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Teaching Nurses to Conduct the Physical Examination:
Becoming Mediators of the Divine Touch

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ABSTRACT

It is essential for nurses to acquire the ability to perform the initial physical and mental status examination of the client (patient) and to develop techniques of inspection, palpation, percussion, and auscultation that go beyond mere cold, clinical diagnostic touching to warm, human, caring touch.

The approach used to present the content of this course to nursing students will be based on a creationist view, one which helps the student realize the importance of the art of touch to detect deviations from normal health. Caring touch can also convey to the patient that the nurse recognizes the human being, not merely as a physical body but as a person who has a mind which has spiritual faculties.

To explore this subject, research was conducted which reflects both Adventist principles and a scientific point of view.

I - INTRODUCTION

Over the past few years nursing schools have been giving more specific instruction on how to conduct a physical examination. The study of signs and symptoms which point to a diagnosis of the patient's condition is now a permanent part of the nursing curriculum. The purpose of this paper is to encourage those practicing the profession of nursing to develop the ability to conduct a complete physical examination which includes the use of special techniques—palpation, percussion, and auscultation.

Such techniques require certain skills which should be practiced many times. These techniques can be learned and performed by nurses as well as by physicians. For many years nurses viewed the palpation technique as something that would be used exclusively by doctors as they were seeking information on which to base a physical diagnosis. But we should not think of the palpation technique as exclusively the domain of the physician. According to Oliveira (1990), the palpation technique can be classified as a touch instrument, one which can be used apart from other techniques. In the view of Silva and Belasco (1996), palpation can be used to assess the patient's physical condition and at the same time to communicate empathy and care. Palpation should be seen as an essential part of the examination process in order to detect deviations from health norms.

Not only during the examination but also during the process of treating the patient, the nurse applies the technique of palpation to many tasks, such as when administering medicine or caring for the patient's hygiene needs. In such cases, palpation, as a kind of touch, has been used without much difficulty.

While teaching my students how to conduct these techniques, because this was a research study it was necessary that I accurately observe how well they were able to apply the techniques as they conducted physical examinations. Therefore I adopted the method of observing their performance on video as they palpated the various parts of the patient's body. As I studied the video, it became evident which students had the greatest difficulties in applying the palpation technique to inspecting, percussing, and auscultating

the patient's body. It was seen that not only did the students have difficulty using the right procedure; most students refused to learn the technique!

I searched the literature, looking for some explanation as to why they found it difficult to touch the patient, even with a very "clinical" touch, as if their hand were merely a mechanical instrument. I observed that in most nursing procedures, the nurse does not examine or touch a patient without protecting her hands by using proper instruments and equipment, including hand gloves. However, the kind of "special touch," the caring touch, which I am recommending become standard procedure in patient examination and treatment, cannot be performed with the gloved hand. It is too "removed" from the patient. The patient needs direct contact with the nurse's hand.

It was discovered that the reason the students were having difficulty practicing the palpation technique was because they were experiencing an emotional barrier to having skin-to-skin contact. This fear of tactile contact might be related, according to Montagu (1971) to the period of infancy and early childhood. During this phase of human development, the quality and kinds of communication which the baby experiences set the pattern for the type of emotional and psychomotor responses the child will be comfortable using throughout childhood and adult life in its contact with others. During this phase, before the baby can talk, communication is primarily through skin contact. That is, Montagu's analysis indicates that students who were having difficulty touching may have also had difficulties in the patterns of touch they experienced as infants in their relationships with their parents or caregivers.

Touch is achieved by applying one of the sense organs, the tactile sense. This, with the other sense organs, makes it possible for us to communicate with the outside world, giving and receiving information. Touch travels through the skin (the body's protective barrier), carrying information through the network of nerve fibers to the brain. The brain processes this information, acts on it, and uses it to enable the individual to relate to the outside world.

Montagu (1971) believed that the "basic sensation of touch is essential to the physical survival of the organism. The human being cannot survive without oxygen and water. In the same way, no organism could survive without exterior cutaneous stimulation."

Reinforcing this thought, we find that Shinyashiki (1985) believed that humans develop a coherent view of the world—the world is a wonderful, or terrible, place—starting at birth, based largely on whether they experience gentle and abundant physical caresses, warm and caring physical touch – or whether they are touch-deprived, or even physically abused. Later their worldview is shaped more by "verbal touch.."

Shinyashiki refers to this kind of touch as a "caress," because that is what the baby needs, after birth, and even when it has become an adult. Human beings need a fond, caressing touch throughout life. I

believe that without frequent, caring touch, a person may become mentally disturbed, socially isolated, and could possibly even develop psychotic thinking and behavior.

Nursing students should develop the ability to use their hands as skilled clinical instruments; they should also develop the ability to work with their naked hands, without shame or preconceived ideas or emotional blocks from their past. Just as caring caresses are essential for the baby's healthy development, the patient may be at a physical or psychological stage in which his or her healthy development may depend on receiving caring touch.

