THE GHANA PHARMACEUTICAL JOURNAL

OFFICIAL ORGAN OF THE PHARMACEUTICAL SOCIETY OF GHANA

Volume 12 Nos. 1 — 2 June, 1989

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Contents

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ANNOUNCEMENT

COMMONWEALTH PHARMACEUTICAL ASSOCIATION

Primary Health Care Data Base

As a result of a current study of the role of pharmacists in Primary Health Care (PHC), the Commonwealth Pharmaceutical Association (CPA) has decided that it would be valuable for it to compile a data base of pharmacists who have been involved in *non-pharmaceutical* primary health care activity (ies) in their localities.

So, if you have participated in PHC activities such as health education, the provision of general health care in rural areas, promoting good hygiene, etc., which are not part of the traditional pharmaceutical services of purchasing, preparation and supply of medicines from pharmacies or pharmaceutical departments, then do furnish the CPA Secretariat with the following Information:

(*a*) Name and address for correspondence

(*b*) Qualification and major appointments held

(*c*) PHC activities: Brief description of activity(ies), country(ies) and date(s).

PLEASE, USE THE ADDRESS GIVEN BELOW:

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Editorial

Make a Sacrifice too

THE Pharmacy profession in Ghana did not attain its present status on a silver platter. It has had to be managed through extremely rough and difficult times with our predecessors making great sacrifices.

However, looking at pharmacy practice in Ghana today, one wonders whether we are not eroding the gains made by these galant men who came before us. In fact, some of us will be quick to say that our generation is "killing" the profession.

Many of us share the view that an improvement in the services rendered by the hospital pharmacist and a consequent enhancement of his image will go a long way to enhance that of the pharmacy profession in general yet most of us refuse to work in hospitals from within which we can best help to create that desired image for the pharmacist, prefering rather, to hop from one drug store to another going through various forms of abuses.

From delibrations held and resolutions passed at the 1986 Annual General Meeting held at Koforidua, for instance, it is obvious that we do appreciate the need for qualified pharmaceutical services to be extended to the rural areas, but three years after the meeting what action have we initiated to realize this idea?

We complain so much about fake drugs in Ghana but what serious measures have we taken to halt their spread? For example, why should pharmacists, especially those in general practice buy drugs—most of them fake—from illiterates and non-pharmacists simply because these persons sell their merchandise at cheaper prices?

Colleagues, the time has come for us, like our predecessors, to make some sacrifices too if we are to stop "killing" pharmacy and instead leave behind a better profession for future generations to practice.

More of us, especially the freshly qualified, must sacrifice and fill the numerous vacant positions in government hospitals and clinics in both urban and rural areas. With our hospitals and clinics now going autonomous and expected to be self-financing, conditions of service as well as job-satisfaction in these institutions are sure to improve considerably.

We are aware that conditions in the rural areas do not facilitate the type of pharmacy we would wish to practice but with the establishment of District Assemblies, pharmacists in the districts will have the opportunity to be actively involved in formulating and implementing district health policies and thereby make their contribution to the development of their communities better appreciated.

We must not allow non-professionals to supply us with cheap drugs simply because we wish to make bigger profits. We must sacrifice a little by allowing some few cedis cut in our profits in order to sell drugs of good quality from trusted sources to our patients.

Finally, as we talk of sacrifices and especially as the 40th Biennial Conference of the Society draws near, we wish to draw the attention of members to the need for a dynamic and effective leadership for the Society.

Yes, dynamic, dedicated and selfless leaders are what we need now to implement resolutions we have made ourselves and to bring honour to the profession. But it appears some of us with these qualities shy away from leadership roles apparently because we only have enough time to see to our businesses. This attitude must change, and we mean now!

Persons with the said attributes must present themselves for election and when elected must devote adequate time to leading this august society.

In addition, it behoves the electorate to see to it that only the right people are elected as leaders otherwise not only will our Society have sterility as its hallmark but also embarrassments will continue to be our lot.

Expiring dates of Drugs in developing Countries

by Lewis Lloyd Crabbe

THE expiry date as applied by National Standard Boards and as affects Pharmaceutical Products in developing countries like Ghana is disturbing. Invariably developing countries lack the hard currency to import pharmaceutical products in adequate quantities to meet their needs. The few that they are able to procure however have been given short lives by manufacturers so that in no time these are discarded for fresh orders to be made.

The question to ask then is, in the face of acute foreign exchange constraint in the third world, should the expiry date be strictly applied and enforced in all cases?

Deterioration resulting from products becoming denatured, unwholesome or poisonous may be due to microbial, parasitic or radio-active activity and chemical reaction.

Those activities which are injurious to health are the important issues that should agitate the minds of officers who seek to ensure that drugs are safe and continue to be safe for human consumption. The Standard Boards no doubt has to be vigilant on these matters but not so much on aesthetic attractions of the product. At any time, the standard of a product is arrived at by the look at the aesthetic value, the potency, the chemical structure and composition of the product by simple chemical and biological analysis and by advanced scientific and technological examination. Certain drug forms are sensitive to light and moisture, e.g. phenolic compounds and hygroscopic compounds. These may change colour and form without necessarily losing their potency.

The competition posed by liberalised market alone is sufficient to call for their withdrawal from the market if the aesthetic nature of these products are really bad.

Pronouncing drugs unsafe just because of the expiry date on labels may often lead to discarding products whose potency are still intact and whose chemical structures do not even change with time. On the ground, in the Ghanaian situation many pharmacists and physicians will agree that many of the drugs which have been declared expired have been found not only to be potent and wholesome but have been successfully used to treat patients of their diseases. The layman is very sensitive to the mention of expiry dates so when unguarded statements about expiry dates are made publicly some Professionals in the Third world are made to feel uneasy. The country suffers when it has to throw away products that are still whole- some and potent just because it is a fashion in some countries to affix expiry dates on all drugs.

Drugs like Vit. B Complex, paracetamol, chloroquine phosphate, amodiaquine, metronidazole, sulfonamides (not injectables) and many others which used to bear no expiry dates are all now carrying expiry dates. In certain cases potency duration which used to be five years and more has been reduced to only two to three years.

A pharmaceutical product like the Oral Rehydration Salt (O.R.S.) consists of glucose or sucrose and mineral elements which do not change or deteriorate at the ordinary conditions of storage and yet it has been given expiry date. A few months ago at the Korle-Bu Teaching Hospital, Accra, Ghana, a UNICEF O.R.S. which had expired caught the eyes of the public who at once became frightened and so agitated that the whole lot should be discarded and destroyed. Even the flow properties of that O.R.S. were intact and yet because of the expiry date the batch of the O.R.S. was expected to be thrown away and another scarce foreign exchange found to import fresh consignment. Heaven knows the cumulative loss that has been incurred this way on drugs which do not need strict expiry dates.

In conclusion, the following recommendations may be made.

1. The Faculties of Pharmacy should be commissioned to review the whole question of expiry dates regarding drugs that may not need expiry dates and those that may need extended expiry time schedule.
2. The fashion in the advanced countries to state the expiry date on all products could be relaxed in respect of products whose expiry dates are not so critical.
3. All expired drugs whose expiry dates are questionable should be referred to the National Standards Board to ascertain the validity of the expiry date and to assure the public of the safety of such drugs.
4. The expiry dates should be qualified. eg. (a) Potency Expiry Date indicating the expiry of the potency of the drug, (b) Aesthetic Expiry Date indicating the expiry of the aesthetic value-changes in colour, hardness, stickiness etc. but whose therapeutic activity is still intact. Of course if the form of the drug changes markedly the Standards Board reserves the right to call for the withdrawal of the affected drug from the market. (c) Others advocate "*Best Before*" in place of Expiry Date for products whose expiry dates are not critical. At the time of indenting of drugs it may be requested in the specifications that the appropriate expiry term be used by the manufacturer.

Formation of Association of Pharmaceutical Industries in Ghana

by F. M. Dickson

THE Pharmacy profession in Ghana though not fully developed, has expanded than it was known some ten (10) years back.

Day in, day out new pharmaceutical industries surface. Many of these industries produce similar products especially tablets such as Paracetamol, Chlorquine and the like. Thus on one market too many forms of Paracetamol tablets are found. Some resembling Sulpha tablets and others like Calcium tablets.

Again it is becoming increasingly difficult to distinguish the Industrial Pharmacist from the General Practice Pharmacist where such Industries that have sales outlets attached to their establishments are concerned

There is therefore the need for the formation of Association of Pharmaceutical Industries to embrace the Industrial Pharmacist and the Industries alike.

The formation of Association of Pharmaceutical Industries will serve to both regulate the forms of tablets and also assist the nation to know such Pharmaceutical producers and the quantities they can produce per year. The quality of such products could also be controlled and the safety of the user assured.

The various types of drugs produced in Ghana could be listed in an index by the name of the manufacturer.

This will assist, a great deal, the Ministry of Health (MOH) in the selection of suppliers for products they need. It will make the work of Industry and Trade easier and will serve to promote the products of each member of the organization.

