivity. So it is in fact more cost-effective to use you on a fee-for-service basis than it would be to do it in-house.

If a competitor is charging a lower rate, convince the client that your experience enables you to produce faster or better. If the lower-priced competitor is an experienced moonlighter or a homemaker who works to supplement an existing income, point out that your full-time status renders you more dependable, able to meet deadlines, and more likely to be available on short notice.

Adjusting or Negotiating a Fee as a “Loss Leader”?
Some clients request a lower rate for the first project or for a long-term assignment. Do not lower your rate for an initial project unless you’re pretty certain that additional business is an actual potential and that your adjusted fee will not be prejudicial to future fees. On the other hand, if a client guarantees (in writing) a specific number of hours per week over many months/years, it is reasonable to reduce your hourly rate for that secured income. But don’t do this without a written guarantee!

And don’t turn down new assignments because you have a verbal agreement to do something for another client. Clients sometimes ask you to hold your availability open while they’re finalizing plans. Request a written guarantee of business, with a kill fee if the project doesn’t materialize. In other words, you agree to turn down other work while waiting—but the client must pay you a fee if his or her project is canceled.

Some consultants have 1 fee structure for corporations, another for small businesses and agencies. This approach is reasonable because large firms can afford higher fees, while smaller businesses and nonprofit corporations may lack resources and agencies need some leeway for profit.

Be flexible about fees in order to accommodate clients, but protect yourself—and don’t lower the price foolishly just to make the sale. The quality of your work may go down if you’re not being paid enough!

— Cathryn Evans

What should I do when a client questions my estimate?
When a client questions your estimate, you first need to consider his or her motive. Perhaps the client had a preconceived budget you weren’t told about. Or perhaps your estimate seems high for the project. It is also possible that the client always questions estimates as a means of getting the lowest price. Notice I didn’t say “best price.” That’s because the best price is the one that provides a balance of excellent value to the client and excellent income to you. Lowest just means cheap, and to that I say: I work 3 ways—good, fast, and cheap—and you can choose any 2 you want. Good and fast isn’t cheap, good and cheap isn’t fast, and fast and cheap isn’t good. By the way, I avoid the second combination and refuse the third.

When it turns out that the client had a preconceived budget, I immediately ask whether a medical writer or an account person formulated the budget. You’d be surprised at how often the answer to that question is “an account person.” After an audible chuckle, I use the opportunity to remind the client that he or she should ask me to provide an estimate when pitching the work. This way, the estimate is developed by someone who knows what it takes to get the work done. This is a great marketing tool, as well as a great negotiating tool for getting the budget increased, if possible.

When a client questions my estimate because it seems high, my first reaction is to review all the elements of the work and deliverable as itemized in my estimate. Often clients don’t appreciate everything that goes into a project until you point it out to them. Reviewing the details enables me to either confirm that my understanding is correct and the client has not fully appreciated the amount of work involved, or that I have overthought the project and need to scale back. Perhaps I expected the deliverable was much larger than the client anticipates, or that I would need to identify and procure references when they are to be provided.

When it turns out that the client simply wants the cheapest price, I usually respond that the job cannot be done well...by me...for less, and leave it at that. I’ve learned over the years that clients who want to pay the least are typically the most trouble, and I prefer to devote my time to developing great relationships with great clients built on mutual respect.

I always work from the assumption that my estimate is based on years of experience and therefore, all things being equal, is probably neither overinflated nor too lean. If I do need to cut back on an estimate, which happens from time to time, and none of the parameters of the project have changed, I never negotiate my fee. Instead, I negotiate the parameters. Scaling back the project enables me to reduce my estimate without cutting costs, and communicates to the client that my fees are always realistic.

— Brian Bass
Money is a subject that we are uncomfortable discussing. In fact, many of us have no idea how much money our friends or parents earn; others might not even know their spouse's income. Discussing money with colleagues or coworkers is even more complicated. Many companies strongly discourage employees from discussing their salaries with coworkers. It should come as no surprise that those of us with little experience talking about money approach salary negotiations with discomfort and unease.

Getting the Job
The process of getting a job involves 3 major steps: getting the interview, getting the job offer, and negotiating the salary. Through experience, the application and interview processes have become fairly routine for most of us; with each job change, we may have applied and interviewed for several positions. However, some of us have limited experience with salary negotiations. Many questions are raised during salary negotiations that make us uncomfortable: “Is the company making a fair salary offer?” “When the recruiter asks how much money I’m looking for, what should I say?” “Is it rude to turn down the first offer and ask for more money?” “If I haggle over the salary, will my new manager see me in a negative light before I even start the job?”

When Should You Talk About Money?
The issue of salary can be raised by employers at any point during the application, interview, or hiring process. Job postings sometimes prompt you to include a desired salary in your cover letter. Recruiters interested in submitting your resume to clients want to know your desired salary. During telephone screening, human resources representatives may ask about salary expectations. Department managers may pose the question during the interview. Or, at the end of a series of interviews, the human resources manager might ask how much you’re earning at your current job as a segue into salary negotiation. You need to be prepared to answer these questions. However, try to defer salary discussions as long as possible, preferably until a job offer has been made or is likely. Ideally, you want the opportunity to determine whether the job is a good fit before discussing salary.

How Much Money Should You Ask For?
When determining the salary to offer you as a potential job candidate, a company uses several factors, including your current salary, how much the company is paying its employees in similar jobs, and what competitors are offering for similar jobs. So, it is important to keep these factors in mind when determining a desired salary range for a specific job.

What Should You Say About Your Current Salary?
Rather than stating your current salary, give the approximate value of your total compensation package. This includes your base salary, actual or potential bonuses, vacation and holiday pay, stock options or profit sharing, health and dental coverage, life insurance, retirement plan or 401(k) contributions, employee discounts, and savings from having a shorter commute to the office or from telecommuting.

What Are Other Employees at This Company Earning for Similar Jobs?
This is the most difficult piece of information for you to determine. If you already know someone at the company, you might want to ask if he or she could provide you with a broad estimate of salary range for medical writing jobs within the company. Avoid asking how much money this individual makes, because you do not want to make him or her uncomfortable. Ideally, you would like this person to serve as a reference for you, and he or she might soon become your new coworker.

If you don’t know anyone at the company, try networking. Ask colleagues; attend your local AMWA chapter meeting and ask if other members know about this company. Through networking, you might be able to get a feel for...
whether the company has a reputation for paying well or for having other intangible perks that might matter to you, such as on-site daycare, a fitness center, or flexible work schedules.

**How Much Are Competitors Paying for Similar Jobs?**
Before you start the process of applying for a new job or post your resume on an employment Web site, determine an appropriate salary range for the type of job that you want. There are several pay-comparison Web sites designed to assist you in determining salary ranges for jobs in selected areas of the country, such as www.salary.com or www.salaryexpert.com. Web sites focused on job hunting, such as Monster.com and CareerJournal.com, also provide online salary calculators. The Occupational Outlook Handbook from the Bureau of Labor Statistics also provides information on earnings for hundreds of different types of jobs.

One of the most useful resources for determining the salary range for a job in medical writing or editing is the AMWA Salary Survey. Gray and Hamilton present results from the salary survey broken down by gender, educational degree, primary employer, job category, and geographic region. Their article also provides an algorithm to help you estimate a mean salary based on these factors. For example, a female medical writer with a master's degree and 3 years of relevant experience applying for a position in the pharmaceutical industry could anticipate an estimated mean salary of $64,023 ($19,768 [base] + $16,904 [master's degree] + $3,789 [experience] + $19,768 [pharmaceutical company]). The results of the 2007 AMWA Salary Survey will be presented at the AMWA annual conference in Atlanta and will be published in an upcoming issue of the AMWA Journal.

**How Much Flexibility Is There in the Salary Offer?**
After you receive a job offer and a salary offer from your potential new employer, ask whether there is any flexibility in the salary. If so, make a counteroffer. Note that there may be more flexibility in the intangible compensation than in the base salary. Determine which factors are most important to you. Is telecommuting an option? Are you planning to pursue an advanced degree, and would this employer provide tuition reimbursement? Does this employer pay for medical writers to attend professional conferences such as the AMWA annual conference or congresses in specific therapeutic areas?

**How Much Does Experience or Education Affect Salary?**
Many writers and editors come to medical communications from other professions. This does affect salary potential. The AMWA Salary Survey is a useful tool for predicting how much your education degree or previous work experience affects potential salary. Results from the survey indicate that employers consistently pay higher salaries to employees with higher degrees than those without them.

**TIPS ON SALARY NEGOTIATION**
- Be prepared to discuss salary and know the salary statistics for comparable jobs in the area.
- Defer salary discussions until the job offer is likely.
- When prompted to discuss salary, ask what the range is for this position at this company.
- When asked to state a desired salary, give a range.
- When asked about your current salary, state the total compensation package that you are currently receiving.

**FROM THE COMPANY’S PERSPECTIVE**

On when to discuss salary:
- Barbara Snyder, who hires medical writers at Procter & Gamble Pharmaceuticals, asks about salary during telephone interviews. “I always ask the candidate what salary he or she is expecting because I don’t want to waste anyone’s time if the expectation is clearly out of the range I’m authorized to offer,” she says.
- “Salary negotiations should not take place until an offer is made,” says Jim Yuen, formerly of Amgen. He also notes, “Information on salary (previous or desired) should not appear in either the cover letter to a prospective employer or in the CV.”

On how much to ask for:
- Yuen notes, “Keep in mind that reputable companies do not set out to underpay their employees.”
- “At Procter & Gamble Pharmaceuticals, salaries are determined by a formula that’s pretty much based on the applicant’s college degree and years of experience,” says Snyder.
- “The salary is set based on a formula that includes the candidate’s experience and qualifications,” says Marianne Mallia, of Texas Heart Institute. “Typically, we like to hire at the midpoint of the salary range so that there is room for growth.”
- Mallia cautions that candidates should be careful about how high a salary they request. “Candidates should always ask for more than they expect to get; however, asking for a salary beyond or at the top end of the range will often keep them from being considered for the job.”
For example, male AMWA members with bachelor's degrees who responded to the survey had a mean income of $73,356 compared with $83,596 for men with master's degrees. Likewise, years of related work experience are associated with increased salary. According to the predictive algorithm based on the results of the AMWA Salary Survey, each year of experience is associated with an increase in mean salary of $1,263. So, keep these factors in mind and use the algorithm to determine an estimated mean salary based on your education, experience, geographic area, and potential employer.