Shinyashiki (1985) emphasizes that it is important for the human being to stay in contact with other human beings; that there is a "contact hunger" which needs to be satisfied, perhaps by a light caress on the head or shoulder or even a by a hug. Nevertheless, most of the time this need is hidden, and instead of exchanging physical touch we exchange only verbal compliments. Words cannot directly satisfy "touch hunger." Therefore we need to understand the necessity of the patient being physically touched during the physical exam, although usually a cold, clinical inspection technique is substituted.

Oliveira, et al (1996) concluded that nursing students had difficulties using the palpation technique because they did not have a clear understanding of how their fear of palpating the patient's body was related to their own touch deprivation or abuse during their childhood, nor did they recognize that in their family of origin there may have been an unspoken, unwritten "law" that touching is reserved only for family members, not for strangers. That is, touching the patient to perform an examination, or being touched by an examiner, seems to have a powerful affective message and meaning. Touch transmits our feelings—our fears, our phobias, our caring—whether we are conscious or unconscious of them.

In Brazilian culture, touch has a very strong emotional meaning. Anzieu (1989), writing about various and sometimes contradictory meanings of touch, commented on the different types of touch Jesus received from the women who followed Him wherever He went. There was the touch of His mother Mary. The touch of Mary of Bethany, Martha's sister, who sat at His feet to listen to His teachings. The touch of Mary Magdalene, "the sinner" who washed His feet and dried them with her hair. It is also commonly noted that the activity of touching, when between two persons of the opposite sex, traditionally has a sexual connotation—which contributes to the hesitance of female nurses to conduct a thorough examination of their male patients.

Nurses act as primary or secondary caregivers in their role on the treatment team. Therefore their activities will vary. If the nurse assumes the primary role in conducting the physical examination, his or her actions will be different than if she or he is in a secondary role, assisting the physician. But there are many situations in which the nurse can be the one to perform the physical examination. Based on the exam results, the treatment team becomes familiar with the patient's health, discovers where the patient's health

deviates from the norm, and is aided in developing a treatment plan. The orientation of the nurse is to care for the body—in a *caring* way, because it is the temple in which God abides.

The importance of understanding the body and its physiological functioning is emphasized by Ellen White (1973) in the book *Life at its Best*. She writes that parents must call their children's attention to the study of physiology and teach them its principles, including how to preserve the health of the body so as to preserve not only physical but also mental and spiritual faculties. White also counsels parents to help their children explore their natural gifts, so that their lives become a blessing to others and an honor to God. She warns that many youth are ignoring this branch of knowledge. She states that a practical knowledge of matters which affect life and health is actually more important than a knowledge of the theoretical sciences generally taught in school. Ellen White further warns us of how important it is for parents to pass on this message especially to their sons.

It is very important that the nurse works to prevent illness. However, if the patient is ill and if the nurse is skilled in detecting unhealthy conditions, then he or she can refer the patient to health care specialists.

The ability to detect deviations from healthy norms is vital. Some patients become anxious to know what is going on when they feel or see some change in their bodies. They quickly go see a physician to discover whether they are becoming ill with some life-threatening disease. Many others ignore potentially dangerous changes, hoping the changes are nothing to be concerned about, when, all too often, the changes are symptoms of a serious problem. For example, breast or gynecological cancer, which has killed a great number of women, could be treated and prevented if detected in its early stages.

In order to help nurses learn to touch and examine patients, both as skilled technicians, and as truly caring caregivers, let us further examine the issues involved in this teaching task:

1—All nurses need to perform comprehensive physical examinations. We will examine how I teach this to Seventh-day Adventist nurses.

2—We will examine why Seventh-day Adventist nurses need to learn how to give such exams and why it is proper not only to physically examine the patient but also to touch the human body. We will look more specifically at two aspects of this:

- a. We are whole persons. The nurse who touches the body in a caring way will also touch the patient's spirit—and thus will be a channel of the healing, caring, loving touch of the Great Physician.
- b. God created man and woman by palpating. By touching. By hands-on contact.

In order to discover a bibliography that related to my research, a search was made of authors who emphasize the importance of nurses learning to examine their patients while using a Christian approach. A Christian approach can implicitly or explicitly help the patient recognize God as the Creator of everything in this world, the Source of all knowledge and healing.

Therefore, one of the objectives of the physical examination is to approach the patient in a way which integrates the physical and the spiritual. Physical touch can become an analogy for the healing spiritual touch of the Master Healer. At times it will be appropriate to help the patient make contact directly with the Divine Healer.

When samples for the research were being collected, I felt it would be important, even essential, for the teacher of nursing students to present a creationist view—a view that lifts the teaching of science above the merely academic and alerts the student to the divine aspects of healing: a relationship with the Creator which can purify the student's mind to receive ideas that will most surely be of much greater profit than the mere study of science.

