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# ***JUNIOR DOCTOR***

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## **INSTRUCTION TO AUTHORS**

Junior Doctor is published by the Hospital Doctors' Association/Bahamas Doctors' Union (HDA/BDU). It is not intended to be a clinical or scientific publication. The goal of the editorial committee is to continuously update all members of the HDA/BDU events and activities and to express and air opinions on matters affecting Junior Doctors.

This publication only accepts original work including case studies, reviews of articles among others. Material for publication is solicited from all, but will be reviewed before placement. Not all material submitted will be published.

Articles in this publication represent the views of the authors, and do not necessarily reflect those of the HDA/BDU executive board and members nor the views of the members of the editorial board.

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## Message from the President

Dear Colleagues:

After an almost decade long absence the “Junior Doctor” returned with its December 2005 issue. The general consensus of those who have had the opportunity to read it is that it was “an overwhelming success”. The magazine serves a critical purpose as a tool through which we can increase our awareness of current issues affecting us as junior physicians. We appreciate your support of the “Junior Doctor” and welcome your inputs and comments as we work to maintain the quality and ensure the longevity of the publication.

Two controversial issues which are currently being debated are the ACUSTAF system and the proposed National Health Insurance scheme (NHI). The Public Hospitals Authority (PHA) continues to explore the ACUSTAF system with a view to its implementation. Simply put ACUSTAF sells itself as a system which enables administrators to evaluate the performance of physicians in terms of duty hours, productivity and patient safety. ACUSTAF would involve a method of documenting attendance and hours of work which would naturally provoke in many the suspicion that ACUSTAF is nothing other than a control device.

The PHA would have us believe that ACUSTAF is a system that can solve most of the problems that physicians face in the work place and perhaps it can solve a few, but without addressing certain basic operational inadequacies and deficiencies which physicians encounter on a daily basis, ACUSTAF, in its present format is unacceptable to junior physicians.

The Hospital Doctors Association (HDA) agrees with the position of the Medical Advisory Committee that there would have to be increase in physician staff, functional information technology services, improved medical record keeping services and improved clerical/administrative support in order for such a system to be effective.

Many of you are also aware that the National Health Insurance (NHI) has been a hot topic over the last several months; and even though national public discussion appears to have cooled down a bit it remains a live issue on the government’s agenda and it is expected to intensify over the coming months. Some are of the view that the proposed NHI if implemented in its present format will be the biggest health mistake in Bahamian history. Certainly we can agree that the Bahamian Government cannot continue to provide free health for all but is the NHI in its present form the answer? There are certainly a number of questions which arise. How will NHI work? How does it address infrastructure? How does it affect physician numbers and the supporting staff? How does it affect patient load? How does it affect the true quality of health care? How does it affect the private physician and remuneration? To some the most important question is how is NHI to be funded and who is to bear the cost and at what cost. To remain silent on NHI means that you would have endorsed the proposal in its present format.

It is important to participate in the discussions on NHI. Let the persons on the NHI committee know what you think, seek the answers to your questions, make reasonable suggestions and let us create a better system that works for all.

PMH’s response to the many cases of vandalism and theft of vehicles on the hospital compound has been a deafening silence. It appears that those directed to deal with this issue are insensitive to the plight of those victims who have suffered property loss or damage. In some cases, tens of

thousand of dollars have been lost. This unexpected response of silence is suggestive of a disturbing disinterest to the general safety and well being of all its employees but unfortunately also indirectly facilitates the perpetrators for in failing to bring this issue to the forefront and forewarn employees of this recurring danger PMH has failed to equip employees with the knowledge necessary to enable them to take vital precautions to protect their vehicles. The problem will not disappear if PMH continues to fail to tackle it head on and take swift proactive steps to ensure that all its employees have adequate and secured parking. Thankfully, the parking lot under renovation when completed will create more parking for physicians and hopefully provide us with more secure parking but regrettably this will only make a small dent in the number of spaces required for all PMH staff.

The HDA will hold its first annual secondary school essay competition in May 2006. Topics to be addressed will include issues relating to obesity and HIV in The Bahamas. In addition to trophies sponsored by PHA the top contestants will also receive lap top computers sponsored by the HDA. Look for further details of the competition to be advertised in the local media and please help to make the competition a success by spreading the word.

On May 4<sup>th</sup> nominations are scheduled to be held for the new HDA executive and if necessary elections will be set for later in June.

I do not intend to offer myself for re-election in the upcoming nominations. It has been a pleasure to serve you on the Executive of the HDA for the past four years. Together, we have been able to achieve much but much remains to be done. I assure you that I will continue to support the work of the HDA as best as I can.