**What Is the Take-Home Message?**
Do your homework; it will pay off. Before applying for a new job, find out as much as you can about the possible salary range for that job, in that company, in that area of the country. If at all possible, determine whether the job is a good fit for you and secure the job offer before discussing salary.

**References**

**Erratum**
In the last issue of the AMWA Journal, the byline for the profile of the Council of Science Editors (CSE) was inadvertently omitted. The Journal thanks Monica M. Bradford, Executive Editor, Science, and 2006-2007 CSE President, for contributing the profile of this association.

**Board of Editors in the Life Sciences (BELS) Certification Examinations**

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<tr>
<td>Wednesday, October 10, 2007</td>
<td>10 AM–1 PM</td>
<td>Atlanta, GA (AMWA annual conference)</td>
<td>Register by September 19, 2007</td>
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<td>Saturday, May 17, 2008</td>
<td>1 PM–4 PM</td>
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<td>Louisville, KY (AMWA annual conference)</td>
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**Note:** You must successfully complete the application process before you can register for an examination. Please allow at least 5 weeks for the application and registration process if you use the US mails. International mails may take longer than 5 weeks. Obtain an application form from the BELS Web site (www.bels.org).

For more information, contact Leslie E. Neistadt, ELS, Hughston Sports Medicine Foundation, Inc, 6262 Veterans Parkway, Columbus, GA 31909. Phone: (706) 494-3322; Fax: (706) 494-3348; E-mail: lneistadt@hughston.com.
Voices of Experience  By Joni St. John

➲ Interviewee: Kristie Holt, MPH, CHES

Current Position
Owner, Principal Consultant, HER Consulting (Health Education Resources)

Educational Background
Bachelor of Science, Exercise Physiology
Masters of Public Health, Community Health Education
Certified Health Education Specialist

AMWA: How does a medical writer/editor become a Certified Health Education Specialist and how important has this certification been to your work?
Kristie: The National Commission for Health Education (www.nchech.org) offers the Certified Health Education Specialist credential. To be eligible to sit for the national CHES exam, individuals must have a bachelor’s, master’s, or doctoral degree in health education (or a degree and a specified number of hours of acceptable coursework) from an accredited institute of higher education. After an individual has passed the exam, he or she must earn a minimum of 75 continuing education units every 5 years. Some employers require that health educators be CHES-certified or at least CHES-eligible. Credentialing provides an important safeguard that all CHES-certified individuals have demonstrated certain core competencies and are committed to professional development. Local and state health departments, medical communication firms that specialize in patient education, and universities are very familiar with the credential and what it stands for. I believe it puts even more credibility behind my name.

AMWA: How did you become a medical writer, and what positions have you held in the medical writing/editing field?
Kristie: Early in my career, I headed a disease management and patient education materials development division of a large health care system. The type of writing was very diverse; we created materials intended for the health care providers as well as low-literacy patient education pieces. I then went into academia; this is when I became more experienced with grant writing and writing for peer-reviewed journals. My position with the university allowed me to collaborate with various government agencies and nonprofit community-based organizations. I very much enjoyed acting as a consultant on the projects that interested me the most and then moving on to another, completely different project.

AMWA: How did you find your first position as a medical editor/writer, and what advice would you give to a newcomer with regard to finding his or her first position?
Kristie: My first job came from a job bank from a professional organization for health educators (SOPHE, Society of Public Health Educators). I strongly encourage active membership in professional organizations that are closely linked to your field. I think one of the most important skills for anyone considering writing health or patient education pieces is the ability to write with cultural competence. This means being culturally sensitive and being able to write for low-literacy audiences. Really take the time to know your target audience; understand that there may be a difference between what your research shows they need to know and what their perceived health needs are, and that it is important to address both. Use literature reviews, focus groups, interviews, etc, to get to know your target audiences before you begin writing for them. Future employers will be impressed with your ability to understand and write for different audiences.

AMWA: Why did you decide to create your own business?
Kristie: There were 2 main reasons. First, after having my third child, I had 3 children under the age of 6. This made showing up at a typical full-time job at 8 AM seem impossible, impractical, and entirely undesirable. Second, I loved the idea that I could take on a variety of shorter term projects with varying degrees of difficulty, and choose the topics that seemed interesting. For example, one week I could be working on a pandemic flu piece, and the next week I could be writing about breastfeeding.

AMWA: What resources were the most useful to you when you decided to start your own business?
Kristie: Joining a local chapter of a national business owners organization was invaluable. I joined NAWBO—National Association of Women Business Owners. It offers various weekly and monthly networking and educational opportunities. I found that many businesses were interested in offering monthly wellness newsletters or e-health messages for their employees. I also became a member of the local Volunteer Center. I knew that by becoming involved, I would have access to all the local branches of national non-
Kristie: What is a typical work day like for you?

Kristie: Because I live in California and work with several clients from different time zones, I typically wake up early so that I can participate on conference calls. By 6 AM, I am either responding to e-mails or on the phone. I will usually break around 7:30 AM to get my older kids fed, dressed, and off to school. On the days that I stay in the office, I will then write for 2-3 hours. I never write for more than 3 hours at a time, as I lose interest, creativity, and focus. I usually exercise for an hour and then take care of administrative tasks, such as billing, calendaring, marketing, setting up appointments, etc. I set aside 2 days a week for "out of the office" work. This involves face-to-face meetings with clients to discuss new and ongoing projects and delivering slide presentations that I have developed. I do not have a secretary or assistant, so I handle all of my administrative tasks myself; this can be very time-consuming. Every night, Monday through Sunday, I am back on the computer from 9 pm until midnight. I am always researching topics, doing literature reviews, and reading.

AMWA: What are the advantages/disadvantages to owning your own business?

Kristie: The advantages are that I can decide to accept or not accept any work. I can also set my own hours around my personal and family obligations like volunteering at my children's school or serving on the executive board of a nonprofit association. The disadvantages are that while you are engaged in one project, you have to be looking for your next one. Costs such as health, life, and dental insurance are very high for the self-employed.

AMWA: What are some the difficulties you encountered while you were starting your business?

Kristie: I think it is important to find your niche. Figure out early on the type of writing that you can do well and efficiently. Your time is your greatest resource when you are self-employed. At first, I wanted to be very appealing so I took on some projects with high learning curves. The projects were so time-consuming that I actually lost money doing them. I would have made more sense for me to invest in some courses, rather than self-teach.

AMWA: How did you find your first clients?

Kristie: I met my first clients by joining local chapters of national organizations like AMWA, SOPHE, and NAWBO and by attending their meetings and networking events. I also contacted many large medical communication firms by e-mail and the phone, letting them know that I was available for work. I started attending and presenting at several professional conferences. Even participating with a poster presentation is a great way to meet potential clients.

AMWA: What are the most rewarding/challenging aspects about your job?

Kristie: The most challenging aspect is the variety of topics that I have to become adept with in a very short period of time. For example, to successfully complete one project, I had to learn everything there was to know about HIV/AIDS-related opportunistic infections (pathogen, medications used, treatment, side effects, signs/symptoms, etc.), and translate the information into terms that would be acceptable and easily understood by HIV-positive high-risk youth in less than 3 days. The next week, I was writing about the uses of pasteurized human breast milk for preterm babies. It was very rewarding to see a community HIV/AIDS educator deliver the curriculum I wrote to high-risk youths. It was equally rewarding to hear the testimonial of a mother of a preterm infant who received donor milk and thrived in the neonatal intensive care unit.

AMWA: Why did you decide to specialize in patient education materials and training curricula, and how did you receive the necessary training in these areas?

Kristie: One of the core competencies of being a health educator is the ability to plan and develop written health education materials. Any Masters of Public Health in Community Health Education program would prepare graduates for this task. New graduates in the health sciences field will most likely find that an entry-level health educator position will require these skills. I believe you become a better writer by writing and reading.

AMWA: What are some of the current projects you are working on?

Kristie: I am currently working on a lead poisoning preventio, a foodborne illness prevention, and several weight management titles. I am also working on a workplace ergonomics assessment tool and am writing 3 grant applications for 2 different nonprofit associations.

AMWA: What resources have are the most useful to you in your work?

Kristie: The APA Style Manual and the Centers for Disease Control and Prevention Web site have been very helpful. I use the local health department's Web sites to gain epidemiologic information, which is good for understanding my target populations. I use the Diagnostic and Statistical Manual of Mental Health (DSM) quite a bit as well.
Guidelines for Clinical Trial Registration Modified
By Faith Reidenbach, ELS

AMWA members whose work involves registering clinical trials or selecting target journals for publication of clinical trial reports should be aware that the International Committee of Medical Journal Editors (ICMJE) has updated its guidelines about clinical trial registration.

Some background: In September 2004, the 12 member journals of the ICMJE announced that for clinical trials that began recruiting on or after July 1, 2005, investigators must report certain details of clinical trial design in a public registry, prior to patient enrollment, in order to have results considered for publication in those journals.1 Dozens of other journals have adopted that policy, which is explained in detail at the ICMJE Web site, www.icmje.org.

As it had promised to do, the ICMJE reevaluated its policy 2 years after it was implemented. In June 2007, the member journals published a joint editorial that announces 3 sets of changes:2

• Acceptance of additional registries
• Change in the definition of “clinical trial”
• Guidance for avoiding charges of prior publication

Additional Registries. In addition to 5 previously recognized registries, the ICMJE now accepts registration in any of the primary registries participating in the International Clinical Trials Registry Platform (ICTRP) of the World Health Organization (WHO).2

The eventual goal of the ITRP is to create a complete, public, searchable registry of clinical trials, to be overseen by the WHO.3 For now, the ITRP is developing a network of registries that meet WHO-specified criteria.4 At the time of this writing, the criteria are still being finalized, but it is known that primary registries must accept registration for any interventional trial, perform quality assurance on submitted entries, delete duplicate entries, and have a process for obtaining updated data. The relatively small number of primary registries will be national, regional, or international in scope and will provide data directly to the WHO. The much more numerous associate registries will feed data to primary registries. They may be either broad-based or restricted in some way, such as being specific to a disease, company, academic institution, or geographic region. Associate registries are not acceptable to the ICMJE because they may be managed by for-profit entities.2

The 5 registries previously accepted by the ICMJE are the following:5

www.actr.org.au
www.ClinicalTrials.gov
www.ISRCTN.org
www.umin.ac.jp/ctr/index/htm
www.TrialRegister.nl

Definition of Clinical Trial. In accord with the WHO, the ICMJE will begin defining a clinical trial as “any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes.” This definition applies to trials that begin enrollment on or after July 1, 2008.2

According to the ICMJE, “Health-related interventions include any intervention used to modify a biomedical or health-related outcome (eg, drugs, surgical procedures, devices, behavioral treatments, dietary interventions, and process-of-care changes). Health outcomes include any biomedical or health-related measures obtained in patients or participants, including pharmacokinetic measures and adverse events.”6

In May 2005, the ICMJE changed its original definition of a clinical trial to exclude phase I trials (preliminary trials designed to study pharmacokinetics or major unknown toxicity).1 In explaining its reversal, it states that having information about phase I trials in the public domain can be beneficial “because these studies can guide future research or signal safety concerns.”6

Prior Publication. A brief (less than 500 words) structured abstract or table does not constitute prior publication, the ICMJE has ruled, so long as it is posted in the same clinical trial registry in which the primary registration was made.2 This addition to the ICMJE guidelines comes in response to growing pressure for registration of trial results.7 ICMJE advises authors that in their cover letters to journal editors, they should fully disclose all registry post-ings of results from the same or closely related work. The group favors development of a standard abstract format for results reporting, such as the one forthcoming from CONSORT (Consolidated Standards for the Reporting of Trials). CONSORT was expected to finish its guidelines for abstracts in the summer of 2007 and intends to seek publication in the ICMJE member journals as well as in open-access journals such as PLoS Medicine (Moher D: personal communication).

of Australia, Tidsskrift for Den Norske Laegeforening, and Journal of the Danish Medical Association (Ugeskrift for Laeger). The (US) National Library of Medicine is also represented on the committee.