To achieve this objective, my strategy was to help the students understand that their purpose in performing the physical exam is not merely to discover the patient's physical illness but also to find a way to discover and touch the patient's heart and soul and spirit—to help the patient discover that all his or her needs can be met in a relationship with the Creator. I believe we need to prepare every nurse in our Adventist colleges to do this work, and, as far as possible, our nurses should introduce these techniques and principles into non Adventist institutions. The world is in need of change, new methods, new ideas—particularly a strong new hope and trust in the almighty God.

II—THE IMPORTANCE OF SEMEIOLOGY TO ADVENTIST NURSES

Semiology means “the study of the signs and symptoms of disease,” (*Dorland's Pocket Medical Dictionary*, Twenty-Third Edition) based on both objective and subjective data gathered from the patient and his or her significant others. Semiology permits the professional nurse to detect signs and symptoms in a particular system or location of the body which indicate deviations from normal health. Then the nurse can make a judgment as to a possible diagnosis, if necessary in complex cases—to be confirmed by a physician or advanced testing. The diagnosis will give the treatment team direction in what will be the proper care to give the patient.

Health professionals have practiced semiology since the days of Hypocrites. With the commercialization of medical practice, managed care, the trend toward socialized medicine, and with the many recent technological advances, there is a new age of medical diagnosis. In this new era, medical

treatment is much more expensive—five to ten times more expensive in the United States than in many countries which give comparable care but without the high cost of lawsuits and high-tech medical diagnostic equipment available only to the wealthy elite. This elitization of the inherent human right to medical attention has opened the door to many other kinds of health professionals, making it possible for them to learn to provide basic, yet adequate medical diagnosis and treatment—the simple kind once provided only by physicians, without the high-tech, high-cost equipment available now only in large medical centers. This is particularly true in third-world countries.

Among these many other health professionals who can learn to perform the physical examination of the patient, we might mention nutritionists, health educators, psychologists, and nurses. The first three will tend to specialize in those aspects of the physical or mental status examination which pertain to their specific profession. The nurse, because she is a health professional with a wholistic vision, seeks to develop skills which will enable her to perform all aspects of the physical exam.

To the nurse, the practice of semiology is very new. Only last year (1996), the nursing colleges in Brazil felt the need to introduce semiology as a specific discipline in their curriculum. Before then, it was taught as a part of various other disciplines in which it was given more or less attention, according to the interest of each school.

Semiology is normally practiced at the first contact which the health professional has with the patient. During this time the examining physician or nurse or other health professional must establish a relationship in which the patient feels the examiner has empathy for the patient's condition. The nurse begins to touch the patient; the patient may or may not permit the touching to continue, depending on whether the nurse conveys empathy.

According to Zago (1989):

- 1-the *anamnesis* (taking the past history of the patient and the patient's family) and
- 2-*performing the physical exam* constitute the first procedure when attending a patient. Depending on the ability of the professional who is the primary caregiver, the success of the diagnostic interventions will become evident, whether therapeutic or preventive. Zago also says that
- 3-*semeiography* is the most important act done in caring for the patient.

When these three are conducted by an attentive, competent professional—and not in a hurried or rushed manner—then these three initial procedures themselves constitute important therapeutic interventions, even before treatment is instituted! Such an approach may not be conventional medicine, but it can be an efficient “medicine,” because taking the patient and family history, performing the physical exam, and assessing the signs and symptoms—if performed with evident skill and caring—can itself reduce or calm the patient's tensions, fear, and the anxieties which are generated by illness, thus preventing these

emotions from generating further illness. A calm, happy mind can even stimulate the immune system, initiating the process of healing.

Even though these three procedures are recognized as very important to the patient, they have not been properly appreciated by medical professionals in Brazil. According to research done by Bour and reported on May 12, 1996, in the most-read newspaper in São Paulo (Folha de São Paulo), in 60% of the nursing or medical appointments, basic medical procedures were not done correctly—including incorrect methods of checking blood pressure, pulse, temperature, and the lymphatic system; improper auscultation of the lung and heart; improper palpation and percussion of the abdominal organs, and incorrect performance of neurological tests.

Zago (1989) singled out an unusual problem: trying to conduct the physical exam of a person who is suffering from amnesia. This mental state presents diagnostic peculiarities. Zago offers a logical, four-step, reasoning structure, based on a quantitative and qualitative scientific method, which is the examiner can use to deduce a correct diagnoses, even without much help from the amnesiac:

1. Collect and observe quantitative and qualitative data.
2. Develop a hypothesis, based on observing the patient's signs and symptoms, as to the likely course or prognosis of the patient's condition.
3. Revise the diagnosis as needed. In the ongoing dialectic which will develop between the examiner and the patient, new facts will appear which will support the initial hypothesis or which will help the examiner to revise and develop a more accurate hypothesis or provisional diagnosis and treatment plan.
4. Assess the patient's improvement after applying a diagnosis based on the above process.