For such an Association to function effectively the following aims and objectives could be suggested for consideration.

a. The Association shall embrace all pharmaceutical and chemical manufacturing industries, be it small or big, which produce all sorts of drugs or chemicals and (such companies) are licensed with the Pharmacy Board of Ghana.

b. The Association should maintain and improve the reputation of the Pharmaceutical Industries and their contribution to the health and economic welfare of Ghana as a nation and the people of Ghana.

c. To enhance and foster contact between member Industries, the Ministry of Health or Governmental Departments, Trade organisations and other similar groups outside Ghana.

d. To foster friendship and knowledge among members by arranging meetings and also act as information bureau.

e. To cover both the Scientific and Commercial activities of the Industry and include such matters as the safety of drugs (medicines), good manufacturing practices, packaging, labelling, prices and profits including information to prescribers.

f. To organise yearly Seminars for her members and publish annually the Association's Magazine (Associated Pharmaceutical Industries Magazine) for members and the general public.

g. To act as a channel of communication for its members to and from the Government and other bodies and to act on collective decisions taken by its members.

h. To discipline its members through the Pharmacy Board/ Pharmaceutical Society and to assist in regulations and functions of its members.

i. To encourage the establishment of a Quality Control Unit for its members by pulling resources and employing competent Scientists and other personnel to man it. This is to allow member Industries have their products tested for quality at a norminal fee which shall be used to maintain the unit.
It must be noted that many of these Industries that spring up have but limited resources for control of quality.

It is a fact that there is in existence the Association of Ghanaian Industries but this association has so much on its hand that little attention could be given to the Pharmaceutical Industries. Hence the call for the formation of Association of Pharmaceutical Industries.

NOTE:

All industrial pharmacists and representatives of pharmaceutical industries who wish to join the described association should contact the writer using the following address:

Mr. F.M. DICKSON.
Intravenous Infusions Ltd.
P. O. Box 63, Koforidua

Tel: 081 - 3141

LETTER to the Editor

United we stand — a Rejoinder

Sir,

Grateful if you could allow me space to react to an aritcle captioned "United We Stand" which appeared in the Pharmaceutical Journal of June, 1987.

Firstly, I personally do not see any impasse between Council and the GHOSPA Executive Committee. The fact is that we all have our personal idiosyncracies and an executive member of GHOSPA might have criticized a Council member for his utterances which the former might have had reason to believe was not made in good faith. But this should not be misconstrued to be an impasse between Council and the GHOSPA executive.

Secondly, the GHOSPA bye-laws, Article 2 (1) states that its "aims and objectives shall be the same as those of the Pharmaceutical Society of Ghana".

Among the functions of the GHOSPA National Executive Committee, Article V (iv) of the bye laws states "It shall work in close collaboration with the National Council of the Pharmaceutcal Society of Ghana".

Then article XV (a) also states "the code of ethics shall be the same as those of the Pharmaceutical Society of Ghana".

If these articles are included in the bye-laws of GHOSPA then the Bye-laws of the Society are binding on members of GHOSPA.

It is therefore ridiculous to state that a misconception is currently being strongly held by the membership of GHOSPA that the National Council is there for interest groups or Wings of the Society.

Nobody disputes the assertion that any pronoucements emanating from the National Council are binding on all Wings and Branches. After all Council comprises members from the Wings and Branches.

However, we must be able to differentiate between Council as a body and individual Council members. For example, I would want to emphasize that in as much as I agree that collective decisions of Council made in good faith are binding on all Wings and Branches of the Society, I will never concede that unauthorized pronouncements by an individual Council member which seeks to subvert the unity of the Society should go without comment. Some of us have criticized and will continue to criticize such utterances without fear or favour no matter the status of those who make them in the Society.

Paragraph 5 of the said article is misleading and I wish to get it right. The GHOSPA general meeting referred to was held at the Komfo Anokye Teaching Hospital, Kumasi from 27th—28th March, 1987.

At that meeting, nobody made reference to the so called "Latest salary adjustment of medical officers in the country" because the Ag. Director of Pharmaceutical Services had at a previous GHOSPA general meeting at Kumasi from Friday 7th to Saturday 8th February, 1986, distributed to members a document captioned:

"Effect of C90.00 minimum wage—Doctors, Nurses and Paramedical staff within the civil service". In the document, the salaries of all health personnel had been adjusted. It was at that February, 1986 meeting which the writer did not attend, that members in discussing the salaries expressed dissatisfaction about certain aspects of the document e.g. the Ag. Director of Pharmaceutical Services being put on a par with a specialist medical officer on range 77 and a Senior Pharmacist being put on a par with a medical officer on range 67.

Again, at the March 1987 GHOSPA general meeting, no member said either explicitly or by implication that Council is there for the General Practice Pharmacists.

Honestly, nobody even mentioned General Practice Pharmacists throughout our deliberations.

On the claim that copies of the GHOSPA miuutes and important proposals arrived at were not sent to Council for the necessary action, the least said the better because at the recent GHOSPA executive committee meeting at Ho, which was attended by Regional Directors of Pharmaceutical Services and the Hon. General Secretary of the Pharmaceutical Society of Ghana, it was confirmed that the minutes did get to Council. Also at least copies of four important letters which GHOSPA sent out through Council last year were on file. However Council did not acknowledge receipt of those letters and to date it is not known whether they were forwarded to the appropriate quarters or not.

I wish to advise the author that there is no impasse between the GHOPSA Executive Committee and the National Council. She should be cautious with her material collection and presentation.

J. O. Kyei.
Kumasi

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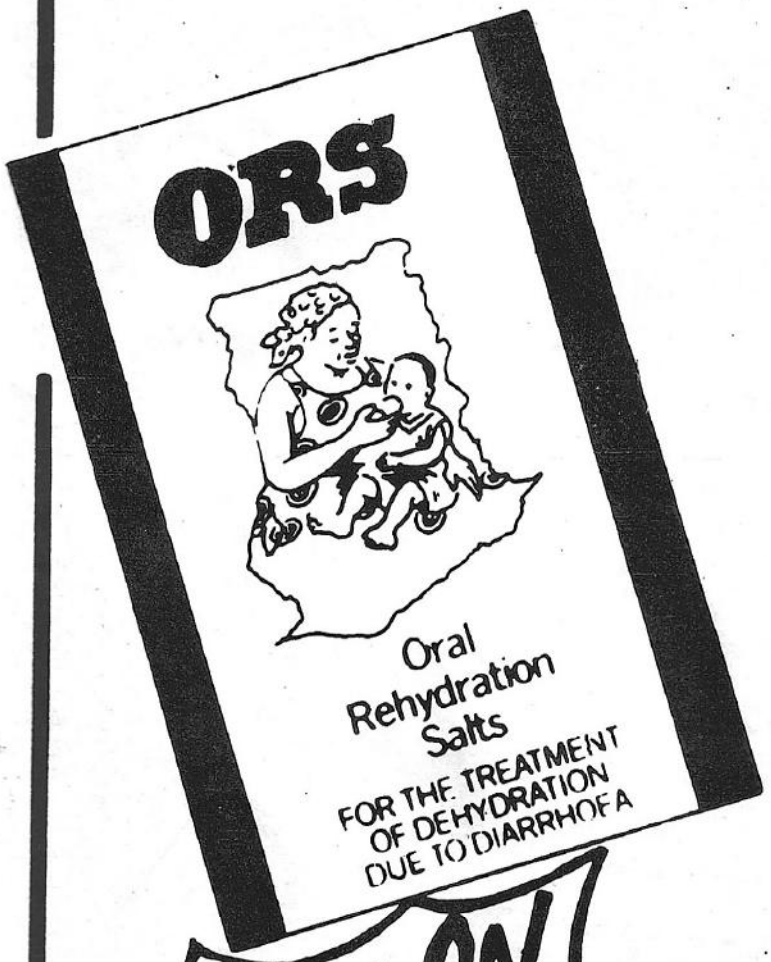

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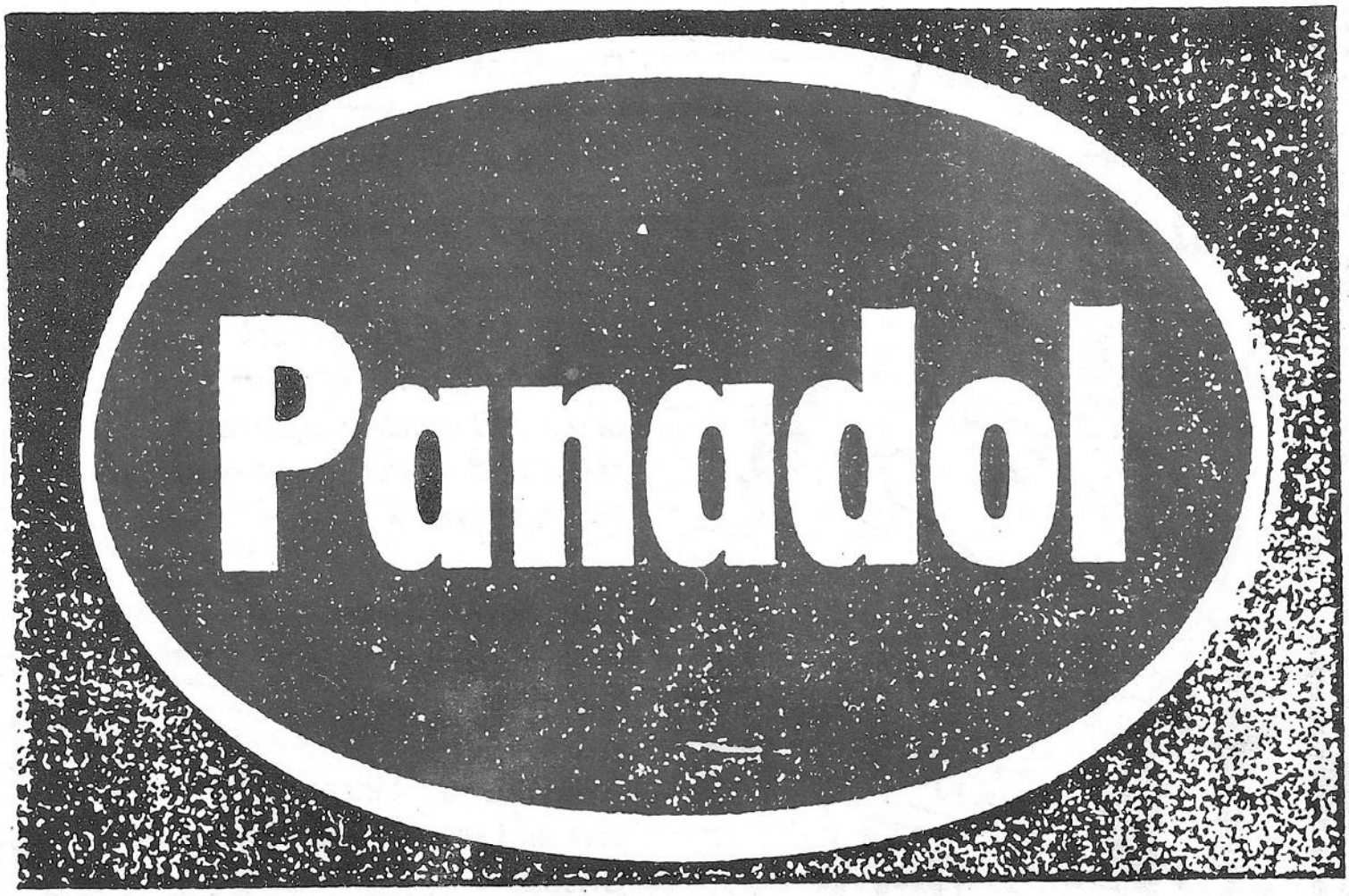