References

Calling All Creative Writers Who Can Be Brief

*Writer's Digest* is looking for fiction that is “bold, brilliant…but brief” for its 8th Annual Short Short Story Competition. Entries must be no longer than 1,500 words. The first place award is $3,000, second place is $1,500, and third place is $500. The deadline for entry is December 3, 2007.

More information is available at www.writersdigest.com/contests/shortshort/index.asp.

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Association for Women in Communications
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Council of Science Editors
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European Medical Writers Association
9th Autumn Meeting
November 1-3, 2007
Basel, Switzerland
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Plain Language Association International
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Society for Scholarly Publishing
29th Annual Meeting
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Sure, you know their names, possibly better than you know the name of the street you live on—almost every writer does. When the need comes, these names drip lightly and quickly off our tongues like they were our own brothers. I am thinking about the famed eponymous duo Webster’s Dictionary and Roget’s Thesaurus.

But I dare say, almost none of us can identify the actual person or conjure up anything about him. Don’t report me, but neither did I until I started to write this column.

**Webster’s Dictionary.** Many people can respond immediately: Noah Webster. We are aware that he is the father of the dictionary. But who was he? What did he do for a living? When did he live?

Noah was born in 1758, graduated from Yale University in 1778, and subsequently graduated from law school. He produced the first American dictionary in 1806 and published his sentinel work An American Dictionary of the English Language in 1828. His interests led him to be a lexicographer, textbook editor, author, Bible translator and spelling reformer. He campaigned for years to secure nationwide copyright privileges for authors, and he succeeded in 1790. His ubiquitous mind produced extensive writings in epidemic diseases, mythology, meteors, and the relationship of European and Asian languages. In addition, he founded the first New York daily newspaper. He died in 1843.

Another dictionary eponym almost as well-known is Merriam-Webster Dictionary. So we have to ask, “Where did Merriam come from? What relationship does Merriam have to Webster?”

George and Charles Merriam purchased the right to revise Webster’s dictionary after his death in 1843. They produced several revised and expanded editions, and the “Collegiate” series was begun in 1898. The C. and G. Merriam Company eventually lost its exclusive right to the Webster name and in 1983, the company name changed to Merriam-Webster, Inc. with the publication of Webster’s Ninth New Collegiate Dictionary. The C. and G. Merriam Company has been owned by Encyclopaedia Britannica, Inc. since 1964.

That brings us to . . .

**Roget’s Thesaurus.** And it gives us the chance to learn about Roget, the man—Peter Mark Roget. Who? What? When?

Englishman Peter Roget, MD, was born in 1779. He studied medicine and mathematics at the University of Edinburgh, entering at age 14 and graduating at age 19. He is acclaimed as the creator of the first-ever thesaurus, a compilation of words and phrases according to meaning rather than alphabetic order. It has been called one of the 3 most important books ever printed, along with the Bible and Webster’s dictionary.

He began his monumental work Thesaurus of English Words and Phrases in 1805 but did not release it publicly until 1852—47 years later. Meanwhile, he was earning a deserved reputation as a distinguished physician and anatomist.

In his lifetime, he became a noted lecturer and writer on anatomy, sewer sanitation, magnetism, bees, geology, and more. He wrote a landmark paper, “Persistence of Vision with Regard to Moving Objects,” which stirred much research and dispute in the scientific and optics community.

When Roget died in 1869 at age 90, his son, John, took over the Thesaurus and he gradually expanded it.

[Physician and writer—what an interesting combination!]

So now you know these men—the “-nyms” in the eponyms. Not enough information? As James Thurber suggested in the title of his 1941 book about baseball, You Could Look It Up!
Institutional affiliations are given for information and convenience only. The views expressed, being solely those of the correspondents, do not represent those of any institution named or of the American Medical Writers Association. All queries, unless otherwise specified, were received and replied to by e-mail.

DEAR EDIE: I seem to have sparked some debate concerning when it is appropriate to use “media” versus “medium” in discussing bacterial cultures. Many of the people I spoke to believe the following sentence is accurate, yet some have used the two words interchangeably in other contexts: “Of the existing media known to be suitable for the culture of bacteria, XYZ medium was used in the current study.” What is your view on the subject?

KRISTINA WASSON-BLADER, PhD
Edmond, Okla.

DEAR KRISTINA: The cited sentence is correct, although I would have phrased it thus: “XYZ, one of the media [or mediums—yes!] considered suitable for the culture of bacteria, was used in this study;” “Media,” being a plural, takes a plural verb. “Media,” shake hands with “data.” There are so many mediums (correct in any context; maybe that will clarify things somewhat). Good writers or editors know that there are innumerable media—pamphlets, books, Web sites, monographs, telephone, television, CDs, tape, e-mail, etc. Each is a medium; collectively, they are media. Not all cultured mediums are happy, even those with a full calendar of seances.

DEAR EDIE: Question: Why do we spell Wednesday the way we do, yet pronounce it as if it were spelled “Wensday”?

MILTON (“RED”) J. SCHIFFRIN, PhD
Seattle, Wash.

DEAR RED: It’s pronounced “Wensday” because people (all kinds and all peoples) tend to slur or elide words and phrases. Just as examples: gimme, gonna, you’ve got a friend in Pennsylvania. Let’s take these examples seriatim (but not too seriously): gimme for “give me”; gonna for “going to”; you’ve got for “you have got”; howja do it? for “how did you do it?” Who in ordinary conversation would ever say “you have got a friend in Pennsylvania”? And besides, how would that fit on a license plate?

So the answer is that ordinary, average people (if any there be) are only doing what humans have been doing ever since language began. No, I wasn’t there.

Sidebar: Webster’s Third New International Dictionary (Webster’s Third) says that Wednesday (pronounced Wenzdee or Wensday) is from Old Frisian and Old Norse, all from a prehistoric (?) compound formed from Germanic components represented by Old English Wöden, the chief god of the Germanic peoples, identified with the Roman Mercury. Und so weiter. Cheers!

DEAR EDIE: This question is from your No. 1 fan. What punctuation, if any, would you advise for the following sentence fragment: “. . . a prospective two-armed randomized controlled clinical trial”?

GRACE DARLING
Arlington, Texas

Darling Grace: Many thanks for the encomium.

The writer has used five adjectives to modify one helpless noun. Commas are needed in the cited phrase: “a prospective, two-armed, randomized, controlled clinical [no comma needed here; these two words are of equal value] trial.” The fragment is so top-heavy that the hapless reader might have to read this comma-less conglomeration more than once to grasp its complex meaning readily.

A comma is the pause that refreshes (thank you, Coca-Cola).

DEAR EDIE: We were stumped, so we seek your expert opinion. A sentence in every one of our final clinical study reports states that “this study was designed to compare [certain information] following a [more info] administered to healthy, adult subjects under fasting conditions.” Should there be a comma between “healthy” and “adult” subjects? The FDA Web site I consulted used the wording “healthy adult subjects,” without the comma. It seems to me that healthy would describe the adult. It’s possible to have healthy adolescent and adult subjects. However, my peers believe that “healthy” describes subjects and therefore a comma is appropriately placed.
Since I have no back-up for my opinion, I’m appealing to your expertise. Should we write “healthy adult subjects” in our study reports or should we allow only “healthy, adult subjects”?

HEATHER HUGHES
Fargo, N.D.

DEAR HEATHER: This will amplify my response to Grace Darling: There is a “rule” that a comma is not used between modifying adjectives when one of them modifies the complete idea represented by the other and the noun following. Here is an excerpt from an extraordinarily good book on grammar, an oldie but goodie, and the best grammar book I’ve ever used (Harper’s English Grammar, by John B. Opdyke; 1965, pp. 101-102; the section on adjectives alone goes from page 79 to page 103):

If you say a good old friend, the adjective good modifies the unit idea expressed by old friend, these two words forming a closed epithet that stands as a single term. So closely knitted is the phrase that no comma is used between good and old. Again, in a clever young man, clever modifies the inseparable unit idea young man, that is, a young man who is clever.

In your cited sentence, the meaning would be “adult subjects who are healthy.” My recommendation is to omit the comma between “healthy” and “adult.” The same for “teenage” or “adolescent,” for instance. Happily (an comma between “healthy” and “adult.” The same for “subjects”?

DEAR EDIE: The phrase “pathological remission [response]” appeared in a document I was reading. When I was working in oncology, it was not common practice to examine tissue sections and evaluate the response (remission) based on the number of tumor cells found in the tissue sample after a patient had received chemotherapy or radiation therapy before surgery to remove the tumor.

In German, the preferred term is “histologische Remission” rather than “pathologische Remission.” This makes more sense to me. How would you phrase this kind of “pathological” remission? As a freelance translator, editor, and writer, I find it hard to believe that “pathological” can indeed be substituted for “histological” in English. A consultant suggested “remission confirmed by histological/pathological means,” but I don’t think “pathological means” is better than “pathological examination.” In addition, I may need to use an abbreviation in a table. Can you clarify this problem?

ASTRID KAESER-FROELICH
Baden, Austria

DEAR EVELYN: I agree with you that vagueness is never a virtue in medical writing. And “new” is as ambiguous and open to interpretation as “recently.” Without knowing the context, my inclination would be to give a more informative indication of the time involved, even if it’s only to say “within the past year.”