Medical practice has been characterized by the development of many distinct specializations and forms of medical practice, largely do to the high level of technological development and advances in knowledge which, no doubt, contribute to helping the physician construct efficient diagnoses. However, these high-tech approaches are not compatible with the realities of the social structure in Brazil. Most cannot afford such high-tech medicine. Health professionals who are trained to apply the high-quality traditional techniques will be able to provide diagnosis and treatment that meets the needs of the masses more efficiently than can too-costly, high-tech medical practice.

To emphasize this point, we can consider the testimony of well-known professionals reported in the Folha de São Paulo (1996): Ricardo Cavalcante Ribeiro recommended the original, traditional maneuver for replacing a dislocated arm into a shoulder joint as still being highly effective; Bernardo Rangel Tura spoke in detail of the importance of using the old-fashioned stethoscope for auscultation (that is, listening to the patient's lungs or abdomen); Carlos A. G. Bijos quite effectively uses the old-fashioned eye-occlusion technique (a patch over the strong eye) to "repair" strabismus (that is, faulty alignment of both eyes);

Marcio Jobete Prado emphasized the importance of simple, direct, manual palpation of the prostate to detect cancer; Leoncio de Souza Queiroz Neto spoke of changing the use of modern, high-tech cauterization equipment to the simple “L”-form instrument. Neto affirmed that it is “not always advanced technologies that bring the most technically effective results.”

Franca (1996) cites work done on penitentiary patients by Doctor Antônio Dráuzio Varela, without all the latest equipment which he had been accustomed to work with in his modern clinic. Dr. Varela had trained himself to detect diseases with very good results, using only his stethoscope, for he couldn't count on there being much equipment in penitentiary facilities; their medical budgets were precariously close to zero, at best. Dr. Varela emphasized that in the penitentiary he used the most ancient methods of clinical diagnoses—those based on his own past experience and knowledge gained in his medical practice and on a great amount of common sense and intuition—techniques which are often lost arts when they are competing with highly developed medical technology. Continuing, Dr. Varela says that his patient's appointment is not limited to one in which the patient needs to take off his clothes, answer a few questions, and let his body be examined and manipulated by a specialist—all in a fast five minutes.

The physical exam is an important means of detecting many diseases, particularly respiratory diseases. Similowski (1995) emphasizes the need of inspection and palpation techniques. He affirms that palpation and inspection of the patient are extremely important in the evaluation of respiratory conditions. Palpation and inspection are the starting points of diagnosis even in cases in which it is necessary to do an X-ray exam. In fact, these simple, hands-on and visual procedures could give the examiner information needed to decide whether an X-ray or other specialized diagnostic test is even necessary. This simple diagnostic approach may provide enough information to suggest the immediate need for a given procedure which will reduce or relieve respiratory problems such as a pneumothorax (in which a lung suddenly collapses); or perhaps the examiner, by careful observation and palpation discovers there is some other type of active respiratory deficiency or chronic obstructive lung disease. The examiner cannot decide what measures need to be taken unless she or he has observed, for example, the distention and immobility of the thorax, in which case the decision may be made to put the patient on a mechanical ventilator.

Similowski (1995) described what the health professional should carefully observe and consider when performing a chest exam: the patient's position; the form of the thorax; the respiratory dynamic; respiratory frequency; chest expansion symmetry; the mechanics and synchronicity of the movements of the abdomen; the muscles involved in the respiration process; the skin of the tracheal region; and chest sounds, such as rough sounds in inspiration (and sometimes on expiration). Note that the examiner can assess all these conditions simply through observation and palpation, including signs and symptoms of extrathoracic

oxygenation difficulties, such as: cyanosis (bluish skin color due to lack of hemoglobin), finger deformity, paroxysmal pulse, or various types of pulmonary obstruction.

The U.S. Public Health Service stresses the importance of the physical exam of the breast, oral cavity, pelvic organs, rectum, prostate, thyroid, and skin. They also stated that each of these examinations are high priorities, due to the high incidence of adult cancer. By stressing the importance of such examinations to increase early detection of cancer, they are working toward their objective, which is to reduce the incidence of cancer and to enable health professionals to completely eradicate from the body those cancers which are found early enough.

As we can see, performing the physical exam is one of the easiest ways to establish an early diagnosis of diseases such as cancer. Atteberry (1994) strongly agrees with the early-detection emphasis of the U.S. Public Health Service, particularly when referring to detecting vascular problems: only a physical exam will permit the examiner to diagnose this type of condition as precisely as can be done by an arteriogram. Cross (1995) presented research on the importance of the physical exam in evaluating the patient's nutritional state. A clinical study evaluating the nutritional state using an anthropometric measuring instrument (to measure body weight, size, proportions, etc.) versus traditional physical exam techniques showed both methods of patient assessment produced similar results.

Our body is the temple of the Holy Spirit; it should always be considered as such, in order to inspire us to preserve our bodies in the best possible health. It is the nurse's responsibility to help the patient realize this high privilege and duty. Nurses, as professionals in the field of health, work on many different health programs, in both government and non-government programs. In cases where a nurse is in charge of the program, the program can be structured from a nurse's point of view.