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AGM '88

THE 1988 Annual General Meeting of the Pharmaceutical Society of Ghana has taken place at the Cape Coast University from September 22 to 24 under the theme "The Role of the Pharmacist in the Primary Health Care Programme."

The opening of the meeting was performed in the University Auditorium by the Regional Secretary for the Central Region, Mr Ato Austin who said it was an honour for the region to play host to the Pharmaceutical Society.

Mr Austin said he was disturbed by the increase in the circulation of fake drugs as well as dumping of toxic wastes in the country and urged pharmacists to come up with an arrangement to counteract these undesirable acts.

In his welcome Address, the President of the Society, Mr Edward O. Gyamfi drew the attention of government to the fact that "by the nature of his professional training and disposition, the pharmacist has a major role to play in the Primary Health Care (PHC) programme" and that pharmacists are not prepared "to relegate this role to any group within or outside the Ministry of Health."

Mr Gyamfi said the Society recognised the important role traditional medicine could play in the Primary Health Care programme and called for redoubling of efforts to research into herbal medicine. He took the opportunity to appeal for more funds from government for this purpose.

The President lamented the situation where the Ministry had allowed poor conditions of service and lack of equipment and other inputs lead to an unprecedented mass resignation from public pharmaceutical service.

To enhance efficiency in the rendering of pharmaceutical services Mr Gyamfi suggested that in addition to a Deputy Director of Pharmaceutical Services (D.D.P.S.) in charge of Manpower Development and Administration, others should be appointed to see to Production and Quality Control, Store Management and Procurement as well as Clinical Pharmacy and Drug Information.

Dr. (Mrs) Mary Grant, PNDC Deputy Secretary for Health, delivering the Keynote Address

He further proposed that the system whereby unqualified personnel are placed in charge of specialized areas in the public service on grounds of long service shouldbe discouraged.

The Pharmacy Board the President said, should place a ban on the registration of Chemical Seller's Shops in the urban areas and also suspend their registration in the rural areas until the Board had furnished the Society and the Ministry of Health with data such as their location and ownership. This, he explained, will enable a better siting of new shops to be made in the future.

The President concluded by pledging the Society's support for the government's efforts to improve health care delivery in the country.

Dr (Mrs) Mary Grant, Deputy Secretary for Health, delivered the keynote address on behalf of the Secretary of Health.

She reiterated government's intention to allow private participation in the purchasing and distribution of drugs within the Public sector adding that private companies could set up pharmacies both within and around, for instance, the Korle-Bu Teaching Hospital.

A symposium on the theme of the meeting followed the opening ceremony. Prof. Ashitey of the Korle-Bu Teaching Hospital spoke on "Epidemiology-Disease Patterns" and Miss Virginia Tamakloe of the Greater Accra Regional Office, Ministry of Health, treated the subject, "The Pharmacist and the Child Survival Programme."

Other panelists were Mr S.A. Botchway (Pharmacy Department, Ministry of Health) and Mr Moses

Appiah, (Greater Accra Regional Office, Ministry of Health). The former spoke on "Management of Basic Essential Drugs Supplies for the Primary Health Care programme" while the latter spoke on "The Pharmacist's Role in the P.H.C. Programme."

The next day was devoted to discussion of reports, consideration of some issues concerning the Society and passing of resolutions.

Voting to elect Fellows of the Society took place the same day. Unfortunately, none of the candidates proposed by Council, that is, Mrs Eniton Gavu (Chief Pharmacist, Cocoa Clinic) and Mrs Agnes Brookman-Amissah, (Gasag Pharmacy, Accra) were elected. Observers, however were of the opinion that had the citations of the nominees been read before voting, which is usually the case, at least one of them would have been elected.

The PNDC Secretary for the Central Region, Mr. Ato Austin is seen here with Mr E. O. Gyamfi (left) the President of Society and Mr A. K. Y. Kokukokor (right) Secretary of the Society

Include Pharmacists in DHMT's

THE Pharmaceutical Society has called on government to see to the inclusion of pharmacists in the District Health Management Teams (DHMT's) as well as those at the regional and national levels in order to optimise the role of pharmacists in the Primary Health Care (PHC) programme.

The call was contained in a communique issued at the end of their Annual General Meeting held at Cape Coast University from September 22 to 24, 1988.

Government was also urged to improve service conditions of pharmacists in government service to attract and retain them.

Other points contained in the communique read as follows:

"Knowing that the PHC programme is both preventive and curative and will involve quite a sizable portion of the national health budget, and also noting that four out of eight components of the programme involves provisions of essential drugs and vaccines, the pharmacist, whether in the public or private sector is committed to involving himself in the judicious procurement, distribution, storage, dispensing and utilization of quality and affordable pharmaceuticals.

"Given the desire of the PNDC government to see that health institutions are self-supporting, the Pharmaceutical Society of Ghana calls on the government to come out with a policy to define hospital pharmacy practice in such a way that the revenue generating capacity of the hospitals is not threatened by the introduction of other competing commercial entities within these institutions. Specifically, with the effective implementation of the government directive that health institutions be permitted to utilize 50% of the retained revenue for developmental projects as well as purchase of essential drugs and supplies, the idea of establishing GNTC/private pharmacy shops within the precints of government health institutions will be counter productive and need to be seriously reconsidered. (*Cont'd on page* 13)

Prof. Dwuma-Badu Expires

IT IS with deep sorrow that we report the death of Professor Daniel Dwuma-Badu, Dean of the Faculty of Pharmacy at the University of Science and Technology (UST), Kumasi, which occurred at the University Hospital on September 13, 1988.

After two wake-keepings, first at the Great Hall, UST, on Thursday, October 20 and then at his home-town, Wiamoase in the Ashanti Region on Friday, October 21, he was finally laid to rest at the Presbyterian Church cemetery in Wiamoase on Saturday, October 22.

Prof. Dwuma-Badu was born to the late Opanin Kwabena Oteng and the late Madam Abena Frema on February 2, 1936. He had his primary education at the Wiamoase Presbyterian School from 1944 to 1953 and continued at the Krobo Odumase Presbyterian Secondary School from 1954 to 1959 obtaining his West African School Certificate.

He entered the Kumasi College of Technology to do his Sixth Form from 1960—62. After teaching at the Axim Secondary School for a year, he secured admission to the Pharmacy Degree Programme of the U.S.T. graduating in 1966.

He was admitted to the Cheasea College in London in 1966 for his Doctorates which he successfully completed in 1970. He returned to Ghana immediately to join the teaching staff of the Pharmacy Faculty.

By dint of hard work and strict discipline he rose, first to become Head of the Pharmaceutical Chemistry Department and then later, Dean of the Faculty of Pharmacy and Chairman of the University Hospital Management Committee.

The late Prof. Dwuma-Badu, who was Chairman of the Research Committee of West African Pharmaceutical Federation (WAPF) from 1980—87 and a member of its Council, was until his sudden death a member of the National Council of the Pharmaceutical Society of Ghana and Chairman of two committees of Council namely Education and Fellowship Awards Committees.

In addition, he was a Fellow of the Society, having been elected "for his invaluable service and contribution to the pharmacy profession."

Prof. did spare some time for local community work for he was instrumental in the founding of the Okomfo Anokye Secondary School at Wiamoase and also the provision of pipe borne water for the town.

In a tribute, Prof. F. O. Kwami, Vice-Chancellor of U.S.T. said "Daniel set very rigorous standards for himself and ensured that he had every detail meticulously right. His vigour, enthusiasm and his devotion to research and teaching of pharmaceutical chemistry was total. All the 18 years of his working life was given to research, teaching and service. His death is a great loss to the University and he will be mourned by his numerous students and working collaegues in Ghana, Nigeria and elsewhere. The vacuum that Professor Dwuma-Badu has left will be very difficult to fill."