EVELYN HERMES-DESANTIS, PHARM.D
Robert Wood Johnson University Hospital
New Brunswick, N.J.

DEAR EDIE: In writing a manuscript, is there an appropriate definition for “recently”? When is a new drug still considered “recently” approved? Is it 6 months, a year, or some other time frame?

EVELYN HERMES-DESANTIS, PHARM.D
Robert Wood Johnson University Hospital
New Brunswick, N.J.
DEAR EDIE: I wanted to put in my two cents about Maryellen Daston’s pet peeve with the word “interestingly” (Vol. 21, No. 4, 2006). I harbor my own contrary editorial opinions on this word. When I worked as a researcher for a major pharmaceutical company, we were taught about patent law and how to write research notebooks in anticipation of potentially patentable discoveries. One rule is that you never use the word “obviously” or any other that portrays the idea of a concept that is not novel.

In U.S. patent law, one qualification for the granting of a patent is that the idea must be “non-obvious.” The use of “obvious” in a research notebook or, worse yet, a formal publication, could easily make a patent grant invalid and might even devalue years of research and millions of invested dollars.

As a result, when I edit, I am scrupulous about deleting the word “obvious.” Some words with which I replace “obviously” are “surprisingly,” “unexpectedly,” “contrary to our hypothesis,” and “interestingly.” Whether most science writers do so because they are conscious of the legal implications of the word “obvious” or because they are copying the lingo they have read throughout their professional lives, it is materially important to qualify a result as surprisingly non-obvious.

I think correspondence is an excellent opportunity to remind and educate our colleagues about the regulatory impact that one small word can have.

DEAR KELLEEN: You might take a look at the discussion in Medical English Usage and Abusage (pp. 37-38) and at the correspondence in this issue on the very same issue. (Do I hear an echo?) Although at one time there may have been a difference in usage observed, the difference is now so blurred that many writers no longer use the tail except, as I wrote in the book, in certain duos such as classic and classical, historic and historical, clinic and clinical. Physic and physical are part of this laundry list.

No one has ever satisfactorily explained to me why “pharmacological” is different from or preferable to “pharmacologic.” Ditto for “physiologic,” “epidemiologic,” “biologic,” and a host of other words. The nub of the matter is that when it makes no difference, my recommendation is not to use the vestigial tail (“vestigial” because, like the human appendix, it no longer serves a useful purpose).

The tailed and untailed words appear in Stedman’s Medical Dictionary (17th ed.), as well as Webster’s Third. I didn’t find “pharmacological” in Dorland’s Illustrated Medical Dictionary (29th ed.) which cites only “pharmacologic.” Preference is not given to either version in either of the other two tomes. Both usages would be correct, but observe the same caveat as above: Be consistent throughout any one document.

DEAR EDIE: I wanted to point out (politely) that the word is right there in Merriam-Webster’s dictionary. That’s a tough point to argue.

My guess is that you’ve addressed this issue before [you can say that again!], and I missed it. Did I just cave in to a semantic bully, or is there some documentation somewhere on this?

KELLEEN FLAHERTY
Jamison, Pa.

DEAR KATE: I cannot remember how. “Pharmacologic,” he insisted, was the correct term. “Pharmacological,” he said, wasn’t in Stedman’s. But is that enough proof? Since that intimidating confrontation, I have steadfastly taught at the University of the Sciences in Philadelphia (USP or USIP) that there is no such word. My students balk at this, point-

DEAR KATE: The subject in your e-mail message (“me, myself, and I”) was exactly on target. “That would be me” is not only acceptable but preferable. We don’t want to sound like stuffed shirts. In the trade, there is what is called idiom, for which there is no grammatical rationale—only a reasonable one. The fact that “everybody says it” is not always a good excuse. Idiom and usage are ordinarily good reasons, particularly in this instance.

DEAR KATE: In response to a question during a meeting about whose turn it was to present a topic, we debated whether the correct response should be “That would be me” or “That would be I.” My money is on the former but, of course, my real response was that I didn’t want to present at all. Please enlighten us.

KATE WOODWORTH
Arlington, Mass.

DEAR KATE: The subject in your e-mail message (“me, myself, and I”) was exactly on target. “That would be me” is not only acceptable but preferable. We don’t want to sound like stuffed shirts. In the trade, there is what is called idiom, for which there is no grammatical rationale—only a reasonable one. The fact that “everybody says it” is not always a good excuse. Idiom and usage are ordinarily good reasons, particularly in this instance.

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Even good writers differ as to whether to use the nominative or the objective case:

The choice between “It is I” and “It’s me” is a choice not between standard and nonstandard usage but between formal and colloquial styles. (Trimmer and McCrimmon, 1988)

So instead of the old choice between right and wrong we are now choosing a style; it is a choice that is much closer to the reality of usage than the old one was (Merriam-Webster’s Dictionary of English Usage, 1989).

I sometimes joke that when my phone rings, my caller always knows who’s at the other end: “It is I,” I say, speaking facetiously (it’s a habit I can’t shake). But in ordinary conversation, I would never say that, not wishing to feel sheepish or silly. In addition, I am a woman of the people, not a purist—only a semipurist.

The French “C’est moi,” which means “it’s me,” is often used as the rationale, but that has no relevance in English. Latin grammar too is often mistakenly used to make or “prove” a point in English, but that too is irrelevant; the grammars are worlds apart.

Here are some examples from Webster’s Third of the fortuitous use of the nominative and objective (a.k.a. accusative) cases by good writers:

Let me urge you not to forget that it was I [nominative]. ... whom you burdened with the job. (George Jean Nathan, 1932)

It was she [nominative] who ... paid no longer any attention to religion. (William Styron, 1982)

It is not me [objective] you are in love with. (Sir Richard Steele, 1712)

And if anybody had to feel of the hot water and get burned it was always her [objective]. (Will Rogers, 1924)

If I were him [accusative] I would put in everything now. (Ernest Hemingway, 1952)

As Merriam-Webster’s Dictionary of English Usage points out, “the strongest force operating in favor of it is me is probably that of word position: the pronoun after is is in the usual position for a direct object, and the objective case feels right in that position.”

I rest my case.
Why People Die by Suicide
Thomas Joiner
Cambridge, MA: Harvard University Press, 2005, 276 pp. $24.95

In Why People Die by Suicide, Florida State University professor of psychology Thomas Joiner presents his personal and scientific quest to find answers to the ever-present question that overwhelms bereaved survivors—why. Despite his training in psychology, he found himself asking this question when his own father committed suicide. Unsatisfied with current views on suicide as an act of weakness, he set out to challenge this notion and put forward that perhaps it was toughness—not weakness—that was integral to completing the suicide.

Joiner presents 3 main factors that come into play for a person to consider, attempt, or carry out death by suicide: a perceived sense of burdensomeness on others, a thwarted connectedness with others, and an acquired ability for enacting significant self-harm. The first 2 represent frustrations of fundamental needs of humans—“to feel effective with and influence others.” He cites evidence of how perceived burdensomeness and thwarted connectedness can contribute to suicide by pointing to correlations between suicide rates and immigration, times of national crisis, and the performance of local sports teams. He also examines the demographics of suicide, explaining how perceived burdensomeness and thwarted connectedness may account for differences according to race, gender, and age.

The acquired ability to enact self-harm is a third facet that completes the ability to attempt suicide. As repeated dangerous experiences can become unthreatening, so can multiple suicide attempts allow a person to “work up to death.” Over time, the ability to withstand high levels of pain and fear erode the innate instinct for self-preservation.

Joiner examines the subject of suicide from a number of angles—including existing theories, contributing neurobiological and genetic factors, and societal patterns. As a scientist and clinician, he builds his argument methodically, supporting his theories with evidence drawn from his own research, clinical anecdotes, world history, current events, medical literature, nature, and pop culture. He repeatedly ties the information back into his thesis, which at times seems overdone, but mostly serves to reiterate his main messages. As a survivor of his father’s suicide, he weaves in a frank, compassionate voice that complements the dissertation-like nature of the content.

The book is referenced and indexed, making it a useful tool for research on suicide. It is appropriate for health care practitioners seeking objective information, professional insight, and guidance on how to help prevent or treat suicidal behavior. For those seeking to cope with a personal loss, it provides answers to some questions and inspires the courage to ask more. For those fortunate not to have been affected by suicide, it serves as a reminder of the importance of the human need to belong to and contribute to society. In Joiner’s words, “Keep your friends and make new ones too—it's strong medicine.”

— Darlene Grzegorski, MS

Darlene is a medical writer specializing in sales training with Educational Resource Systems, Inc., in Red Bank, NJ, and volunteers as an editor for the Delawriter, the newsletter of the AMWA Delaware Valley Chapter.

One Man's Century: With Pen, Brush, Fiddle and Scalpel. Confessions of a Near-Centenarian with Five Lives
Harold Laufman, MD, PhD
Victoria, British Columbia: Trafford Publishing, 365 pp. $28.54, paperback

Once you start reading this book you won’t want to put it down. It is a riveting account of the author’s 5 lives in one, engagingly written with touches of light humor. Laufman, who celebrated his 95th birthday in January, served as AMWA President in 1969-1970.
school, he did caricatures of his professors that were widely exhibited. Among his World War II anecdotes is the one about how he almost killed Jascha Heifetz. His other true wartime stories are illustrated by cartoons that bring humor to some of his harrowing front-line experiences as an Army surgeon. In a more serious vein, his Faces of War portraits of wounded soldiers were prominent in postwar exhibits.

During the last days of overseas Army duty, Dr. Laufman painted a series of oil paintings, Impressions of Disease, allegorical portrayals of 10 common disease states, now on permanent exhibit in the Museum of the Learning Center, University of Chicago.

Among his postwar experiences, we find the sensitively written one about how he met his future wife, Marilyn. As a young widower, he raised his 2 musician daughters practically single-handedly while fully engaged in the demanding duties of surgical practice and research. Many years later when he lost his lovely second wife, June, he mourned mightily, but his account of these tragedies records no bitterness or envy, only love and hope.

Throughout his entire life, up to and including the present time, he continues his intense appreciation of the arts and continues with chamber music despite age-related visual impairment.

Another way in which this book stands apart from other autobiographies is the easy, conversational style in which Dr. Laufman describes his lives. In his relationships with others, his descriptions are candid but kind, frank but not deprecating, realistic but always forgiving.