III—APPLYING PROPER TECHNIQUES FOR CONDUCTING THE PHYSICAL EXAM

In order to properly apply the techniques for conducting the physical exam, you should use with great precision your four senses: Observing, listening, touching, and smelling. The four senses could be augmented by using special instruments such as the stethoscope and ophthalmoscope, to better hear the chest and abdomen sounds and to examine the patient's eyes.

In addition to the basic measurements or assessments of the patient's condition which can be accomplished simply by using carefully the four senses, there are four fundamental processes which are applied when performing a physical exam. These are inspection; palpation; percussion; and auscultation.

a) Inspection

Of the four physical assessment skills, inspection is unquestionably paramount. It appears simple and so is often taken for granted. But this skill involves more than just looking at the patient. Inspection is

informed observation, or, looking with a purpose—keenly, intently, with an eye for relevant detail. This skill goes beyond what you see; you must also inspect by smelling, touching, and listening. For example, your nose may detect the odor of necrotic (or dead) tissue. By a touch, you can roughly gauge the temperature of the patient and texture of the patient's skin. Your ears can pick up noisy respirations.

For some types of inspection, you may need to use equipment such as an ophthalmoscope, an otoscope, or a speculum, to enhance vision or to gain visual access to an area of the body. Inspection draws on your most acute faculties. You need keen physical senses, adequate clinical knowledge, an agile mind that can quickly recall relevant past clinical experiences, and the ability to draw accurate conclusions quickly. You can be sure of one thing. You will never lack opportunities to practice inspection. By far the most frequently performed assessment skill, inspection comes into play every time a patient is examined.

As an astute observer, you will notice the appearance of a new sign or symptom—these changes in the patient may signal deterioration or improvement in his or her condition. Inspection is an ongoing process; it begins during the health-history interview, continues through the physical examination, and should not end until the day the patient is discharged. To be sure that each patient is inspected thoroughly and accurately, you should develop a systematic inspection method that can be followed routinely but which can also be adjusted for individual patients.

Sometimes you may *inspect and palpate* a patient simultaneously. For example, when the inspection of a patient reveals an enlarged scrotum, palpation may detect a unilateral, non-tender mass that feels like a bag of worms—a finding that suggest varicocele (varicose veins around the sperm cord). However, generally, palpation will be performed as the second step in assessing the patient, to rule out, or possibly confirm, suspicions raised during the inspection phase.

b) Palpation

Palpation involves the trained and skillful use of the sense of touch to obtain clinical information about the patient. With your hands and fingers, you can determine the size, shape, and position of structures as well as their temperature, texture, moisture content, and movement. All parts of the patient's body can be palpated, including tissues, bones, muscles, glands, organs, hair, and skin. Palpating helps check for growths, swelling, muscle spasm or rigidity, pain and tenderness, and crepitus (crackling sounds in the lung). You will perform abdominal palpation often, to detect such problems as a distended bladder, an enlarged spleen or liver, or a prominent upper-abdominal pulsation with lateral expansion; you can detect even the position of a fetus by palpating.

Like inspection, palpation relies on a sense that is important but often undervalued. Theoretically, anyone can touch or probe a human body with the hand to feel for a lump or some other abnormal sign. However, only a knowledgeable and experienced health-care professional can perform such an examination

thoroughly and systematically, while causing the patient as little discomfort as possible. You must remember that touching a patient is apt to elicit fear, embarrassment, and other strong emotions. Be sure to explain what you're doing and why, as well as what the patient can expect, such as discomfort. Make sure your hands are warm. Try to get your patient to relax any muscular tension or guarding (in which the patient tries to guard against pain by tensing the muscles of the area you are trying to palpate). To the patient, it may feel like poking the sore spot. Tense muscles can interfere with the examination, making it impossible for your palpation to give you the diagnostic information you need. To help the patient relax, instruct him or her to breathe deeply, through the mouth. If you've identified tender areas, palpate them last.

Part of the skill of palpation is in knowing what areas of your hands and fingers to use. All parts of your hands and fingers are not equally sensitive to all sensations, such as temperature. For example, you might suspect that your patient has an elevated surface temperature over a sprained ankle, or a lowered surface temperature in his or her hands, due to poor circulation. To investigate these and similar suspicions, use the back of your hand or fingers, because the skin there is thinner and more sensitive to temperature. You may find it helpful to palpate the suspected area with the back of one hand, while palpating an unaffected area with the back of your other hand. Then switch hands to confirm the difference you perceive between the two areas.