Professor B. A. Dadson of the University of Cape Coast once expressed the view that the "nation has in Dr Dwuma-Badu a pharmaceutical chemist of enormous stature".

Prof. Dwuma-Badu "has achieved a great deal and has developed into an excellent research worker", so says Prof. Bruce D. Martin of Duquesne University School of Pharmacy, Pittsburg, Pennsylvania.

Mr Eric Aheto, Secretary of the Greater-Accra Branch of the Society recollects that "Prof. had very close attachment with students and was ever prepared to help them out of difficulties", adding that he admired his "natured suggestions and his constant efforts to diffuse potentially explosive situations at Council-meetings."

Prof. Dwuma-Badu left behind a widow, Mrs Joyce Dwuma-Badu and four children and to them we express our deepest condolences.

Professor Daniel Dwuma-Badu, may you rest in perfect peace.

The Late Prof. D. Dwuma-Badu

The West African Pharmaceutical Federation

requires your presence

at all of its

GENERAL ASSEMBLIES

AND

SCIENTIFIC SESSIONS

to

actively participate in its delibrations

thereby contributing to its progress.

Make it a point,

therefore, to attend its next

meeting and subsequent ones.

The President of the Society, Mr E. O. Gyamfi, answering questions during very anxious moments of the meeting. With him in the picture are (L—R) Mr F. K. Bruce Ag. Director of Pharmaceutical Services and Mr E. K. Addotey. Treasurer of the Society.

DHMT's

(*Continued from page* 10)

"We also resolve that pharmacuetical services be re-organized by:

a) immediate promulgation of the Pharmacy Council and Drugs, Cosmetics and Poisons Laws.

b) The appointment of a Substantive Director of Pharmaceutical Services and the appropriate deputies to handle the various aspects of the profession, including the headship of Tema Central Medical Stores.

"Finally, in the face of worldwide outcry against abnoxious habit of some developed countries dumping inferior products and toxic wastes on unsuspecting Third World Countries, the Pharmaceutical Society of Ghana calls on its members to be vigilant in detecting and exposing any of the said substances, especially pharmaceutical products.

Towards Improved Health Services in Ghana — what panelists say

THE Eastern Region Branch of the Pharmaceutical Society of Ghana has organized a symposium at the Hotel Eredec on Thusday, July 21, 1988.

Four panelists contributed to the symposium held under the theme "Towards Improved Health Services in Ghana."

In a welcome address, the Chairman of the Branch, Mr M.K. Aboagye said the symposium was, among other things, aimed at "establishing and maintaining cordial relationship and to fraternize with other professional bodies in the health care community thereby assisting in delivering efficient and effective health services to our people."

The first speaker, Mr M.A. Nortey, (Pharmacist Proprietor of Edmonstey Pharmacy, Koforidua) was of the opinion that health services delivery in Ghana is 'woefully inadequate.' There was the need to provide more hospitals, clinics, health posts and primary health care centres (PHC), he noted.

In addition Mr Nortey said, more pharmacists, medical officers, nurses and paramedicals needed to be trained to man these institutions. He deplored the present poor doctor to patient ratio and expressed dissatisfaction at the fact that in the Eastern Region alone there had been at least five hospitals without pharmacists for the past two years.

Logistics, Mr Nortey said, was yet another important factor which should be considered if our people should enjoy effective health care services. Drugs and chemicals, diagnostic material, equipment and vehicles should be adequately supplied.

He took advantage of the occasion to suggest that before drugs are destroyed on grounds of expiry, tests should first be carried out on them since sometimes exporters use expiry dates as ploy for dissipating our hard earned foreign exchange.

In conclusion, Mr Nortey had this to say to all health workers: "the health care delivery system in this country consists of members of not less than six recognised professional bodies and under such circumstances there is an inevitable struggle for supremacy. Some professionals consider themselves to be more important than others and therefore arrogate to themselves the right to supervise and direct the others. Even within the same profession with various degrees of specialization this tendency still lingers on. This is rather unfortunate and has already caused us several dear lives. Let us therefore as professionals discard this notion and work as a team with a unity of purpose—the health of the patient. Let us approach each other as a potential ally in the health care delivery system whose professional competence is vital in the improvement of health services in the country.

When one is in doubt about the request or suggestion of the other, it will be in the interest of the patient's health that one consults the colleague about his request or suggestion rather than confront him."

Dr Lamptey, the Regional Medical Director of Health asked for an improved incentive scheme for health workers to entise the young

ones into the public health institutions as well as retain those already in them.

In order to improve healh services in Ghana, Mrs. A. Boahene who is a Nursing Sister, urged Nursing Training Schools to endeavour to recruit the right calibre of candidates and requested for refresher courses for both nursing tutors and clinicians.

She called for an improvement in the decision making process within public health institutions which she believes is at present not democratic enough.

The last speaker, a traditional leader, suggested that a system of education be worked out for traditional healers in order to bring them at par with orthodox practitioners. Intravenous Infusions Limited of Koforidua refreshed participants at the end of the discussions.

General Practice Pharmacists Association Holds National Conference

THE General Practice Pharmacists Association (GPPA) has held its National Conference under the theme "The General Practice Pharmacist-Fake Drugs" at the British Council Hall on December 5, 1988.

In his address, the Chairman of the Association, Mr E.N. Ayeh, (Drofan Chemists Ltd., Accra) noted that in recent times the general public had developed a high respect for the pharmacist because of the high quality of services they rendered.

He was confident that in the not too distant future more pharmacists would go to render services in the rural areas in response to Government's call.

The Chairman expressed the Association's concern over the high cost of drugs and appealed to Government to reduce customs duty to the bearest minimum in order to make drugs more affordable to the ordinary man.

The Deputy Secretary for Health, Dr (Mrs) Mary Grant, in her keynote address, said her Ministry was not happy about the presence of fake drugs on the Ghana market which invariably came in from neighbouring countries and attributed this to the absence of appropriate trade protocol between countries in the West African Region and weak border checks, among others.

She urged pharmacists to make sure that drugs imported into the country were from reputable sources and also to insist on quality assurance documents on such imports.

Mr K.A. Ohene-Manu, Immediate Past President of the Pharmaceutical Society of Ghana gave a talk on the theme, the full text of which is published elsewhere in this issue.

Members of the Association elected new officers to serve a two-year term; they were:

Chairman	— Mr S.A. Abbey
Vice-Chairman	— Mr Alex Fiagome
Secretary	— Mr Derx Baffour
Assistant Secretary	— Mrs Doris Attafuah
Treasurer	— Mr Mike Adwedaa
Executive Members	— Messrs I.K. Williams and J.M.K Berdie

Below is the full text of the talk on the theme of the GPPA national conference by Mr. K. A. Ohene-Manu.

I am most delighted to have been asked by the organizer of this conference to lead discussions on the theme for this year's conference of the General Practice Pharmacists Association of the Pharmaceutical Society of Ghana. I am delighted because as a practising pharmacist I have gradually observed with sadness the proliferation of fake drugs on our market over the past couple of years.

Mr K. A. Ohene-Manu

As you have been informed, the subjectfor discussion is "Fake Drugs" and I intend to start my presentation by first defining the key word "fake" so that our discussions will be more confined to the subject matter.

The various English Dictionaries I consulted invariably define "fake" as follows:

> "Work of art etc that seems genuine but is not"; "something seemingly right or true but not really so"; "claim falsely to be, or to have something" or in order words "something put up in such a way as to deceive".

Imitation and counterfeit are words that are quite synonymous with fake.

From this definition then any drug whose appearance will make one believe that it is a particular product manufactured by a certain company whereas these facts are not true is a fake. Examples of such

drugs abound in Ghana now: Proviron tablets (Schering) Neurobion and Dolo-Neurobian tablets (E Merck) Ketrax (ICI) ventolin Inhaler (Glaxo) Septrin (Wellcome) and a host of others. Most of these fakes sell at less than 50 % of the price of the original products and it is the low price which makes them appeal to the greedy importer.

There are also those other fake drugs which may be presented as generics but may contain substantially less of the declared active constituents or may in fact not contain any active ingredient at all—e.g. red/black capsule put up as Ampicicillin capsule 250mg which may contain the inert and useless substances such as starch, chalk or talc or even in some cases toxic compounds. While it would appear simple to refer to fake branded products simply as a brand product which is put on the market by a manufacturer who is not the Trade Mark-owner, it is not so easy to categorize fake generic drugs. For instance a substandard generic drug may not necessarily be a fake. The manufacturer may be sincere but unknowingly produces a substandard drug by reason of poor formulation or wrongly-sourced raw materials.

The cardinal point is that fake drugs kill and if fake drugs kill then it is a menace to society and therefore all must take part in its eradication from our country.

Advent

It has been reported elsewhere that the advent of fake drugs in the developing world followed the oil crisis of 1973 when because of foreign exchange constraints importation of basic drugs were drastically reduced. With the inadequate drug supplies, the charlatans in Asia and Southern Europe set out to produce fake drugs at about a third of their original prices for sale to the gullible third world. Although this might have been the case in countries like Sierra Leone, Nigeria and perhaps those countries of East Africa, the Ghanaian experience seems to have more recent origins. Our problem started in the late 1970's when with the general craze for quick money—the era of kalabuleism—all manner of men decided to deal in importation and sale of pharmaceutical products and drugs.