In his mid-50s, he accepted an appointment to move to New York to head up the Institute for Surgical Studies and a professorship in surgery at Albert Einstein College of Medicine. Here he applies his lifelong interest in engineering to research into the surgical environment, and after his career in vascular surgery, together with 2 bioengineers he founded a consulting firm that ultimately served more than 300 hospitals worldwide.

A brief but clear stage-setting of each era of the century is presented by a synopsis of scientific achievement orienting the reader to each period. A deliberate effort is made to steer clear of politics, religion, or war. On the subject of war, he writes, “Technological improvements, in all their glory, have only altered how war is carried out, but have not affected whether or not war should be waged.” And, contrary to what one might expect from the pen of a physician, Dr. Laufman does not prescribe, preach, nor hand out platitudinous advice on how to survive forever, as if one size can fit all. Instead, he devotes the last chapter to the subject of The Art of Aging, in which he suggests that if the reader finds any parallels with his or her own life’s journey, perhaps his disclosures can be helpful in paving the way through theirs.

The book ends with several simple truths on aging, clearly defined, and the statement, “If I leave with any complaint, it is that my century has passed all too rapidly.”

Any profits from the sale of the book will be donated to the Laufman Educational Fund, Division of Biological Sciences, Department of Surgery, University of Chicago.

— M. J. Schiffrin, PhD

“Red” Schiffrin, like Dr. Laufman, is both a nonagenarian and a former president of AMWA.
A Family Album: Poetry by Dan Liberthson  
San Francisco, CA: Cut Tongue Press, 2006, 144 pp. $24.95  

Dan Liberthson is a Fellow of AMWA and recipient of the President’s Award to AMWA in 2005. His poems have appeared in previous issues of the AMWA Journal and have been published in Neovictorian/Cochlea, South Coast Poetry Journal, Black Buzzard Review, and others.

The collection of poems A Family Album expresses moments in his life as the author reflects on photos. In the beginning, Dan tells how he was sorting through clutter in a closet on a rainy January weekend. “In a worn cardboard box unopened through many moves were 3 battered photo albums. I felt I had to give them the attention they deserved after long neglect and tell the story of the labyrinth that was my family.”

The collection includes 36 poems that evoked random memories, although he organized the book not in chronological order but by family member. The topics that he addresses are personal, but he hopes “that the reader will relate them as common human experience, and be rewarded with empathy for and insights into people in your own life.”

Some of the poems have such down-to-earth titles as “Puppy Love” and “Dad Eats a Hard-boiled Egg.” One of the most poignant that was my favorite was from “Yom Kippur Dialogue”:

“They’re all dead, a voice said,  
And you can’t do anything about it.  
Another answered, yes you can:  
Remember them, make your mind  
A womb in which they gestate  
And are born again.”

Dan has included 2 CDs of his reading of the poems. His beautiful imagery but quiet tone is appealing to anyone who are struggling with the guilt of past relationships. Reading Dan's poems is an experience in healing.

For copies and CDs, contact: Dan Liberthson, P.O. Box 31581, San Francisco, CA 94127-0581, or visit his Web site http://liberthson.home.comcast.net.
The opportunity to network is a significant professional association membership benefit. AMWA offers multiple ways to get to know your peers. You may be familiar with AMWA’s annual conference and chapter conferences, which provide fantastic opportunities to interact with new and old colleagues. But what do you do if work deadlines loom or family commitments take up evenings and weekends? Is there no hope of networking? Of course not! AMWA has solved the time crunch concern by offering not 1 but 2 methods for online networking.

One way to network online is through the AMWA Bulletin Board, which is available to all members. The Bulletin Board software and design are new and freshly launched, so if you haven’t visited recently, I urge you to take a look at the sleek, user-friendly set-up. You can reach the Bulletin Board in 2 ways.

The first way is to click on “Membership” on the left-hand column of the AMWA home page (www.amwa.org), and then click on “AMWA Bulletin Board.” The second way is to enter your ID and password in the “Members Login” boxes, which are located on the bottom screen; then, under “Networking” on the “Members Only” page, click on “Bulletin Board” (see below).

Using either method, you will need to log into the Bulletin Board page using the instructions shown. Once you have accessed the Bulletin Board, a column of message topics for the day will appear. Click on the desired topic to view the content and poster’s ID. Across the top of the screen you will see a toolbar that includes buttons to reply to an existing message or to post a new message. Once you post a message, you cannot delete it. Topics on the Bulletin Board vary widely, from grammatical issues to queries about how to get started as a medical writer. Archived posts are searchable by key words, author, or posting date. To reach the archived posts, navigate to the Bulletin Board page and click the link for the archives. I encourage you to try the Bulletin Board. It is a good way to identify a roommate for the annual conference, bounce ideas off your peers, learn something new, or see what others are concerned about, all without leaving your chair.

The second online networking opportunity for AMWA members is the AMWA listserves. These listserves, which are essentially daily e-mail communications with a collection of your peers, are available only to AMWA members who subscribe. Subscribing is simple; log onto the AMWA Web site as a member, and then click on...
“Listerves” and follow the instructions. There are 5 topics to choose from:
- Pharmaceutical
- Freelance
- Editing-writing
- Educators
- Public Relations

The variety of topics enables you to select the issue or issues of greatest interest and ignore the rest. When you subscribe to a listserve topic, you will be asked to select whether you want to receive each person’s e-mail at the time they send it or whether you want to receive one e-mail that contains all messages sent the previous day (termed a digest). The number of e-mails you receive each day, when not in digest mode, varies with proclivities of your fellow subscribers. Some topics may generate more e-mail than others. I suggest selecting digest mode if you are disturbed by the thought of an extra 5, 10, or even 30 e-mails a day. If you want to reply to a post, choose “Reply” or “Reply to All.” For some computers you will need to enter the listserve address (for example, FREELANCE@LISTSERV.AMWA.ORG) to send the message to the entire listserve list. Once you send a message to the listserve, it cannot be deleted. If your interests change and you no longer want to receive listserve e-mails, unsubscribing is easy. First, log onto the AMWA Web site as a member, click on “Listserve” and scroll down until you see “Manage Your Subscriptions.” Each listserve topic has a corresponding box that shows “Yes” or “Digest” if you are subscribed or “No” or blank if you are not subscribed. Simply delete the word “Yes/Digest” and type in “No,” and you will be unsubscribed within 2 business days. Please note that you cannot unsubscribe by sending an e-mail that says ‘unsubscribe’ to the listserv. Anyone (even those not subscribed to the listserve) can search archived listserve messages the same way that archived Bulletin Board posts are accessed. To search the archives, navigate to the listserve page and click the link for the archives.

The biggest difference I have found between the Bulletin Board and the listserve after using each for several years is that the listserve tend to have a strong sense of community. From participating in a listserve, I have learned many things that directly influence how I conduct my business, such as contract concerns, where to buy insurance, pros and cons of available software, and much more. I also have met new friends and empathized with their ups and downs. If you find that the freelance life lacks “water cooler” moments, you will find these moments on the listserve. In comparison, the Bulletin Board allows your posts to reach more people than does the listserve. Another difference is that you choose when to participate in the Bulletin Board because you decide when to log on, as opposed to receiving e-mail(s) every day. If you have only an occasional question or periodic interest in catching up with your peers, you may enjoy participating on the Bulletin Board.

In addition to networking, AMWA offers a number of benefits for members, and several new, exciting ones are available through the AMWA Web site (see below).

### Exciting New AMWA Benefits

**New AMWA discounts renegotiated**


- More than 400 AMWA members attended the first AMWA Webinar simply by clicking a link and dialing the phone. The Webinar, which was free to members, was recorded and is available on the AMWA Web site ([www.amwa.org/default.asp?l=t&Mode=DirectoryDisplay&id=361](http://www.amwa.org/default.asp?l=t&Mode=DirectoryDisplay&id=361)).
In Memoriam

John P. McGovern, MD
June 2, 1921-May 31, 2007

Long-time AMWA Member and Benefactor

By Lynn M. Alperin

Dr. John P. McGovern, outstanding allergist, scholar, and philanthropist, died of pneumonia in Galveston, TX, on May 31, 2007. A member of the AMWA Southwest Chapter since 1961, Dr. McGovern was elected an AMWA Fellow in 1967 and received the association’s highest honor, the Harold Swanberg Distinguished Service Award, in 1988. He expressed his commitment to excellence in medical writing by establishing the John P. McGovern Award Lectureship for the Southwest Chapter in 1982 and the John P. McGovern Award, which was first awarded at the AMWA Annual Conference in Montreal, Canada, in 1985.

Dr. McGovern was born in Washington, DC, on June 2, 1921. He earned his bachelor of science and doctor of medicine degrees from Duke University. He interned at Yale-New Haven Hospital, served 2 years in the Army Medical Corps, and pursued postgraduate work at Guy’s Hospital in London and L’Hôpital des Enfants Malades in Paris. Returning to the United States, he continued his training at Duke University Hospital, Children’s Hospital in the District of Columbia, and the Boston Children’s Hospital. Later, he served as a John and Mary R. Markle Scholar in Medical Science at George Washington University School of Medicine and at Tulane University School of Medicine. He was board-certified in both pediatrics and allergy.

In 1956, Dr. McGovern moved to Houston, joining the faculties of Baylor College of Medicine and the University of Texas Health Science Center at the burgeoning Texas Medical Center. He founded the McGovern Allergy and Asthma Clinic, which subsequently became the nation’s largest private allergy clinic. His philanthropic John P. McGovern Foundation has endowed annual award lectureships, professorships, and scholarships for countless academic institutions and scholarly organizations. Diverse scholarly and educational venues in Houston bear his name. In 1985, he received the Private Sector Initiative Commendation from President Ronald Reagan for his “lifetime of meritorious service in medicine and generous contributions to his community.”

At the time of his death, Dr. McGovern had received honorary degrees from 29 American colleges and universities as well as awards and decorations from foreign countries. He was the first American citizen to be awarded the Kemal Ataturk Gold Medal Distinguished Service Award by the Government of Turkey in 1989. A member of Phi Beta Kappa, Alpha Omega Alpha, Sigma Xi, and numerous other honorary and professional societies in medicine, science, and health education, Dr. McGovern was a past president or chief elected officer of 15 such organizations, including the American College of Allergy and Immunology and the American Osler Society, of which he was the principal founding member in 1969. His service to government agencies was extensive, including a 4-year Presidential appointment to the Board of Regents of the National Library of Medicine, which he chaired in 1973-1974 and to which he remained an active consultant.

In many ways, Dr. McGovern resembled the handful of physician-writers who founded AMWA in 1940. He was the author or coauthor of 252 publications, including 26 books, in the medical sciences, humanities, and health promotion and disease prevention. He had been the editor, the associate editor, or a member of editorial boards of more than 23 scientific journals.