For discriminating skin surface textures, first use your fingertips, to detect general differences, and then use the back of your hands and fingers for finer distinctions. Use the pads of your fingertips to determine the position, form, and consistency of structures—to palpate lymph nodes, for example. For determining muscle and tissue firmness, as well as joint positions, use your thumb and index finger to grasp the body part. To detect vibrations (such as thrills or fremitus), use the palmar surface of the metacarpophalangeal joints—the ball of your hand (not the palm nor the heel of the hand).

c. Percussion

Percussion involves tapping the body surface lightly—with a sharp, quick motion—to produce sounds that can help determine the size, shape, position, and density of underlying organs and tissues. This technique seems to be the physical assessment skill with which nurses are least familiar. Here's how it works: Percussion drives sound into the body by causing the body surface to vibrate. The examiner then listens and feels for various characteristics of the returning sound, which will reflect the nature of the body cavity's contents.

Place only the distal phalanx of the pleximeter [the plate that will be struck] firmly in contact with the patient's body. Maintain this contact after a tap by the plexor [the percussion hammer—which could be a metal-and-rubber hammer, but could also be the tip of your finger, used as a hammer], then immediately

remove the plexor. If the plexor remains on the skin for even a second or two after striking the pleximeter, the resulting sound will be muffled—much as the sound is damped if you hit a xylophone and do not immediately remove the hammer from the musical wooden bar.

A light tap generally produces the best percussion note. A too-forceful blow may obliterate the sound, besides making the plexor (which could be your finger) sore. [Demonstrate percussing with the finger.] Keep the fingernail of your plexor-finger trimmed to prevent damage to the area you are percussing or to the pleximeter [the plate you are percussing]. Percussion notes don't need to be loud to be useful; equally important are the pitch, duration, and quality of a note, for which lighter percussion is often superior. (However, excess adipose tissue may dampen a normal percussion note. You may have to be more forceful in examining patients who are obese or who have large muscle mass.)

You shouldn't have to percuss in an area more than two or three times before moving to another area. If you have to percuss the same area repeatedly to produce a meaningful note, check your technique. Needless to say, keep external noise at a minimum so you can detect changes in percussion notes. Remove all your jewelry too, such as rings, bracelets, or a loosely fitting watch that might make noise while you're percussing.

d) Auscultation

Although you can perform auscultation directly over a body surface, using only your ear, the preferred method is indirect auscultation with an acoustic stethoscope. This instrument conducts sound to the ears (but does not amplify it), while blocking out environmental noise (see: The Acoustic Stethoscope).

Before beginning auscultation, make sure your stethoscope is in working order. Air leaking from a damaged bell or diaphragm, or from cracked ear-tips or tubing, is common. Don't overlook such a leak. It can let external noise into the stethoscope, decreasing sound volume by as much as 10 to 15 decibels.

Remove all sources of potentially interfering sounds. Close the door, turn off the television or radio, and ask the patient not to talk. Warm your hands and the stethoscope heads before auscultation, so your patient doesn't shiver, which can produce rale-like sounds. Make sure the stethoscope is open to the listening end (the bell or diaphragm). Which end you use depends on whether you're assessing high or low frequency sounds (see: Using the Stethoscope Heads Effectively.) Hold the bell or diaphragm firmly, without moving; otherwise, sounds from the movement of intercostal muscles joints or skin may occur, possibly mimicking a friction rub.

IV—INTEGRATING FAITH AND LEARNING

As we introduce the physical examination techniques to nursing students, we should emphasize that God, when He created man and woman, used many techniques, but the one most used is believed to be

touching, that is, palpation. God Himself took clay in His hands and modeled each structure and part of our body. In presenting the subject of palpation, it can help the nursing student be willing to touch each part of the patient carefully and without embarrassment, if he or she remembers that each part of man, each part of woman, was touched by the hands of God as He created Adam and Eve. When modeling the nose, He used His fingertips. Think how He created each little lymph node. How carefully the nurse must examine each lymph node, feeling the size of each to see if any has become abnormally enlarged, indicating infection. Think of the tips of God's fingers, smoothing the clay of Adam's skin as He created it, thin and smooth, with its many and varied textures all over the body.

God used not only the palpation technique; He also used the inspection technique—with which He observed each detail of what He was modeling, perhaps even remodeling the parts that He decided to redesign for better fit or greater beauty. Such careful inspection the nurse applies in her examination of the patient.

In order to help us adequately understand how the body is functioning, God even built in mechanisms within the body that will make sounds that can be perceived by auscultation. For example, cardiac sounds can be heard by listening to the heart. By listening to the movements of the heart, the skilled clinician can understand what these movements mean: they can be signs and symptoms of a healthy heart or of defective valves, heart failure, faulty rhythms, and so on.

The touch technique was used by Jesus during His ministry on earth. He often touched people with His bare hands. Ellen G. White tells us that Jesus devoted more time to healing the sick than to preaching. In one passage, she describes the occasion when Jesus went to the fisherman's home at Capernaum. Peter's mother-in-law was lying sick in bed with a "great fever." Her friends quickly told Jesus about her illness. Jesus touched her hand, and immediately the fever left her, and she arose and ministered to the Savior and His disciples. See Luke 4:38; Mark 1:30; Matthew 8:15.

In the same book, we read that Jesus took the children in His arms. He laid His hands upon them and gave them the blessing for which they came. This greatly encouraged and comforted the mothers.