To these men importation and distribution of drugs was just like dealing in rice, sugar and sardines and their only concern was how to maximise their profits. Already they have been able to find cheaper sources of rice and sugar from South East Asia and sardines from Taiwan, Japan and Southern Europe. So it was to these places they went looking for cheap sources of drugs and gradually our market was invaded with untested drugs from South East Asia and Italy, Spain and Bulgaria which surprisingly is the biggest producer of fake drugs in Eastern Europe.

Annoyance

At the initial stages these were looked on with annoyance by pharmacists and clinicians who only thought that the products were genuine generics but rather substandard. Little did they know that the manufacturers were knowingly putting out fake generics.

Nigeria has become perhaps the world's largest distribution centre for fake medicines which are imported into that country from Italy, Spain, India, South Korea, Taiwan, Singapore, Malaysia etc. in collaboration with some unscrupulous Nigerian businessmen. The real influx of fakes to Ghana started from Nigeria in the early 1980's when the large population of Ghanaians then living in Nigeria (Agege) started a thriving business with illegal exportation to Ghana of various commodities including drugs as a means of repatriating their earnings. Very soon, this trade was joined in by young women who travelled to Agege over weekends to sell their bodies for Naira and then use the money to buy drugs and other things to bring back to sell in Ghana. Since that time it has no longer been only the well-connected but illiterate businessmen and women (when it comes to drugs) who deal in importation of drugs alongside the traditionally recognized pharmaceutical companies but any young man or woman who has a passport and some money to trade decides to go in for drugs from Nigeria. Of course since these people are untrained to handle drugs and their prime objective is to make quick money they soon started buying fake drugs to bring back to Ghana because they found them very cheap compared with the prices of the genuine ones on the Ghanaian market. These untrained and inexperienced as well as greedy people have continued their illegal activities over the past couple of years and our country now abounds in fake drugs ranging from vaccines, antibiotics, antiasthmatics, antihypertensive through pain killers, antimalarials, and worm expellers to vitamins and tropical preparation

Some of these on our market now are such bad fakes that it is not too difficult for the trained eye to detect but to say the unsuspecting asthmatic, it is only when it gets to the point of dying, because his difficulty in breathing is not being alleviated by his inhaler, that he starts smelling rat. To some it may be too late!

The problem of fake products is not confined to drugs alone in this country. Our motor mechanics and vehicle owners have come to realize the difference between genuine parts and fakes, again brought into the country largely through Nigeria. These mechanics now look out for the genuine parts for the repair works they carry out for their customers so as to maintain their credibility and retain their customers. Why should we as pharmacists not do the same with fake drugs when we very well know that fake drugs kill by "default" to quote Murtada Sesay of Sierra Leone!

In Nigeria, Sierra Leone and elsewhere the problem of fake drugs have been blamed on the lack of adequate legal controls for the manufacture, importation and distribution of drugs. In Ghana, our Pharmacy and Drugs Act of 1961 (Act 64) had been a very good piece of legislation and our problem has been rather lack of enforcement of the provisions of this law. This lack of enforcement have permitted the importation and selling of drugs by unqualified persons as if drugs were ordinary articles of commerce.

Killers

Permit me to emphasize this point by quoting Professor Arnold Beckett formerly Head of the School of Pharmacy, University of London.

"Drugs, by their very nature are potentially lethal products and are therefore not ordinary articles of

commerce and should therefore be left to be handled only by persons whose training prepares them to manufacture and distribute them safely.'.

Perhaps we may paraphrase it to:

"Fake drugs by their very nature are killers by default and are therefore not ordinary articles of commerce. . . ."—

If the importation of drugs are limited only to registered pharmacies as the law requires and if drug importers are made to submit certificates of analysis for every consignment of any product they bring into the country as specified by law these problems will cease to exist.

Under the current Economic Recovery Programme, there is really no justification for the admission of spurious drugs into the country from petty importers who travel along the West Coast. I admit that all fakes are substantially cheaper than the genuine and one would therefore be tempted to say that cheaper and therefore more affordable drugs, especially in the face of the constantly reducing value of the Cedi, should be permitted into the country. We could have good and reasonably cheap priced products from some reliable sources—especially for generics and we should by all means bring those in but certainly there must not be a free importation of fake drugs which will be affordable but kill us by "default".

In my view it is necessary for firm action to be taken to curb this menace. For starters:

(*a*) Let no pharmacist sign any application for Ministry of Health (MOH) Import Permit for Drugs unless he has absolute trust in the manufacturer and/or the Supplier and he is prepared to face the full rigours of the law if drugs that are permitted entry under his hand are found to be fake.

(*b*) True to his professional ethics, let no pharmacist buy or accept to sell or dispense any fake drug. By being vigilant and caring, all pharmacists are capable of detecting fakes.

(*c*) Let the officers of Customs, Excise and Preventive Service (CEPS) ensure that nobody brings any drug into the country without proper documentation (MOH Import Permit, Certificate of Analysis etc.). The law requires them to do this and they owe it a duty to the country to so act.

(*d*) Let the law that restricts the practice of pharmacy be fully enforced so as to exclude effectively all untrained and unqualified persons from importing drugs.

(*e*) Let the members of the public obtain their drugs from only registered premises where pharmacists are available (if possible) and when they have cause to believe they have been supplied with fake or spurious drugs by a pharmacists, let them officially report the matter to the Pharmacy Board.

(*f*) Let the Pharmacy Board ensure that the law requiring every premises which opens to the public as a "Pharmacy" or "Chemists" to have available a qualified pharmacist is respected and enforced.

(*Contd. on page* 17)

Vitapharma Opens

VITAPHARM Limited, a retail and wholesale pharmaceutical concern situated on Guggisberg Road (behind the Maternity Block of the Korle-Bu Teaching Hospital) has been opened for business on October 10, 1988 at a colourful ceremony in front of the shop.

Mrs Charity Bentsi-Enchill cut the tape to declare the premises opened in the presence of numerous invitees notable among them were Mr K A. Ohene-Manu (Immediate Past President of the Pharmaceutical Society of Ghana) and Mr T.C. Corquaye (Registrar of the Pharmacy Board) who were Chairman and Guest of Honour respectively.

The Company is jointly owned by Mr Emmanuel Agyarko who is also the Supervising Pharmacist and Mr Niki Bentsi-Enchill.

A befitting reception was later held at the canteen of the Medical School to entertain the invited guests.

The shop opens for business from 7.30 a.m. to 10.00 p.m. during week days and from 9.00 a.m. to 9.00 p.m. on Saturdays, Sundays and on Public Holidays.

Picture shows Mr T. C. Corquaye speaking at the opening of Vitapharma Ltd. On his right is Rev. Dr. Aryeetey. Others from his immediate left are Mr K. A. Ohene-Manu, Mrs Charity Bentsi-Enchill and Mr Emmanuel Agyarko

Talk by Ohene-Manu

(*Contd. from page* 16)

In recent times the Nigerian Government has issued a law making it a criminal offence punishable by huge fines and prison terms if any one is caught manufacturing or dealing in fake drugs. The full import of this new law is yet to be seen but if we bear in mind that Nigeria is as it were, the nerve centre for drugs, then any positive steps taken there must be of interest to us. Perhaps if the problem of fake drugs in our country will not go away by public action as I have outlined above, then government would have to consider some legislation which will be enforced so as to save the people dying slowly by "default".

I do not claim to have dealt with all the problems connected with FAKE DRUGS but it is my hope that I have given some of the factors involved and this should form a basis for further discussion and comment by all.

In conclusion, let me retariate that drugs can kill if taken unwisely or without proper advice but even worse fake drugs are a menace and bigger killers even when taken wisely. We should all therefore, contribute to eradicate it from our society.

People

THE International Pharmaceutical Students Federation (IPSF), a body embracing all organized national pharmaceutical student associations throughout the world and with the aim of promoting pharmaceutical education worldwide has bestowed on Mr Mike Addo an Honorary Life Membership award in May, 1988 for being "a long-time supporter of IPSF and an active adviser and counsellor to the Liaison Secretary of Ghana."

Mr Addo thus, becomes the first black African to receive such an honour since the establishment of IPSF in Holland in 1949.

Mike was the Liaison Secretary of the Federation in Ghana from 1974-75 during which period he arranged the first students exchange between Sweden, Netherland and Ghana. In 1977, as a result of his hard work, he was appointed Commissioner for Africa.

It is on record that the period 1974—78 evidenced "a lot of interest shown by the African countries in IPSF Student Exchanges and Congresses" through the efforts of Mr Addo.

Mike has represented Ghana at, IPSF congresses in Finland, Austria, Mexico, Malta and Great Britain.
To Mr Mike Addo, the GPJ says: Congratulations!

Mr Mike Addo

Dates

GREATER-Accra Branch of the Phramaceutical Society of Ghana meetings on April 20, June 15, August 17, October 19 and December 14. Venue for June meeting is the British Council Hall. All other meetings will take place at the Social Advance Institute.
International Seminar on Pharmacy Management in Accra in May 1989.
Medical Stores Management Course for Pharmacists at GIMPA in Accra in August 1989.

International Pharmaceutical Fedederation Congress in Munich, West-Germany from September 3-9, 1989.

The 40th National Conference of the Pharmaceutical Society of Ghana at the Christ the King Hall, Accra, from September 21—24, 1989.

West African Pharmaceutical Federation Executive Committee meeting in Banjul, The Gambia in November, 1989.

KATH Making Progress

ANOTHER attempt by the Ministry of Health to reactivate the Children and Maternity block projects of the Komfo Anokye Teaching Hospital is underway at the cost of ₵76 million. So far, however, the Government has released ₵7 million.