As junior physicians we need to be vigilant and aware of issues that affect us. We should not settle for mediocrity or accept a “business as usual” attitude. If we are to keep apace with global trends in health care, we will have to be open to new ideas and willing to embrace changes designed to bring about greater accountability, higher education, increased productivity, improved health care and patient satisfaction. Let us be open to change and work together to make ourselves, our institution and our country better.

May God continue to richly bless us.



Dr. Francis Williams  
B.Sc., MBBS, M.Sc. Family Medicine  
President

## MEDICAL TERMINOLOGY

Most terms used in Medicine today are based on the Greek and Latin languages. As a result, the correct use of medical terminology is like mastering a new language. Many physicians today have come upon the use of medical terms in a haphazard fashion. Traditional Latin and Greek classes have been replaced in the formal curriculum by newer, more relevant subjects, such as Immunology and Molecular Genetics. This leaves the average graduate without a basic knowledge of the correct meaning of the prefixes, roots or suffixes of terms still in current medical usage. Consequently terms are learnt as a whole without the ability to understand or appreciate other interpretations of the same medical condition. This is the second installment in this three part series, which aims to partially address this deficiency. It must be stated that this exercise is not by any means an exhaustive one. (Note: US spelling is used.)

The following are common root words and their meanings...

carcino – cancer	cerebro – cerebrum/brain
derma – skin	hemo/hemato – blood
neuro – nerve	ped – child
recto – rectum	thrombo – clot

The following are common prefixes that are added in front of root words and their meanings...

bi –two	contra – against
hetero – different	hyper – above
mid – middle	poly – many
quad - four	

The following are common suffixes that come at the end of root words and their meanings...

cide – kill	graph – record/picture
lysis – destruction	oscopy – look into
phasia – speech	uria - urine

It also is a good practice when possible, to write in full all medical terms and directives as to avoid the risk of misinterpretation. However, where this is not possible, the following are common abbreviations used today and their meanings...

a – without/lack of	ad lib- as desired
am/mane – morning	ax – axillary
BM – bowel movement	BRP – bathroom privileges
c/o – complains of	cath. – catheter
CCU – cardiac care unit	DC - discontinue
COPD – chronic obstructive pulmonary disease	Dx – diagnosis
Ft – feet	GI - gastrointestinal
gtt – drops	h – hour

## **ETHICS 101**

### **ETHICS ARTICLE SERIES**

Dr. Glen S. Beneby, Medical Advisor

#### **ARTICLE 2**

#### **INFORMED CONSENT**

A fundamental tenant of modern research, of any kind, is the principle understanding of the assurance that all participants have a clear undertaking of their involvement in the process. The historical basis for this came about as a result of the Nuremberg Code which resulted in German Nazi scientists, some of whom were physicians, facing trials for cruelty to Jewish captives. During World War II, Jewish prisoners were subjected to harsh unproven clinical tests. They were considered as being tortured in a number of cases. This resulted in significant morbidity and mortality. The vast majority of these German Nazi scientists were convicted of these war crimes - receiving death sentences and long prison terms. Thus, the declaration was endorsed by the World Medical Assembly (WMA) for the protection of human subjects; that there must be Informed Consent before being included in any experimental research activity to ensure that participants' rights are not violated and that all potential harm and benefit are thoroughly explained at the very outset. This is the responsibility of the Principal Investigator to ensure that the Consent Form is properly designed in easily understood language for the subjects, with interpretation where appropriate and in some instances to explain and decipher any unusual terms. The participants must sign to acknowledge that not only was the information given but that they comprehended the substantive matter contained therein. The participant ought not to be coerced in any way and must be afforded the opportunity to discontinue involvement in the research activity at any time provided that such action would not prove detrimental to the well being of the individual. Prior to the conduct of the research the Principal Investigator is required to submit the properly designed Consent Form to the Ethics Review Committee (ERC) and/ or Institutional Review Board (IRB) in the "research package" along with other required documents for Approval. The Approval is usually in one of three categories: Approved, Not-Approved or Provisionally Approved. The ERC/ IRB must pay special attention to participants that may be considered as vulnerable (groups that are disadvantaged) such as children, migrants, indigent persons, prisoners, uneducated populations, severely ill patients, et cetera. The Informed Consent is continually upgraded to ensure that it is truly reflective of the nature and extent of all aspects of the research that is being conducted.