Known worldwide as a champion for patient-centered and scientifically based medicine, Dr. McGovern would probably most like to be remembered as a medical humanist. He held an abiding interest in the history and philosophy of medicine. His philanthropic endeavors reflect his passionate devotion to the teachings and ideals of Sir William Osler, the Canadian-born physician who became the most respected figure in Western medicine around and well beyond the turn of the last century. One of the founding fathers of John Hopkins University School of Medicine, Osler published The Principles and Practice of Medicine in 1892; this classic textbook of medicine enjoyed popularity for more than 4 decades. Osler was a prolific and witty writer and a great proponent of the humanities in medicine. In 2001, Dr. McGovern paid his ultimate tribute to Osler by creating the John P. McGovern Academy of Oslerian Medicine at the University of Texas Medical Branch at Galveston. In his final years, Dr. McGovern took great pleasure in reports of the academy’s manifold activities to teach and promote Oslerian ideals of compassionate and scientifically sound medical care.

Dr. McGovern has left AMWA an enduring legacy. The members of AMWA have been fortunate indeed to be recipients of his benevolence. We extend our deepest sympathy to his loving wife, Kathrine.
The AMWA Journal is committed to providing AMWA members with high-quality peer-reviewed articles, professional news, and features. The Journal thanks the readers here for their close reading of the Journal and for their feedback on articles in recent issues. The Journal encourages all readers to use the Letters to the Editor section as an open forum for comments on the content of the Journal.

We are writing to express our concern about the article “Write It Down ... Every Step of the Way” (AMWA J. 2007;22:31). Although it was not listed in the Table of Contents, this piece was structured as an original article, even though its content was overtly promotional and featured a company logo. Given the second tag line, this was not even a thinly disguised advertisement for the company the author described.

We understand that this article underwent the standard review process and was accepted as a regular article after some discussion by the Editorial Board. As members of AMWA and readers of the Journal, we want to register our concerns about the decision that was made to publish this article as a nonadvertisement. We believe it should not have been accepted (or published) as it was, considering its promotional focus. An original article on the same topic would have provided information about similar companies and resources, along with a more thorough description of what such companies, in general, do.

We suggest that the AMWA Journal consider developing a policy on the publishing of such “advertorials.” When we run what is essentially a free advertisement in a publication that accepts paid advertising, we violate good journalistic standards and risk alienating those who are paying for their ads to appear. Most medical journals do not accept advertising disguised as education, and we believe that our journal should do likewise.

We hope you will accept our concerns as constructive. We believe the AMWA Journal should be something that all AMWA members can be proud of and would like to see it maintain the highest of journalistic standards.

Sincerely,
Liz Wager
Publications Consultant
Bucks, United Kingdom
Art Gertel
Beardsworth Consulting Group, Inc.
Flemington, NJ
Tom Lang
Tom Lang Communications and Training
Davis, CA
Barbara Good, PhD
National Surgical Adjuvant Breast and Bowel Project
Pittsburgh, PA

The Editor thanks Wager et al. for their comments. The article they note appeared in the Professional Development section of the Journal. When this section first appeared in the Journal (AMWA J. 2005;20:15), it was introduced with the following statement: “AMWA’s mission includes promoting excellence in biomedical communication, and in support of that mission, the AMWA Journal will now highlight conferences, educational programs, and writing competitions that can help members enhance the quality of their work and grow professionally. The Professional Development Resources section will also include brief profiles of relevant professional organizations to introduce other potentially valuable resources for AMWA members.” Since that time, the name of the section has changed but the goal has remained the same: provide information to help AMWA members expand and enhance their professional skills and knowledge.

The article of concern to Wager et al. was the fourth in a series of profiles, each focusing solely on one educational program or professional organization. Of course, there was no intent to disguise this article as anything other than an informative piece about the potential benefits of the educational program, similar to the previous articles in the series. We agree that the AMWA Journal should adhere to a standard of not accepting “advertising disguised as education,” and note that because the article appeared in the Professional Development section, which was designed and has been used to inform readers about such programs/organizations, we believe that standard remains intact. We appreciate the comments provided as the Journal continues its commitment to maintaining integrity and meeting the needs of our readers. Over the past 5 years, we have increased efforts to enhance the design and the content of the Journal, as we agree with Wager et al. that AMWA members should have a journal of which they can be proud.

References
2. Longjet J. Enhance your skills and keep your day job: the medical writing and editing certificate from The University of Chicago. AMWA J. 2006;21:117.
Although MaryAnn Foote and coauthors do an admirable job surveying the basics of present-day oncology (AMWA J. 2005;20: 52-58, and AMWA J. 2007;22:22-28), there was information omitted. Leaders in cancer research almost without exception now believe that cancer stem cells are the cause of most if not all types of cancer. Many lines of evidence support this conclusion, including my own work. For example, implantation of cancer cells does not propagate tumors; only implantation of cancer stem cells can do this.

A corollary is that the most effective and perhaps only way to achieve a pharmacologic cure of cancer is to control or eradicate cancer stem cells—otherwise they will continue to drive growth of new tumors. Worse, current strategies in clinical oncology are to use chemotherapeutic agents to kill rapidly dividing cells, but stem cells by nature do not proliferate rapidly and hence will not be targeted much by current chemotherapeutic agents. Strange as it may seem, chemotherapeutic agents are targeting the wrong cells!

The task, then, is to control or eliminate cancer stem cell populations. To this end, we will need to identify mechanisms by which cancer stem cells drive tumor growth and target those mechanisms. Identifying such mechanisms will, necessarily, require a way to identify stem cells and an understanding of mechanisms that give rise to the unique properties of stem cells in normal tissues and how these mechanisms become altered when a normal stem cell becomes a cancer stem cell.

Sincerely,

Jeremy Z. Fields, PhD
ScientificWritingServices.com
Freeport ME

References
In Memoriam

Lawrence M. Prescott, MS, PhD
July 31, 1934 - March 21, 2007

By Sharon Kirshen Prescott

Dr. Lawrence M. Prescott died at Scripps Memorial Hospital, La Jolla, CA, on March 21 at the age of 72 from complications related to lung cancer. A 28-year resident of San Diego, Dr. Prescott was a true Renaissance man, a highly reputed medical writer, and an internationally known infectious disease specialist and public health administrator.

In a sense, Dr. Prescott was a man for all seasons, having been a talented pianist, choral singer, and elocutionist in his youth, a notable scientist and World Health Organization (WHO) consultant in his early and mid-adulthood, and a prominent medical writer in later life.

After graduation from Harvard University, Dr. Prescott studied at George Washington University, where he earned a master's of science degree and a doctorate degree in clinical microbiology and public health and was elected to Sigma Xi for his academic and scientific excellence. He was awarded a National Academy of Science Postdoctoral Fellowship and carried out studies in microbial and human genetics at the Army Biological Medical Center in Frederick, MD.

On completion of his fellowship, Dr. Prescott joined WHO and spent 12 years as an infectious diseases specialist, a health laboratory services consultant, and a public health administrator in Southeast Asia. In India, he served as a member of the WHO Cholera Team, and in Indonesia he acted as the team leader of the WHO laboratory services group. He also served as the health laboratory services project manager in Thailand, where he helped to establish regional hospitals in all 84 provinces, planning the construction of the standard hospital, presenting training courses in the various laboratory disciplines to Thai physicians and laboratory technicians, preparing training and technical manuals for these courses, setting up a clinical pathology doctoral program at Chulalongkorn University in Bankok, and acting as the WHO proxy at international medical conferences in Thailand. Prior to leaving Thailand, the Ministry of Public Health, Government of Thailand, awarded Dr. Prescott the Ministry's Medal of Merit First Class for his exemplary service to the country. He resigned from WHO when his wife, Ellen, was diagnosed with a brain tumor. She died in 1981.

In 1982, Dr. Prescott began a second career as a medical journalist, and he joined AMWA that same year. Over the next 24 years, he had more than 6,000 articles published in medical and pharmaceutical magazines. Together with his new wife, Sharon, he was a contributing writer for numerous peer-reviewed articles for physicians and prepared meeting reports for clients around the world. Dr. Prescott was a multifaceted medical journalist. He had an eye for news and could write in nearly every area of medicine or science, reporting on the latest cutting-edge advances in a variety of medical disciplines. He was a mentor to many young people who wanted to enter the field of medical journalism.

Dr. Prescott also wrote in areas outside of medicine. He was the restaurant and movie critic for the Bangkok Business Times for several years. He wrote children's stories for The Strawberry, a Sanrio publication, and he published humorous poetry in Living in Thailand. In addition, he wrote the cookbook Curry Every Sunday with his first wife, Ellen, using recipes they collected from their travels in India, Indonesia, Burma, and Thailand.

Dr. Prescott was born in 1934 in Boston, MA, the son of Dr. Benjamin and Lilyan Prescott. In addition to his various professional interests, he was an inveterate philatelist and numismatist in his youth, enjoyed bridge and poker throughout his adult life, was a fan of the Boston Red Sox and the San Diego Padres, and had a special love for all his dogs. In his later years, Dr. Prescott derived his greatest pleasure watching his son, Marc, a CBS news reporter in San Diego, on television, and talking with his son, Gary, a middle school teacher, about education and sports. Most importantly, he enjoyed spending time with his loving wife, as well as with his pet miniature poodle, Nicole Angelique, and his son's dog, Maggie.

Dr. Prescott was predeceased by his first wife of 20 years, Ellen G. Prescott. He is survived by his second wife, Sharon Kirshen Prescott; a brother, Dr. Elliot Prescott; 3 sons, Adam Prescott of Tulsa, OK, and Marc Prescott and Gary Kirshen of San Diego; a daughter, Jennifer O'Neil, of Phoenix, AZ; and three grandchildren.
A temporary alignment of warm and cold air masses combined with a stable jet stream (and a whisper of good luck) to provide balmy sunshine and light breezes for my 1,000-mile journey to and from the summer meeting of the Executive Committee (EC). I was thrilled to be out riding with my knees in the breeze, and even more thrilled to be meeting my friends and colleagues yet again as we gathered from across the continent to meet in Milwaukee on July 13 and 14, 2007, for our final meeting of the year.

We kicked off our weekend with a break-out session wherein small groups discussed the future shapes of the annual conference and the Web site. Ideas abounded in unrestrained brainstorming, allowing the free-flowing creativity so necessary to really think outside of the current paradigm. All ideas were considered, and some were identified that will undoubtedly bring some new excitement and enthusiasm to conference attendees and visitors to our Web site. Watch for announcements and changes through the end of this year and into 2008.