The touch of Jesus signified much. When He was passing through a large crowd who were squeezed against Him as they walked along together, a feeble woman who was suffering great pain touched His garment. He noticed that touch. He recognized it as the touch of faith. Jesus said, "Somebody hath touched Me, for I perceive that virtue [the healing power of love] is gone out of me" Luke 8:46. Ellen White writes in *The Ministry of Healing* (p. 16) that "He could distinguish the touch of faith from the casual touch of the careless throng. Someone had touched Him with a deep purpose and received answer."

Jesus, in His life on earth, is the model mentor and motivator for nurses. We can think of Him and His caring, healing touch when we need to use our hands for palpating a patient. Our touch influences our

patients. Nehlsen-Cannarella (1997) pointed out the importance of touching in the healing process, because it helps the physical body communicate with the depths of the brain's spirituality and sense of joy in the experience of being loved and cared for; as the nurse's touch communicates caring love, the patient experiences that compassion and feels a renewal of spirit which stimulates the immune system to make real, measurable, healing, mind-body connections. Nehlsen-Cannarella believes that touch is important not only in the healing process but also as a method of *preventing* disease, as *a basic principle* of disease prevention! This kind of interaction between mind and body is essential because of the influence of the brain in activating the immune system, an influence exerted by activating the hypothalamus and pituitary—which can enhance immune function—or in the absence of love, can suppress immune functions, bringing on disease and premature death.

V—CLOSING CONSIDERATIONS

Many physicians and other health professionals, such as nurses, study semiology only as an advanced scientific skill. Thus they are blind to the fact that their patients are complete and complex beings who are each created by God. The concept that the human body, with all its parts and all its systems, is a fully integrated whole—all parts indivisibly related to each other—was spelled out in detail as a biblical concept over two and three thousand years ago: For example, the Apostle Paul compared the church to a body with many members. The members represent each one of us, with the varied talents God has given each. United with Jesus as the head of His church on earth, we are to work together toward the aim of spreading the good news of His Second Coming, just as the members of the body work together to achieve the goals of the head of the body.

Many health professionals forget that the eye is connected to the nervous system; and if it is not in good health, all the other systems of the body will suffer too. In the same way, when a patient is being treated in the conventional way by a health professional who does not see that God created the patient, this limited view will interfere with the healing of the whole patient—in body, mind, and spirit.

One of the objectives of the nurse is to work with the whole person; thus it is very important that the nurse becomes skilled in examining the patient and in helping the patient see the Divine Source of his or her physical, mental, and spiritual health and how each is indivisibly interrelated. When the nurse understands that each patient is to become whole in a relationship with the Creator, and when the nurse becomes skilled in examining patients, he or she will be able to minister healing to the whole patient—physically, mentally, and spiritually, thus instilling God's principles and fulfilling God's dream for humankind.

When God blew the breath of life into Adam's nostrils, he was created with the ability to think. Adam named all the animals living in the garden of Eden. In addition, Adam and Eve were given a "heart"—that is, the capacity to feel deeply and to love unselfishly. So when as nurses we deal with the human body, we cannot work on fragments, body parts, just an eye, an ear, a mouth, a liver, an arm. All the structures of the body, in order to work properly, need the functions of each other part. So why treat one apart from the other? The Adventist nurse must keep in mind that the human being cannot be evaluated and treated as separate body parts but as a divinely created whole

Let us now reconsider the application of semiology. This technique of carefully assessing the patient's signs and symptoms is a very simple way to make a diagnosis which can be as precise as a diagnosis made with extremely sophisticated equipment. The knowledge which nurses obtain and further develop through professional experience can qualify them to conduct physical examinations and to apply semiology among the less privileged parts of the population, to give many thousands access to good, inexpensive health information, diagnosis, and treatment.

Many diseases today are being treated with expensive medicine, just because of the lack of communication between the patient and the health professional. What the patient may really need may simply be personal contact with the health professional—human contact full of spiritual comfort. The health professional needs to become personally involved with the patient when conducting the physical examination. From this wider viewpoint of a relationship with the whole person, the examining nurse will be able to find any openings that will help him or her discover what are the patients real, "felt needs.". The presenting physical symptom may be hiding a deeper pain, a mental or spiritual agony.

Dr. Lee (1991) confirms that the medical science of our age is fragmented: health-care professionals generally treat the human body as something separated, divided from the whole person. This may be rooted in the false idea that has prevailed for many centuries in Eastern and Western culture—the notion that human beings are divided into two very distinct and separate parts: a body and a soul. The body—the tissue, organs, bones, and skin—is the material part. The mind, the immaterial part, even though dependent on the body, supposedly has its own separate and immortal existence. Actually, the biblical view is that mind and body are intimately and indivisibly connected. What affects the mind is affecting the body; what affects the body is affecting the mind. Neither can function autonomously.