In a more general sense but equally significant is the importance of the "Public Informed Consent" which is referred to as "Public Opinion" or "Public Consensus" in a democracy. This influences Public Policy formulation and therefore it is very important that the people be properly informed with regard to what is going on in society; this is especially so with specific reference to Health issues which have many social determinants. The role of physicians as educators and community activists for the Public Good is a responsibility that all physicians must be reminded that they ought to fill. In developing countries the reservoir of scientific knowledge amongst physicians as a group of professionals tend to be largest and therein lie a great potential to bring about positive change. In recent surveys held in a wide cross section of the North American Continent the Public has been shown to have placed physicians high on the lists of professionals in whom they place their confidence, well above lawyers, clergymen and others. I reckon that there is a dearth of research in developing countries which makes it difficult to establish an

evidence based position empirically. Nonetheless the “physician trust” in the mind of the indigenous peoples of these regions has been ambivalent historically because of the scarcity of

readily available physician community leaders to become involved in National debates. Physicians must lead the required and necessary role of “Knowledge Brokers” in transforming the scientific knowledge with which they are familiar into Information that can be utilized by a growing inquisitive mass in the general population; that is hungry for knowledge. The role of Civil Society is being globally acknowledged as a sector of the entire population that has a crucial part to play when Public Policy is being developed. One such current issue which is close to home for the healthcare providers is the National Health Insurance debate that has gotten the attention of a significant section of the Bahamian population. This debate is likely to intensify over the up coming months presenting many opportunities to demonstrate professional maturity in bringing to the issues focused evidence based resolutions that are paramount to the well being of the public. The physicians must be careful not to allow the National Health Insurance debate to isolate physicians out of the body of healthcare providers and leave them stranded on the beach head of time as an insensitive self-centered privileged group of professionals whose personal agendas take priority over the Public Good. I am confident that at this pivotal juncture in the health developmental paradigm of the Bahamas, as it crystallizes, that physicians would arise from the desert of inactivity, unite the collective knowledge base and make all Bahamians proud of them not just as national leaders but global health leaders. Physicians with the demonstrable skills however, must make major contributions to create an outstanding National Health Insurance model that would get the attention and accolades of the World.

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## MEDICAL TERMINOLOGY

*continued from page 4*

hemi – half

ht – height

inc. – incontinent

LPN – licensed practical nurse

NA – nursing assistant

nocte. – at night

pc – after meals

pr – per rectum/rectally

q2h – every 2 hours

SOB – shortness of breath

Tbsp – tablespoon

UTI – urinary tract infection

HOB – head of bed

I+O – intake & output

L – liter

min – minute

naso – nose

OT – occupational therapy

po – per os/by mouth

pt – patient

ROM – range of movement

STI – sexually transmitted infections

UA – urinalysis

wt - weight

## Pulmonary Manifestations of Systemic Lupus Erythematosus

Joy-Ann Lowe, MBBS  
2<sup>nd</sup> year Resident Internal Medicine

The patient is a 32-year old female who was first brought to Internal Medicine's attention in April 2000. At that time, she was admitted to hospital after having being diagnosed with a missed abortion at 10/40 gestation. She was next seen on June 2003 in Dermatology Clinic when she presented with skin rashes, swelling of the fingers and painful joints. Concurrent examination revealed a butterfly rash over the face with scaly hyperpigmentation on the left pinna. She also had erythematous eruption on the dorsum of the hands and scaly erythematous eruptions on the extensor aspect of both elbows. The patient was admitted to hospital and assessed as having Dermatologic Lupus. The following are some pertinent test results obtained.

ANA >1:1280 speckled pattern  
Double stranded DNA 111u/ml  
(normal range = 0-99)  
VDRL – negative  
HIV- non reactive



The patient was commenced on prednisone, Plaquenil, cortisone cream, Advantan ointment, and polytar shampoo and showed improvement with this treatment. She was readmitted in Aug 2003 because of reoccurrence of symptoms. And she was discharged after 13 days when her symptoms improved.

She was admitted Sept 2004 after deterioration of her clinical status with a diagnosis of Systemic Lupus Erythematosus, pyelonephritis, pneumonia, and possible pericardial effusion.

### *A Brief Discussion on Systemic Lupus Erythematosus*

Systemic Lupus Erythematosus is an auto immune disease defined by the presence of antibodies in the blood directed against one or more cell nuclei.

The Criteria for classification of SLE

The proposed classification is based on 11 criteria. For the purpose of identifying patients in clinical studies, a person shall be said to have systemic lupus erythematosus if any 4 or more of the 11 criteria are present, serially or simultaneously, during any interval of observation.