The Ministry, in addition, will purchase 24 flats of the SSNIT Housing Projects at Asuoyeboa in Kumasi to accommodate 18 doctors, 4 pharmacists and two paramedical staff of the hospital. An amount of ₵16 million has been released to furnish the rooms.

Not only has the hospital purchased two utility vehicles at the cost of ₵7 million to help alleviate transportation problems, it has also procured 100 matresses at the cost of ₵2.5 million, rehabilitated part of the hospital mortuary and has bought drugs, dressings, surgical materials and other supplies to the tune of about ₵27.6 million.

Again, the hospital has provided ₵4 million from hospital fees collected for the renovation of plumbing and electrical systems of the gynaecological theatre. It is gratifying to note that all these has been possible, thanks to the Government policies of cost recovery in health care delivery.

It would also interest readers to know that the period from January to November, 1988 saw KATH bagging more than ₵103 million in hospital fees.

Health Fund for Africa

THE 38th Session of the World Health Organisation (WHO) Regional Committee for Africa held from September 7 to 14, this year has passed a special resolution setting up a special fund for health in Africa.

According to a release from the WHO's office in Ghana the fund is to assist the Africa region to deal rapidly with emergencies and disasters, finance the technical expertise needed in the preparation of health development programmes as well as support institutions that train health teams in the field.

The fund will also be used to purchase and maintain equipment in rural areas and support research in community health, the release said.

The release stated that the capital endowment in foreign currency with an African initial capital is to be augmented by capital payments, voluntary contributions, subscriptions, district resources arising from seed money and other income-generating activities of the local health system.

The international community, the release said, will be invited to subscribe to this special fund which would be independently managed.

It said the WHO Regional Director for Africa, his representatives in the countries, the designated representatives of African member states and members of the contributing international community will be accountable for funds under the overall guidance of a Board of Trustees.

The resolution which was sponsored by Cameroun and Guinea was supported by Burundi, Central African Republic, Mali, Rwanda and Senegal.

—Peoples's Daily Graphic

Hospital Boards Law Passed

THE government has passed a Hospital Administration Law 1988, under which nine member Regional Hospital Boards (RHB) are to be established to see to the management and administration of all hospitals, clinics and health stations in the country.

The Boards will, among other things, formulate policies, develop plans and strategies as well as make the regional hospitals and health stations self-financing. It will also draw up appropriate plans to improve the standards of health services provided for patients at hospitals and health stations in the region.

Under the law, the RHB may appoint committees to assist it in the discharge of its duties.

"These shall include a Finance Committee, a Technical and Planning Committee and a Staff Development and Disciplinary Committee".

The law also provides for the establishment of hospital and health station management committees and gave their composition as a Chairman, Hospital Administrator, Hospital Secretary, Finance Officer or the most senior accounts Officer, Heads of two clinical units and a Matron.

The others are pharmacist of the hospital, three other persons resident in the locality, and one representative each of the CDR and Health Services Workers Union.

Teaching Hospitals in the country which normally enjoy regional hospital status are empowered to have boards like the regions and these boards (including regional boards) "shall have perpetual succession and a common seal and may be sued in its corporate name".

The tenure of office for members of these boards shall be four years and the boards shall recommend to the Secretary for Health fees to be paid by patients, appoint staff and determine their remunerations.

West Africa Pharmacy Students Meet

THE first consultative meeting of the Federation of West African Pharmaceutical Students Association (FWAPSA) has taken place in Accra from July 22—23, 1988.

A communique issued at the end of the meeting said delegates decided that (1) an Inaugural General Assembly be held in Dakar, Senegal at the end of March 1989 and that a symposium/seminar be held in Monrovia, Liberia just before or immediately after the inaugural General Assembly (2) student exchange programmes must be three-dimensional, namely academic, professional and social, (3) the FWAPSA applies for membership of the International Pharmaceutical Students Federation (IPSF) as a sub-committee and be affiliated to any organization that may be deemed necessary and (4) Accra, Ghana be made headquarters of FWAPSA.

The meeting also adopted a draft constitution and elected officers for a two-year term.

Mr G. Abankwa-Yeboah of Ghana was elected President. The post of General Secretary went to Mr Papa Gallo-Sow of Senegal, while Mr Benjamin Botwe, also of Ghana, became the Treasurer.

Others were: Mr Rashid M.V. Corneh of Liberia who becomes Secretary for Information and Publications and Mr P. Tarpewah Kear Jnr. of Liberia as Secretary for Student Exchange and Education.

The Federation whose full membership is open to all national associations of pharmacy students in West African has, among others, the following aims and objectives:

a) to study and promote the interests of pharmaceutical students and to encourage regional co-operation amongst them;

b) to collect views on the subject of pharmacy education, suggesting improvements where necessary and ultimately to attain uniformity in the sub-region, and

c) to co-operate with other international organizations on the scientific and cultural planes.

Delegates attending were from Ghana, Liberia and Senegal. Nigeria and La Cote d'Ivoire were unable to attend.

Import Licence Scrapped

DR Kwesi Botchwey, PNDC Secretary for Finance and Economic Planning has in January, this year announced the abolition of the Import Licence System. Importers will therefore no longer be required to obtain import licence to allow them access to foreign exchange.

He said importers would instead be expected to sign a declaration confirming that their import transactions would be concluded in accordance with existing laws.

It follows, therefore, that the 20% Special Unnumbered Licence (SUL) tax has also been abolished.

First Health Magazine Launched

A monthly health magazine named "Your Health Guide" has been launched in Accra by Prof. H. H. Philips, President of the Ghana Medical Association (GMA) on March 11, 1989.

According to Dr Anthony Ossei, the Editor-in-Chief of the Magazine, their main aim for publishing such a magazine, which is the first of its kind in the country, was to make the general public know more about ailments that afflict them through "the presentation of medical conditions in simple terms devoid of medical jargons" and to use medical photographs and illustrations to explain the causes, prevention and treatment of medical problems".

This approach, he pointed out, would go a long way to help improve the quality of medical care provided in this country.

In a speech to launch the magazine Prof. Philips described the idea of bringing out such a magazine as "fantastic" since knowledge, he maintained, was essential to the modification of one's behaviour and actions in order to sustain one's life.

In a short address, Dr E. N. Delle, a dermatologist said the magazine would contain the required information on how to attain good health, but benefits to be derived from it would depend, to a large extent, on how the user utilizes the information.

He called for support from all and sundry to make the magazine last on the newstand. In an auction that followed the launching, the first 10 copies of the magazine were sold at a total sum of C168,500.000.

Present at the ceremony were numerous well-wishers including Dr A. P. Bulango and Mr Saidi Shomari who are the WHO and the UNICEF representatives in Ghana respectively.

WAHC on Fake Drugs

THE 17th Assembly of Health Ministers of the West African Health Community (WAHC) ended in Freetown, Sierra-Leone on October 21 with a call on governments in the sub-region to enact strict laws against the manufacture, importation and distribution of fake drugs within the region.

This has become necessary, WAHC explained, as a result of the dangers being posed to the people in the region by the alarming presence of fake and sub-standard pharmaceutical products.

Recognising the important role pharmacists can play to correct this unfortunate situation, the Health Ministers appealed to them to redeploy their efforts in enforcing ethical practice among themselves.

In Ghana, the Ministry of Health is working on a programme for a quality control laboratory to be set up with the assistance of the United Nations Children Fund (UNICEF) to test samples of all drugs and chemicals being imported into the country for quality assurance.

FIP plans to reach all

TO enable the influence of the International Pharmaceutical Federation (FIP) to be felt in many more parts of the world and especially in those parts where, for some reasons, FIP Annual Congress cannot be held an arrangement whereby a national pharmaceutical society, or a regional body like the West African Pharmaceutical Federation (WAPF) could jointly with FIP organise a seminar for between 200 and 500 participants in their areas of juridiction is being worked out. It is expected that the planning, choice of speakers, funding and other relevant details will be jointly handled and the proceeds shared at an agreed ratio.

National associations within the sub-region and the WAPF are advised, therefore, to take advantage of the facility and organise activities within the next two years.

Meanwhile, in a bid to effectively launch FIP into the next decade and to enable the profession serve humanity much more, an appeal for funds has gone out to all ordinary members of FIP, that is, national societies.

Response to this has so far been encouraging as the American Society of Hospital Pharmacists has donated $100,000.00 and the Nagai Foundation in Japan has given $10,000.00. All the Nordic countries have made a joint donation and the Royal Pharmaceutical Society of Great Britain intend contributing a sum of £7,100.00 and this is expected to spread over 5 years. Similarly, the Dutch Pharmaceutical Society will donate an amount equal to one year subscription spread over 2 years.

Notwithstanding the rather poor economic state of African countries, Mr Sam Agboifo, Vice-President of FIP has urged African states "to consider in what way we can make a token donation."

He expressed his conviction that if properly briefed, various African Governments would be willing to assist.

Pharmacy Act for Sierra Leone

A Pharmacy and Drugs Act "to regulate the profession of pharmacy; to control the supply, manufacture, storage and transportation of drugs; and for matters connected therewith or incidental thereto" has been enacted in Sierra-Leone by the President, Mr J.S. Momoh and members of the Sierra-Leone Parliament.

The Act, being the first of its kind, was signed by the President in Febuary, 1988.