After a quick break for a working lunch, we moved smoothly into a planning session devoted to the 2008 annual conference, which will be held at the Galt House in Louisville, Kentucky. (Yes—it’s never too early to start planning AMWA’s flagship event!) Sue Hudson, president-elect, chaired the session, in concert with next year’s annual conference administrator (who joined us by phone). The morning’s ideas combined with a fresh perspective and a plan to promote a fruitful discussion. I won’t share details here—after all we’ve not yet arrived in Atlanta—but I must confess that I am excited to see these ideas come to life in Louisville!

The afternoon was occupied by the conclusion of our Strategic Planning, started during the previous EC meeting. Despite the lengthening day and the energy already expended during the morning and early afternoon, our evening session was no less vital, our conversation no less robust. We ended the day with a well-considered and well-executed plan, and with the satisfaction of having completed a good day’s work.

But we were just getting started! Saturday morning came early as we began the EC meeting proper. Details of the activities of the various officers and department administrators will become evident as plans and programs are initiated, conducted, and concluded over the next several months. Suffice to say that I am pleased and proud of the work everyone has been putting into fulfilling their individual responsibilities, into working together with Donna Munari, AMWA Executive Director, and the headquarters staff on shared initiatives, and into working together to keep the business of the association moving forward. In my last column I noted several individual achievements. Today I’d like to make note of the efforts of the entire team.

As you read through the rest of this issue of the AMWA Journal, as you review your AMWA Updates, as you discover “What’s New” on the AMWA Web site, you will see the results of this team’s efforts. As you register for the annual conference (you have registered, haven’t you?), consider the volunteer time it took to secure the amazing array of top-notch presenters, the dedication and commitment of the dozens of workshop leaders coming to Atlanta, the hours of staff time required to compose the complex schedule of workshops, open sessions, meals, roundtables, and klatches, and you will catch a glimpse of the work being done by this team and countless other volunteers across the association. Consider the AMWA Update, the Journal, and the Web site themselves—and the time and careful attention needed to keep these communication channels open and flowing to you. Consider the low cost of membership renewal and conference fees compared with other organizations, and the work it must have taken to secure sponsorships and negotiate reduced rates to keep the cost to members low and the value to members high.

If you happen to run into one of the EC members or staff at the annual conference, please take a moment to say hello and thank you. I certainly cannot thank them enough!
Each year, AMWA bestows honorary awards to recognize outstanding achievements and contributions to both the association and the field of medical writing and editing. AMWA also hosts competitive awards for articles and monographs as well as for full-length books. In addition, with generous support from sponsors, AMWA presents student scholarships to provide students with the means to attend the AMWA Annual Conference.

The following AMWA members were selected this year as recipients of AMWA’s honorary and competitive awards. These recipients will be recognized at various events at the 2007 AMWA Annual Conference. Brief biographies of the recipients are scheduled for the December issue.

- **Harold Swanberg Distinguished Service Award**
  Elliott Churchill, MS, MA

- **Golden Apple Award**
  MaryAnn Foote, PhD

- **AMWA Fellowships**
  Jennifer Fissekis, MA, ELS
  Jim Hudson
  Donna Miceli

- **President’s Award**
  Peggy Robinson, BSc, ELS

- **Annual Conference Student Scholarships**
  (Announcement is scheduled for the December issue.)

- **Eric W. Martin Awards**
  **Lay Audience Article**
  Debra Bradley Ruder
  Life Lessons

  **Professional Audience Article**
  Florence M. Witte, MA
  Stories from the Field: Students’ Descriptions of Gender Discrimination and Sexual Harassment During Medical School

  **Monograph**
  Diane Shannon, MD
  Helping Your Patients Decide: Making Informed Health Choices about Hormonal Contraception

- **Medical Book Awards**
  Funded by the Dr. MaryAnn Foote Foundation
  (Announcement of all winners and reviews of the books receiving first-place awards are scheduled for the December issue.)

AMWA’s 67th Annual Conference
October 10-13, 2007
Atlanta, GA

Don’t miss out on the record number of educational events at this year’s conference.

Register by September 12, 2007, to save on the registration fee. Call 888-236-2427 to reserve a room at the Marriott Marquis hotel, the site of the conference.

See you there!
In November 2006, the Mid-Atlantic Chapter hosted a dinner meeting featuring Annetta Cheek, PhD, a world-renowned expert on plain language—a way to effectively reach your audience by saying what you mean and meaning what you say, simply, even when the information you need to convey is complicated. During the program planning meeting, Chapter President Jennifer Sizemore offered her husband Richard’s professional videotaping services and suggested posting Dr. Cheek’s taped presentation on the chapter Web site. Program planners agreed that this seemed like an excellent way to increase interest in the Web site and reach more members with news about the programs the chapter offers. Once Richard Sizemore and Dr. Cheek were onboard, we pursued our idea and hosted our meeting in a private room of a chain restaurant.

Overall, our plan was a resounding success. The taping did not disrupt the meeting and our goal of increasing Web site visits was achieved. The month the Webcast was posted, visits to our Web site were significantly increased compared with the previous month. The next month, Web site visits were more than double the average of all months in the previous year.

The Mid-Atlantic chapter had 2 advantages in putting this Webcast together. First, both our presenter and our video professional agreed to provide their services for free. Second, we had a private room where the video could be made with minimal disruption.

Creating and posting a Webcast is not too complicated. Here are some tips based on our experience.

**General**
1. Obtain your speaker’s permission before videotaping and posting the Webcast.
2. Secure a private room to ensure the best sound quality on the videotape and minimize disruptions during taping.
3. Choose a room with adequate space for the speaker, audiovisual equipment, and videotaping equipment. Consider whether you will want wide shots and close-ups and how much space is required for each. Remember to remove obstacles between your video camera and your speaker.
4. To cut costs, consider rooms in community centers and local libraries. Our dinner meeting and the subsequent Webcast were entirely covered by a modest registration fee of $15 per person because of generous donations of time by our renowned Plain Language expert and our video professional, and because we chose a modestly priced restaurant that charged us nothing extra to reserve its private room.

**Technical advice**
1. **Equipment:** A professional video camera is not required. A standard camcorder can be used. However, to pick up the audio, be sure to provide a microphone because a camcorder microphone is not reliable. Additionally, standard camcorders will not directly plug into most computers and record. Instead, a video encoder links the camcorder and computer. Encoding software is needed as well. Our videographer provided the video encoder and used Windows Media Encoder software, which is available as a free download.
2. **Taping:** Ask the speaker to keep movement to a minimum so that the video isn’t “choppy.” Our camera was placed on a tripod and left there throughout the presentation. But interactive taping with close-ups and various camera angles is possible for more experienced camera operators.
3. **Preparation for Posting:** The longer the presentation, the larger the file. To send a large file to your Webmaster for posting, you’ll need either a File Transfer Protocol (ftp) site or a flash drive. An encoding program allows you to edit the video. Using a basic AV switcher available at most consumer electronics retailers, you can even insert other video clips during the live encoding process (ie, while creating the video recording). The Windows encoding program we used allowed our finished video to be viewed in Windows Media Player, which many people already have on their computers.
4. **Taking this Idea to the Next Level:** Your chapter could develop a Webcast that plays your video alongside a PowerPoint presentation with slides that advance in a scripted manner in synchronization with your video, but a professional video specialist and Webmaster may need to be involved.
In addition to the Webcast, we also posted Dr. Cheek’s slide set to our Web site after converting it to a PDF file. Our initial data showed that the individual slides were attracting more attention than the video. Further analysis will determine if that trend continues, but this early evidence suggests that activity to chapter Web sites may also be increased by the posting of PowerPoint presentations from chapter events.

We announced the Webcast posting to our members only after our meeting so that members would not decide to skip the meeting and “catch the video later” and to give us a chance to test the material after posting. We also promoted the Webcast in another chapter’s electronic newsletter once our members demonstrated that they were able to access it successfully.

The Mid-Atlantic Chapter extends a special thanks to Dr. Cheek and Richard Sizemore of Viva Productions. Please view our Webcast at www.amwa-midatlantic.org/2006PlainLang.html.

Kay is the Director of Communications & Editorial Services at Blue House Publishing, Washington, DC.

Chapter Officers Discuss Increasing Volunteerism
By Vicki White
Administrator of Chapters and Membership

AMWA chapter officers met via conference call this spring to share ideas about a common concern—how to encourage members to take on more active roles in their chapters.

Many chapters rely on a small core group of volunteers to pull programs together. While balancing the demands on their careers and family life, these contributors do an impressive job of planning relevant curriculum offerings, scheduling interesting dinner speakers, arranging educational tours, and maintaining chapter Web sites. But these few volunteers know that with additional help, much more could be offered to their fellow chapter members.

On the conference call, chapter officers exchanged the following ideas for increasing participation of their membership:

1. Hold regular potlucks to maintain contact with members.
2. Emphasize to potential volunteers the rich networking benefits that come with active AMWA involvement.
3. Recognize active members in an awards ceremony.
4. Remind members that they can earn points toward an AMWA Professional Development Certificate through involvement in chapter activities.
5. Divide large tasks into several small tasks so more people can contribute without sacrificing too much of their free time.
6. Remind chapter members through regular e-mail or newsletter announcements of specific volunteer opportunities.
7. Create additional positions on chapter boards for liaisons to specific geographic areas. Such liaisons can encourage member participation in regions outside of the chapter’s main geographic areas.
8. Review responses from AMWA’s Willingness-to-Serve form that members completed to indicate their areas of volunteer interest. (The form is available on the AMWA Web site from the main Members Only page.)

If you are interested in becoming more involved in your chapter, contact your chapter officers to discuss opportunities. An up-to-date listing of officers is maintained on the AMWA Web site chapter information page.

Catherine Magill, a freelance and Vice President-President-Elect of the North California Chapter, contributed to this article.
Laurie LaRusso, principal of Chestnut Medical Communications, led an enlightening noncredit session on creating presentations—figures, slides, and posters—using Microsoft Office software as part of the 7th annual New England Chapter Conference held in May in Sturbridge, MA.

LaRusso began the workshop by surveying the 20 or so attendees about their familiarity with and comfort using Microsoft Office software. Not surprisingly, the class was a mixture of experienced and novice users. After reassuring the nervous novices, LaRusso launched into a 3-hour demonstration of how to create high-quality figures, slides, and posters for presentations.