Arthritis – nonerosive arthritis involving 2 or more peripheral joints, characterised by tenderness, swelling and effusion.

Discoid rash - erythematous raised patches with adherent keratotic scaling and follicular plugging; atrophic scarring may occur in older lesions.

Malar rash – a fixed erythema, flat or raised, over the malar eminences, tending to spare the nasolabial folds.

Oral ulcers – oral or nasopharyngeal ulceration, usually painless, observed by a physician.

Pericarditis – documented by electrocardiogram, rub or evidence of pericardial effusion.

Photosensitivity – skin rash as a result of unusual reaction to sunlight, by patient history or physician observation.

Renal disorder – persistent proteinuria is greater than

Serositis – pleuritis – convincing history of pleuritic pain or rub heard by a physician or evidence of pleural effusion.

The pleuro-pulmonary manifestations of SLE include pleural disease, chronic interstitial pneumonitis, acute lupus pneumonitis, alveolar haemorrhage, pulmonary vascular disease, airway disease, shrinking lung syndrome, and pulmonary hypertension.

#### Pleural disease

Pleuritic pain occurs in ~ 45-60% of patients with or without pleural effusions and is usually bilateral. ANA, anti-DNA antibodies and LE cells have been found in some pts with effusions. Although biopsy of the pleura is rarely done, thoracoscopy may reveal lymphocytic and plasma cell infiltration, fibrosis and fibrinous pleuritis. Treatment of this symptom is with the use of thoracentesis and NSAIDS to relieve pleuritic pain.



Chronic interstitial pneumonitis occurs in approximately 3-13% of SLE patients. The progression of recurrent acute lupus pneumonitis to chronic interstitial pneumonitis is common. High-resolution computerized tomography (HRCT) delineates this condition; however, chronic interstitial pneumonitis has characteristic features. This aspect of SLE has an association with anti-single-stranded antibodies (anti-SSA).

Acute interstitial pneumonitis may present with cough, dyspnoea, pleuritic chest pain, hypoxia and fever. It is seen in 1-4 % of patients with SLE. Histological features include alveolar wall damage and necrosis, inflammatory cell infiltration, oedema, haemorrhage and hyaline formation. A micro-angitis, involving the capillaries with fibrin thrombi and infiltration with necrotic neutrophils, may be present. HRCT findings show a classic ground glass appearance and fibrosis. Treatment involves corticosteroids; and for non-responders, immunosuppressive agent and cytotoxic agents can be used.

Acute alveolar haemorrhage is a very rare but catastrophic complication of SLE. Chest radiograph shows diffuse alveolar infiltrates. Hypoxaemia, dyspnoea and anaemia are characteristic. This aspect of SLE is associated with high circulating titres of anti-DNA antibody (ADA), and active extra-pulmonary disease.

Glomerulonephritis occur as a result of deposits of IgG, C3 or immune complexes in the kidney. Treatment of this feature of SLE is with high dose steroids with or without cyclophosphamide.

Pulmonary vascular disease, also called acute reversible hypoxaemia syndrome, is characterised by hypoxaemia and diffusion abnormalities and is associated with occlusive vasculopathy. This is due to activated endothelium and complement activation leads to neutrophil sludging.

Vasculitis-induced pulmonary hypertension complicating SLE occurs rarely in pts without parenchymal disease. A high proportion of these patients also have Raynaud's phenomenon, and the features are a result of pulmonary vascular disease. The prognosis is poor, with the overall mortality exceeding 50% at 2 yrs.

Thromboembolism occurs as a result of the presence of lupus anti-coagulant/anti-phospholipid/anti-cardiolipin antibodies has been associated with an increased risk of intravascular thrombosis. Treatment of this feature of SLE is with anticoagulants life-long for the prevention of recurrent thromboembolic disease.

Airway disease is characterised by abnormal pulmonary function tests and may be seen in up to 60% of patients with SLE. A reduction of FEV<sub>1</sub>/FVC ratios to less than eighty percent suggests an obstruction. The most common type encountered is obliterative bronchiolitis. The presence of BOOP (bronchiolitis obliterating organising pneumonia) or cryptogenic organising pneumonia can result in a restrictive picture. Some of these cases respond to corticosteroids. However, non-responders should be treated with cytotoxic agents.

Shrinking lung syndrome occurs when there is a diaphragmatic dysfunction. It is characterised by dyspnoea, persistent episodes of pleuritic chest pain, a progressive decrease in lung volume, with no evidence of interstitial fibrosis or significant pleural disease on chest CT imaging. Chest radiograph may show small lung volumes (raised diaphragms) and basilar atelectasis. The determination of the cause of low lung volumes is made with the use of oesophageal and gastric pressures, phrenic nerve stimulation and/or diaphragmatic electromyography. Theophylline and corticosteroids have been used to treat this problem.