In many ways the Act reads very much like the Pharmacy and Drugs Act of Ghana, but it is worthwhile to note that unlike that of Ghana's, this one, by the composition of its Pharmacy Board, places the regulation of the pharmacy profession more in the hands of pharmacists.

Out of nine Board Members only two are doctors. Five members of the Board form a quorum, three of whom should be pharmacists and in the absence of the Chief Pharmacist, who is Chairman of the Board, the members present at the meeting elects a chairman from among the pharmacists present.

Among those who assisted in no small way to bring the Act into being was Mr Mutada Sessey (Kingsway Chemists, Freetown) who incidentally is a product of the Faculty of Pharmacy at the University of Science and Technology, Kumasi.

A copy of the said Act is available at the Secretariat for reference purposes only.

7th Assembly of WAPF

THE 7th General Assembly and Scientific Symposium of the West African Pharmaceutical Federation (WAPF) has taken place at the Federation Palace Hotel, Victoria Island, Lagos, Nigeria from February 20—24, 1989.

Ghana was represented at the Assembly by a 15-member team.

Mr T. C. Corquaye (Registrar of the Pharmacy Board) was elected 1st Vice-President of the Federation. He was until his election 2nd Vice-President of WAPF.

Look out for a detailed account of activities of the Assembly, with photographs, in the next issue of the Journal.

ORS Reducing Mortality Rate in Ashanti

A workshop for retail pharmacists and chemical sellers on the use of Oral Rehydration Salts (ORS) for the control and management of diarrhoeal diseases has taken place in Kumasi on November 8, 1988.

The workshop which is the first in a series of a nation-wide training programme was organized by the Ghana Social Marketing Programme (GSMP) in collaboration with DANAFCO Limited and Pharmahealth Centre all in Accra.

In the course of the programme Dr. (Mrs.) Doris Hayfron-Benjamin, Ashanti Regional Director of Medical Services disclosed that infant death due to diarrhoeal diseases in the region has been on a sharp decline following the setting up of ORS corners in hospitals and health centres in Kumasi and the intensification of health education programmes in the districts.

Nine hundred participants took part in the 18-day workshop.

Obs, Gynae Post-Graduate Training in Ghana

A post-graduate training programme in obstetrics and gynaecology is scheduled to begin at the University of Ghana Medical School and the School of Medical Sciences at the University of Science and Technology as from January 1989. The programme is expected to be ran with assistance from the Carnegie Corporation in New York.

A release from the University of Ghana Medical School said "this pilot project intends to provide the needed faculty and training materials to enable physicians who wish to especialize in obstetrics and gynaecology to receive their training and licensure in Ghana."

With the programme in place, the situation where candidates travelling abroad for training refuse to return will be eliminated.

The programme will also be opened to scholars from neighbouring West African countries without such facilities.

Pharmacists Are Best In Australia

A report on F.I.P. matters presented at the 7th General Assembly of WAPF held in Lagos in February this year said "according to a recent survey of the honesty and athical standards of 20 professionals conducted by the Morgan Gallop Poll, Australians trust pharmacists the most.

"Included in the survey for the first time, pharmacists were rated 'highly' or 'very highly' by 76% of the 1195 men and women interviewed across Australia. Next were Dentists at 68% and Doctors at 67%".

A few years ago, in another Gallop Poll conducted in the United States of America, Pharmacists were adjudged the most reliable and trust worthy professionals next to the clergyman.

Drug Abuse

by S. N. Tenkorang, B. Pharm., M.P.S.GH.
Danafco Ltd.
Accra

IN The context of modern societies, drug abuse is mainly concerned with the use of drugs without prescription, prior to medical or expert advice and or drug used for non-medical purposes.

The attitudes of people towards drugs vary greatly depending upon the particular individual, this ethnic cultural background, his 'illness' (problem or motive), his age, his socio-economic level and his own attitude towards self reliance.

The culture in almost every part of the world is basically a drug-culture; however, life is not a drug-deficient disease. Almost everyone takes drugs of one kind or another everyday; aspirin for pain, coffee to get started, alcohol to avoid anxiety, tobacco for reassurance, sedatives for sleep tranquilizers for comfort, marijuana for feeling 'high' and to view the world in a novel way, vitamins for health, and laxatives to join the regulars.

Some drugs are regarded by society, as reflected in the law, as pernicious: Their production, distribution, and sale are rigidly controlled or even prohibited absolutely. Offences carry stringent penalties, and users are often regarded as criminals. Drugs in this group include heroin, cocaine, marijuana and lysergide (LSD). Other drugs are recognized to have the potential for causing damage to individual users or to the social structure, and the legal attitude to these is to maintain vigilance over production, distribution and sale (by imposition of taxes) to limit the conditions and circumstances of use, and to penalize certain types of misuse: The main drug in this legal class is "Ethanol" (alcohol). Still another category is of drugs that may cause damage to individuals if used in excess, but not to society; controls, to the extent that they exist at all, are mainly concerned with taxation: Examples of such drugs are tobacco, and caffeine containing substances.

In modern societies, the availability of drugs for therapeutic purposes and of other chemical substances that pose toxicological hazards is regulated by government agencies (eg. Pharmacy Board in Ghana). Generally, access of the public to these substances is for approved purposes through appropriately qualified professionals (e.g. Medical Practitioners, Dentists Pharmacists and Veterinarians). Thus, drug acquisition through other sources (such as peddlers and quacks) and subsequent use including self-medication which is not backed by professional advice constitute abuse, and could lead to various problems including physical hazards, drug addiction and dependence with their attendant social problems.

Drugs Abuse in Ghana

There are various types of drugs commonly abused in the country. Following are some examples of the main categories:-

1. Capsular Antibiotics (Topae, abombelt):- ampicillin, chloramphenicol, tetracyclines; the antibacterial (sulfur) agents-Thiazamide (m&b 760), suphatriad and sulphadimidine.
2. Antimalarials:- Chloroquine, camoquine and Fansidar
3. Antidiarrhoeas:- Sulphathalazole.
4. Analgesics/Antipyretics/anti-inflamatory/anti-rheumatics:- Paracetamol, Aspirin, Novalgin, Butazolidin, Indocid.
5. Sedatives/Tranquilizers/Hypnotics:- Diazepam (Valium), Chlordiazepoxide (Librium), Phenobarbitone, Ativan.
6. Psychedelics:- Morphine, cocoa leaves and cocaine, marijuana, heroin.
7. Pep-ups:- Amphetamines, Ephedrine.
8. Purgatives:- Mixt Sennae Co. WL (Wonder Laxative).
9. Antihistamines:- Periactin, Benadryl.
10. Anabolic agents (used for weight gain)
11. Topical corticosteroid ointments /creams:- Topysolone, Topsyn, Decoderm, Betnelan.
12. Multivitamins.
13. "Socially accepted" drugs:- Ethanol, Tobacco, and Caffeine-containing substances. These are socially permitted in the sense of "*legally*" permitted (although there are degress of constraints and some differences between societies).

The importance in considering these popular drugs lies in the harm their abuse can cause to users and to society at large. A person gets hold of ampicillin capsule (red and black) and thinks he can take it for almost all kinds of ailments he applies it to open sores and also takes it internally. Antibiotics and other antibacterial or chemotherapeutic agents are generally used for treating infections-diseases caused by germs. And any particular chemical agent is specific for only a certain kind or class of germs; and the indication of the drug for any infectious disease can only be established mostly by detailed laboratory examination of specimens and tests. So that arbitrary use of any antibacterial agent may pose problems resulting from wrong medication. And in a number of cases, such chemical agents may not even be necessary for treatment. The germ itself can develop resistance if the drug, used to irradicate it and then treat its host (the patient) of the disease, is not used the way it is supposed to be applied as establis-

hed by scientific and clinical findings. Their topical applications (capsular and injectable powders, tablets) can lead to serious and sometimes fatal hypersensitivity reactions; eg. penicillins, streptomycin, chloramphenicol and the sulfur drugs.

Seemingly common drugs like paracetamol, aspirin, chloroquine and vitamins can sometimes cause irreversible kidney and liver damages and visual disturbances if they are abused. And here, overdosage, prolonged use, ill-advised use and even, underdosage and non-compliance to dosage requirement all constitute abuse.

Novalgin, butazolidin and indocid among others can produce severe disorders in blood functions leading commonly to anaemia, jaundice and loss of immunity (body's ability to fight diseases).

Drugs like diazepam, chlordiazepxide, phenobarbitone, lorazepam (ativan), ephedrine
and morphine are to be used strictly under medical advice/supervision because of their dependence potential if they are abused. In fact, the non medical use and possession of amphetamines, cocaine, morphine marijuana and the like are illegal in Ghana. They can all produce dependence and addiction to the users and create problems to society. The use of so-called socially acceptable drugs like tobacco and alcohol (in excess) is now being actively discouraged particularly for medical reasons. Tobacco, for example, is seriously implicated in some forms of cancer and various lung and heart diseases.

Weight Control

Women especially use certain drugs either to shed fat or to lose weight, and in fact, it is not medically advisable to continue their use because of their dangerous effects following persistent use. The use of periactin and prednisolone for weight gain represents typical cases of drug misuse and abuse because it is really their side effects which are usually exploited.

Popular purgatives like *mist sennae co, mist alba* and wonder laxative (WL) are relatively safe when they are taken as medically directed; but they can cause very troublesome side-effects if they are misused or abused. When WL is taken in overdose, the purging effect can be very drastic and prolonged leading to serious dehydration and weakness. *Mist sennae co* and *mist alba,* for example, are supposed to be taken with large amounts of water else they can irritate the gastro-intestinal tract and produce vomiting.