The nurse, when in training to detect abnormal health conditions, should become skilled in using medications found freely in nature, as indicated by the Creator to Ellen White, His chosen spokesperson. I believe that if nurses became conscious of their ability to apply successfully such simple, natural means of diagnosis and treatment, they could control and relieve many health problems that affect populations worldwide. The masses need to know more about the causes of their sickness and simple methods of self-

treatment. They also need to become aware of how to recognize their true physical and spiritual needs in times of physical and spiritual illness.

So it is the responsibility of nursing educators to form centers to train professional nurses and enable them to work as primary health-care diagnosticians and treatment providers—not simply as members of the health-care team in a secondary role assisting the physician. There are not enough physicians to meet the needs of the many under-served populations worldwide. Nurses can do this work and do it well.

As the nurse conducts the physical exam, for example as patients' health habits are being assessed, this can become an opportunity to teach them better health habits. The nurse can give instruction on how care for the body, mind, and spirit properly to keep *the whole person* in good health. Ellen White counseled in *Life at its Best* that children should be provided clothing to give warmth and comfort. While examining patients, the nurse may see that one of the main causes of irritation and discomfort or even disease is tight clothing—so tight that the heart and lungs are prevented from full, healthy expansion. Patients must be taught that they should not wear tight clothing. Every part of the body should be well taken care of. This means wearing clothes that allow each organ to function freely, without any restrictions of movement.

In some countries we find another unhealthful fashion —the habit of wearing clothes that leave the shoulders and arms bare. It is difficult to persuade those who like to keep cool in hot weather that this is an unhealthful custom. However, the further a body part is from the heart, the center of circulation, the more care should be taken to be sure the extremity is covered (clothed) so it will not be chilled, which would constrict the blood vessels near the surface of the skin and interfere with the circulation and lower the immunity. The arteries that lead blood to the extremities are big, providing enough blood to heat and nourish them. However, when the arms or legs are bare, not properly covered, and the extremities get cold, the circulatory system and the health are in jeopardy. The risk of getting colds, flu, or other illness increases.

The matter of healthful clothing is just one example of ways a nurse can educate patients while conducting the physical exam.

The Adventist nurse can play a very special role in the world if she develops the ability to detect and diagnose unhealthy physical conditions as well as the knowledge of how to apply simple and effective treatments and natural remedies which will prevent future complications. But this is not enough. God needs skilled, experienced, professional nurses who also have the skills to prevent or even solve, not just treat, some of humanity's major health problems. My goal is to invite nurses to become fully prepared to finish God's work on earth!

V - Bibliography

ANZIEU, Didier. O Eu-Pele. São Paulo. Casa do Psicólogo, 1989. P.286.

ATTEBERRY, Linda R. et al. Physical exam is safe and accurate for evaluation of vascular injuries in penetrating zone II neck trauma. Journal of American College of Surgeon. V.179, no. 6 December 1994. P. 657-662.

CROSS, J.H. et al. Clinical examination compared with anthropometry in evaluating nutritional status. The Journal of the British Pediatric Association. V. 72, no. 1, 1965. P.60-61.

FRANÇA, Valeria. Doutor Carandiru. Veja, 12 de Junho de 1996. P.3.

LEE, Sang. Liberte-se. DAG-Gráfica Editora Ltda. São Paulo, 1991.p. 205.

MONTAGU, Ashley. Touching. The human significance of the skin. New York, Perennial Library, 1971.P.405.

NEHLSSEN-CANNARELLA, Sandra L. Spirituality and Immunology. Copy Faith and Learning Seminar. Loma Linda University, 1997. P.5.

OLIVEIRA, E.R. A Proposta de um modelo de Ensino de Exame Físico para o Processo Metodológico da Assistência de Enfermagem. Tese Livre Docente. UNI-RIO. Rio de Janeiro, 1990. P.196

OLIVEIRA, E.R. et al. O significado do toque para alunos de Semiologia. Anais 1º Congresso Brasileiro de Qualidade da Saúde. São Paulo, 1997. P.11.

SHINYASHIRI, Roberto. A carícia essencial. Uma psicologia do afeto. 1ª. edição. São Paulo. Editora Gente, 1985. P.155.

SILVA, Maria Julia & BELASCO, Domingos J. Ensinando o toque terapêutico: Relato de uma experiência. Ver. Latino - Americana. Ribeirão Preto. V. 4, no. Especial, Abril 1996. P. 91 - 100

V - Bibliography

US PUBLIC HEALTH SERVICE, Cancer detection in adults by physical examination. American Family Physician. V. 51, no. 4, March 1995. P. 72.

ZAGO, Marco A Inconsistencia metodologica no ensino da anamnese nas escolas de medicina Ver. Ass. Medica. Brasil. São Paulo. v. no. 2, Mar-Abr 1989. P. 79-80.

WHITE, Ellen. O melhor da vida. Casa Publicadora Brasileira. São Paulo, 1973. P.314.

_____. The Ministry of Healing. Health and happiness. Columbia Pinks - Silver Springer, 1990. P.224.