Pulmonary hypertension is a rare complication of SLE, being more frequently associated with scleroderma, rheumatoid arthritis and mixed connective tissue disease. The symptoms and clinical findings are varied. Pulmonary Function Tests may show reduced carbon monoxide diffusing capacity (DLCO), mild hypoxemia, enlarged pulmonary arteries with clear lung fields on chest radiography, and evidence of right ventricular hypertrophy by electrocardiography.

## Wells Clinical Score for Deep Venous Thrombosis (DVT)\*

The Wells clinical prediction guide quantifies the pretest probability of deep venous thrombosis (DVT). The model enables physicians to reliably stratify their patients into high-, moderate-, or low-risk categories. Combining this with the results of objective testing greatly simplifies the clinical workup of patients with suspected DVT. The Wells clinical prediction guide incorporates risk factors, clinical signs, and the presence or absence of alternative diagnoses.

### Wells Clinical Score for Deep Venous Thrombosis (DVT)\*

Clinical Parameter Score	Score
Active cancer (treatment ongoing, or within 6 months or palliative)	+1
Paralysis or recent plaster immobilization of the lower extremities	+1
Recently bedridden for >3 d or major surgery <4 wk	+1
Localized tenderness along the distribution of the deep venous system	+1
Entire leg swelling	+1
Calf swelling >3 cm compared to the asymptomatic leg	+1
Pitting edema (greater in the symptomatic leg)	+1
Previous DVT documented	+1
Collateral superficial veins (nonvaricose)	+1
Alternative diagnosis (as likely or > that of DVT)	-2
<b>Total of Above Score</b>	
High probability	$\geq 3$
Moderate probability	1 or 2
Low probability	$\leq 0$

\*Adapted from Anand SS, Wells PS, Hunt D, et al. Does this patient have deep vein thrombosis? *JAMA*. 1998 Apr 8;279(14):1094-9.

Using the pretest probability score calculated from the Wells DVT score, patients are stratified into 2 risk groups: DVT unlikely (DVT score <2) or DVT likely (DVT score  $\geq 2$ ).

The DVT score was developed in a specific subgroup of patients. Excluded from the model were patients with suspected coexistent pulmonary embolism and patients already taking anticoagulants. Therefore, the evaluation and subsequent treatment of these excluded subgroups must be individualized.

## WORD SEARCH PUZZLE

*'Internal Medicine'*

L	E	E	D	O	R	P	D	I	A	B	E	T	E	S	M	T	N
E	Y	H	T	A	P	O	Y	M	S	A	Z	C	U	Z	P	R	E
L	G	L	U	C	P	Y	O	R	L	O	I	M	V	N	R	E	E
P	F	X	A	U	T	L	X	L	G	M	D	G	O	O	D	T	L
S	B	W	J	G	N	L	E	X	E	T	C	I	C	I	G	C	P
I	F	V	D	E	E	R	W	T	S	G	S	A	R	T	L	A	S
S	O	A	R	K	G	M	S	M	D	M	L	E	O	C	U	R	K
O	W	Y	J	Y	R	Y	O	T	E	L	E	N	A	E	C	D	X
B	D	Z	C	U	S	P	Q	T	E	L	I	I	A	F	O	I	J
M	R	A	I	X	P	F	R	R	A	R	O	N	V	N	S	A	L
O	A	M	M	V	M	E	G	S	I	P	I	X	F	I	E	C	A
R	C	O	L	W	P	Y	I	P	I	T	E	R	P	B	J	S	O
H	B	N	A	Y	X	R	S	F	E	E	T	H	A	P	O	Y	M
T	R	I	H	J	I	A	L	R	A	L	U	C	S	A	V	S	O
M	A	C	T	N	O	I	T	A	M	M	A	L	F	N	I	X	J
N	C	R	H	K	B	A	B	L	E	E	D	I	N	G	N	Q	S
A	H	A	P	N	E	U	M	O	N	I	A	A	W	B	U	G	L
X	I	C	O	J	W	B	Q	D	B	L	A	N	E	R	V	Z	K

### WORD LIST

hypertension  
glucose  
carcinoma  
spleen  
retina  
myopathy  
systemic  
pneumonia  
infection

diabetes  
bleeding  
hepatomegaly  
ophthalmic  
cardiac  
renal  
inflammation  
aspirin  
allergy

vascular

thrombosis

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