**Figures**

LaRusso first discussed the advantages of using figures within manuscripts, noting that they convey concepts using fewer words and help the reader more easily understand and visualize trends in the data. She demonstrated how to create figures for manuscripts using the chart wizard tool in MS Excel. Although Word has a tool to create figures (the “Insert Chart” function) within manuscripts, LaRusso said she prefers the chart wizard tool in Excel because she finds it easier to edit and manipulate figures. The Excel figure can then be imported into a Word document and can be resized as necessary using the cropping tool in the “Show Picture” tool bar.

**Slides**

In discussing the creation of slides in MS PowerPoint, LaRusso suggested starting with one of the built-in template designs found in the format menu. She demonstrated how to create figures, including tables, graphs, and diagrams, and recommended using a visual data display about every third slide. She also discussed the animation feature and cautioned that animation can distract viewers from the data, so it should be used only when it clearly supports a particular concept, such as highlighting an important trend in the data.

**Posters**

Using PowerPoint to create posters was next on LaRusso’s agenda. She demonstrated the use of grids and guides to divide the poster visually and aid in formatting. She suggested that inlaid text boxes can help maintain the appropriate proportions for each of the elements of the poster (i.e., Background, Methods, Results, and Conclusion) and recommended allowing about 50% of the poster space for the Results section. LaRusso demonstrated PowerPoint’s “Create Figure” function and showed how to copy pre-existing figures from one PowerPoint file to another.

LaRusso used class exercises to reinforce the concepts presented during the workshop. For example, after learning how to create posters, workshop participants were asked to sketch out a poster using an abstract she provided, indicating the placement of sections and which figures to be included.

As one of the “nervous novices,” I felt confident by the end of the workshop that I could wrestle Excel into submission and emerge victorious with an effective figure, slide presentation, or poster in hand.

Diane W. Shannon, MD, MPH, is a freelance medical writer specializing in performance improvement and risk management topics.
Member Profile: Jim Yuen

Jim Yuen's youthful appearance belies the fact that he calls himself "retired." On the other hand, after 32 years working for 2 companies as a medical writer-editor, maybe he's entitled to some time off.

In 1974, after graduating from the University of California at Berkeley, Yuen joined the ALZA Corporation in Palo Alto, CA, as an information scientist. "There was no Internet back then, so we conducted information searches of Index Medicus by hand," he says. "Although my degree was in physiology, my boss, Connie Mitchell, found that I had an aptitude for editorial work. I became an editorial assistant, progressed to editor, and moved up the writing-editing ladder. When Connie retired, I became the manager of technical editing services."

Yuen's involvement with AMWA began on the chapter level, soon after he joined ALZA. Many members (including this writer) associate him with Asilomar, the idyllic conference center in Pacific Grove, CA, which is the home of AMWA's Western Regional Conferences. "The originators of the Asilomar Conference were former AMWA President Jerry McKee, Susan Eastwood, and Lottie Applewhite," Yuen says. "They did a great job in 1980 and 1981, but in 1982, when the Annual Conference was to be in Los Angeles, Jerry decided to skip Asilomar that year. I thought it a shame to lose the momentum of the Asilomar Conference, so I volunteered to take over and was both the registrar and director that year. I subsequently served as co-director and registrar several times."

In 1986, Yuen received an AMWA Fellowship and in 1987 became AMWA's Administrator for Regional Meetings, a post he held for 2 terms. He became increasingly active in the national organization, serving as Treasurer and as a member of the Constitution and Bylaws Committee. In 1992-1993, he was President-Elect and Nominating Committee Chair and in 1993-1994, he served as AMWA President.

His enthusiasm for AMWA was contagious, as former ALZA colleague and AMWA President Betty Cohen can attest. "I met Jim in 1977, when I joined ALZA," says Cohen. "He lost no time in telling me about AMWA, which I promptly joined. We rapidly formed a close and lasting friendship, both as colleagues and as collaborators during our years together on the AMWA Board and Executive Committee and in planning Asilomar Conferences. No matter how pressing the workload, we always made time for fun, even annually celebrating our mutual November birthdays at AMWA Annual Conferences. To this day, Jim remains a loyal and trustworthy pal and confidant."

Yuen has been Administrator of the Annual Conference twice, in 1989-1990, when the conference was again in Los Angeles, and the second time (1994-1995) in Baltimore. "Chairing the Annual Conference is a lot of fun," he says. "You just get a good group of people to work with, and everyone helps out. That's what I like about AMWA. It's a very collegial, very friendly group of people. You can call people up, you can form committees, and no matter how busy people are, they are wonderful to work with."

Yuen credits his AMWA associations with helping him make an important career move. In 1996, after almost 22 years at ALZA, he had begun to think about making a job change. "MaryAnn Foote, with whom I had worked on the Executive Committee, came to California in the early 1990s and started the Medical Writing Department at Amgen. In 1996, she called me up to say, 'I have a position open; how about trying for it?' I went to Amgen then and became a manager of medical writing. In my 10 years at Amgen, I moved from Associate Manager of Medical Writing to Associate Director of Global Regulatory Writing, reporting to MaryAnn, who was Department Head.'"

Dr. Foote left the company in 2005, Yuen shortly after. "I had been contemplating early retirement that year. I thought it a shame to lose the momentum of the Asilomar Conference, so I volunteered to take over and was both the registrar and director that year. I subsequently served as co-director and registrar several times."

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Dr. Foote left the company in 2005, Yuen shortly after. "I had been contemplating early retirement down the road," he says, "but MaryAnn's departure put my plan on a fast track. Now I enjoy myself immensely doing what I want to do when I want to do it. I set myself up as an editorial consultant, and if editing or a document review comes my way, I am happy to consider it. But I am so busy exercising, traveling, editing digital graphics, practicing piano, attempting to cook, and staying involved with AMWA, I can't figure out how I found time for a full-time job!"

"Jim is an editor's editor and a gentleman," says Dr. Foote. "He edits all my work, even now when we are both 'retired,' and I acknowledge him for it—the editing, not the retirement. He has served AMWA well, particularly as Treasurer for a long stint, and as President. He has been on all sorts of AMWA committees and adds quite a bit of value to them."

Yuen's advice to AMWA members is: "Get involved: The people you meet, the contacts you make, and the knowledge you gain are well worth the effort. Besides, participation is fun!"
In this issue, we introduce Eleanor Vincent, who joins Jennifer King as a writer of the essays in Page Break. Eleanor is a health education communications manager for Kaiser Permanente in Oakland, CA. Her passion is ensuring that health information is written in plain language, addressing the health literacy needs of patients, and assisting clinicians in communicating clearly. In addition, she has published articles, essays, poetry, and a memoir, Swimming with Maya: A Mother’s Story (Capital Books, 2004). She has won numerous awards for her work, including a Woman of Promise Award from the Feminist Writer’s Guild. The AMWA Journal welcomes her to Page Break.

Ants, Altruism, and Surviving a Wedding

By Eleanor Vincent, MFA

Seen from above, I imagine that our interconnected gray cubicles look something like an ant farm. I sit at my desk with a stack of tip sheets and brochures to edit. I hear the buzz of my fellow ants: their low phone conversations, the tap, tap, tap of their computer keys. We toil in an office on the 13th floor of a high-rise building in downtown Oakland, working for the largest combined medical group and health plan in the United States. The physicians and staff of Kaiser Permanente provide care for more than 3 million Northern Californians. Here in Health Education, we create and shape materials—on the Web, in print, via Podcasts or CDs—that help people live healthier lives. Like ants, we lay down a trail of information for others to follow.

Actual ants practice “kin altruism.” Most worker ants are sisters who are more closely related to each other than to the offspring they will never have. Wikipedia says that sterile workers toil to support the breeding and survival of their mother, the queen. They care cooperatively for her offspring. Altruistic indeed! Perhaps comparing workers in a vast health care bureaucracy to ants isn’t quite parallel—we aren’t sacrificing our reproductive independence in order to preserve a colony. But we are altruistic.

What inspired these musings anyway? It began the day my 26-year-old daughter Meghan announced her engagement. The words, “mother of the bride,” evoke a mélange of emotions: pride, terror, and resounding awe. How can my child possibly be so grown up? How can I possibly be so old? To manage my anxiety, I immediately sought advice from other MOBs, colleagues who have walked this road before me. As it happens, a health educator 3 cubicles down from mine hosted a wedding for her daughter less than 2 years ago. My boss, Caren, married off her daughter and son in the same 2-year period. Suddenly, I didn’t feel so alone.

With her trademark humor and élan, Caren shared information about the best bridal stores. She coached me on the fine points of paying (and tipping) vendors. When I was wringing my hands over how best to welcome out-of-town guests to San Francisco, Harriet, my health educator colleague and friend, immediately volunteered that she had put together goody bags for her guests and offered to help me do the same. Balancing the stress as well as the joy of my daughter’s wedding by sharing it with my coworkers helps me to be more present in my daily work.

When my daughter e-mails me a new horror story about the outrageous prices of wedding cupcakes ($4 apiece!), or complains that the hotel computer system is crashing and losing reservations, or frets that customers of the alterations firm she had planned to use say the seamstress wrecked their dresses, I restrain my panic. Instead, I head straight to Harriet’s cubicle or Caren’s office for a consultation and a good laugh. I always come away with a new resource or insight and with renewed determination to forge on. Without the sister ants who toil by my side, finding the path forward would be incalculably more difficult. Our particular brand of altruism—friendships based on hard-won life and work experience—makes achieving work-life balance a much happier and easier enterprise. With support and practical suggestions from Caren and Harriet and a host of other friends, planning my daughter’s wedding has become a shared enterprise.
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Practical Matters: Articles that provide advice to medical writers and editors at all levels of experience and in all types of practice settings (approximately 700-1,000 words).

Science Series: Articles that provide an overview of a specific anatomical or physiological topic or of a particular disease (approximately 3,000 words). Send suggestions for content to the Editor at amwajournaleditor@hotmail.com.

Case Studies: Scenarios providing advice on dealing with ethical dilemmas in medical writing and editing. Send suggestions for content to the Editor at amwajournaleditor@hotmail.com.

Sounding Board: Forum for members' opinions on topics relevant to medical writing and editing (approximately 1,000 words).

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Chapter Corner: Forum for chapters to share experiences and expertise. Send suggestions for content to Chapter Corner Editor, Tracey Fine, MS, ELS, at finemedpubs@earthlink.net.

Member Musings: Forum for members to share personal essays (related to medical writing and editing) and creative work, as well as news about member achievements. Send written work and member news to the Editor at amwajournaleditor@hotmail.com.

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Hard copies of figures, if necessary, should be sent (with complete documentation of the manuscript they accompany) by postal mail to:

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