Certain skin ointments and creams (topical corticosteroids) are greatly abused by our women. Eg. Topysolone Decoderm, Betnelan and Topsyngel. Their prolonged use may affect the nature and tenderness of the skin and can produce permanent unsightly pimple markings of the skin and certain types of skin lesions. The risk of skin infection is increased and existing infections are worsened by topical steroids.

From the foregoing, it can be inferred that a drug is only safe if it is used for the indicated medication and, also, used strictly according to the directions as given by the medical profession. Any instance of abuse can present severe health problems to individual users and to society in one way or the other.

Broad issues of drug Abuse

Among Ghanaian communities, various factors contribute to drug abuse. Lack of proper education and ignorance and the will to satisfy curiosity or to gain/improve upon social acceptance, stand out as very important factors. Sometimes, insufficient knowledge about drugs lead to selfmedication and subsequent drug abuse.

However, non-medical uses of drugs are mostly influenced by:

(*a*) The characteristics and experience of the user;

(*b*) The properties of the drugr used, and the amount, manner, frequency, and duration of use;

(*e*) The social, cultural and economic environment of the user and the circumstances of use in relation to the environment.

A drug may be used experimentally, or on a casual or recreational basis or because of a state of dependence. Whatever the form of use there is an initial or inducting experience, for which a number of motives have been identified.

Patient non-compliance to medication may lead to misuse; and leftovers, which are collected by others for either similar or absolutely different conditions, can produce serious consequences. The drug leftover may have been destroyed due to improper storage (without showing any obvious signs of spoilage); it may have expired and thus lost its potency or medicinal power.
In either case, the drug is unfit and unsafe for use. In fact, a large number of drugs don't only lose their potency after expiration but also change to other products mostly toxic (poisonous) to be used (typically the tetracyclines). There are certain conditions during which drug administration is to follow strict caution, and the choice could be very crucial since carelessness can produce abnormalities and sometimes fatal consequencies. Typical examples of such conditions include pregnancies and patients or individuals with histories of liver or kidney diseases diabetes, hypertension and vatious heart diseases. Aspirin and tetracyclines, for example should not be taken by pregnant women because of their possible harmful effects on the *foetus; and, in* fact, drug use during the first three months of pregnancy is medically unwise.

It is pathetic to see children with yellowish teeth and poor bone formation. These could have resulted from the use of tetracyclines either by their mothers during pregnancy or during their infancy.

The damages caused by drug peddlers, quacks, certain hebal peddlers on the poorly informed is quite immense as far as drug abuse is concerned. These people may act as businessmen or daring sympathizers and their actions mostly result in administering drugs which might have expired, sub-potent due to poor storage, contaminated, withdrawn (or even banned) or spurious; certain capsules they give may not even contain any drug at all. Most of these people exploit the ignorance of others to their monetary advantage. Certain drugs are either withdrawn from market (eg. children's aspirin) or

(Contd on page 27)

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Drug Abuse

(*Contd from page* 24)

banned after their continued use are found clinically to be harmful. And the unsuspecting victim could be deceived into buying them from peddlers and quacks. The use of butazolodin and novalgin (and its kind) among others are actively being discouraged.

It is important to buy drugs from pharmacies and genuine lisensed chemical sellers with prescriptions (where necessary) from qualified professionals; and to seek expert advice about drugs from pharmacists instead of buying the drug from quacks. The danger in this attitude lies in the possibility of one drug being replaced with another due to similarity in presentation (esp. with solid dosage forms-tablets and capsules).

Problems Associated with Drugs dependence

As far as drug abuse is concerned, the major problems which attract serious attention are those particularly related to drug, tolerance, dependence, addiction and the like. But, it seems, that most drug-related problems are the result of drug dependence. A drug-related problem is said to exist where a situation is created, which is proclaimed by an eminent and influencial authority or organization, having been judged as producing or capable of producing harm to or difficulties for an individual or society.

The dependence-producing drugs with which the WHO Expert Committee concerns itself include the following types:

1. Alcohol barbiturate type-eg. ethanol, barbiturates (eg. phenobarbitone) and certain other drugs with sedative effects such as librium, diazepam and meprobamate.
2. Amphetamine type - eg. amphetamine, dexamphetamine and phemmetrazine.
3. Cannabis type-preparations of *Cannabis sativa L* such as marijuana, ganga, hashish and pot.
4. Cocaine type eg. cocaine & cocoa leaves.
5. Hallucianogen type eg. Lysergi de (LSD)
6. Opiate type eg. morphine, heroin & codeine and synthetics with morphine-like effects such as pethidine & methadone.

In addition, it has been noted that tobacco is a dependence-producing substance, that dependence on it is widespread, that it may cause physical harm to the user and constitutes a public health problem; and the caffeine type of dependence is of reasonable importance.

Drug associated problems can be divided into three main types individual socio-cultural and sociolegal-depending on the primary phenomenon.

Individual Problems

These may arise directly as drug-induced disorders of mental health (eg. amphetamine-induced psychosis) or physical health (eg. ethanol-induced cirrhosis), or they may arise directly from the form or manner in which the active principle is used (eg. hypersensitivity reactions resulting from topical application of penicillins). Although these deleterious effects are exerted primarily on the individual, they do have important secondary consequencies for society.

Socio-Cultural Problems

One measureble index of such problems arising from the use of drugs is the loss of earning capacity of the drug-user, and the costs to the community of treating drug-induced disorders, providing welfare services and maintaining law enforcement. However, these are more socio-economic than socio-cultural. Loss of earning capacity of a worker because of drug use has provided a reason for imposition of controls (for example on gin & opium in some countries and even, for the continuation of criminal legislation against narcotics).

At the level of the family unit, drug use may lead to disruptive clashes and excessive drug use may result in neglect and other problems. Instead of providing for their families and buying food, drug users spend more and more on drugs and less on the family, even with increasing taxation.

Socio-Legal Problems

Imprisonment, particularly for use of drugs that are illicit per se is the main problem of this type. A clash between the opinion of a large segment of the community and the legal attitude to a drug may have a severely disruptive effect on society as is now occurring in a number of countries in connection with cannabis. The commission of illegal acts to obtain drugs (eg. stealing, forging prescriptions) or to supply drugs (eg. smuggling, black-marketing) may give rise to serious sociolegal problems.

Much attention has been paid to illegal acts that are induced by drugs or committed under the influence of drugs. Problems of this type include those in connection with cannabis, cocaine and other such narcotic drugs. However, the main drug indicted under this heading is ethanol. The imposition of legal restraints on the use of a particular drug may create additional problems. For example, a ban on opium smoking may be followed by a greatly increased use of heroin, resulting in intensification of dependence, a rise in the incidence of disorders associated with drug use, and loss of the socio-cultural background which exerted restraint on the pattern of use of opium. When there is a considerable demand for an illicit drug and high profits can be made from trafficking in it, there is a high likelihood of corruption of lawenforcement officers. This has secondary consequences that are socially disruptive in that the principals engaged in drug-trafficking may also be concerned with other kinds of criminal activities and these too are allowed to flourish.

Control of Problems

The first task is to identify the precise problems in an objective way, avoiding terms that prejudice objectivity (eg. addiction", "abuse", "socially acceptable").

The second task is to devise means for preventing or reducing the seve-

rity of identifiable problems that do not themselves raise additional problems, and to monitor the effectiveness of the control measure in an objective way.

The three broad Approaches to Control are:

(*a*) Limitation of availability of specified drugs

(*b*) Reduction of interest in and demand to drug for non-medical use.

(*c*) Massive educational programmes on proper drug acquisition and usage, and the various consequencies of drug abuse.

Limitation of availability has worked fairly well in some instances (eg. in decreasing the use of injectable amphetamine in some countries), but it may in other instances increase the incidence and severity of problems; this is generally the case when there is absolute prohibition of drugs for which there is demand and sources of supply are difficult to control (eg. ethanol, opium, diamorphine, cannabis).

Probably limitation on degree and manner of use may be more successful. (as in methadone-maintenance therapy for diamorphine-dependence).

Reduction of interest in and demand for drugs call firstly for identification of persons at risk of experiencing drug-related problems, and then for identification of the reasons that are responsible for placing them at risk.

Many national programmes aimed at prevention of drug-dependence emphasize drug education; but here little success is achieved, because, people tend to view the various descriptions of drug-associated activities, procedures and equipment for self-administration of drugs as a way of teaching or inviting them to experiment rather than avoiding them.

Conclusion

From the fore-going discussion it becomes clear that numerous factors and influences are involved in drug abuse, which in itself is a factor of various types of drug dependence.

The consequences of drug abuse are immense and have serious implications not only to the individual user but also to society. The control of drug abuse and the drug-associated problems is quite difficult and continue to be a social and world-wide problem.

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Korsakoff's Syndrome (Psychosis)—An Appraisal

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KORSAKOFF'S syndrome or psychosis consists of impairment of memory for recent events (memory for past events being preserved), disorientation in time and space, visitations of ideas of grandeur or unexcelled importance and elevation in life with consequent chemirical vice-regent or vicerory activities pertaining to the positions of heads of state, potentases, financial and commercial magnates, intellectual giants and prodigies and confabulation for the main purpose of filling gaps in the memory. Korsakoff in 1887 first described this condition associated with polyneuritis.

Acute delirium tremens-like symptoms, such as tremor, perspiration, tachycardia, apathy, loss of volition and paucity of elaboration, are usually but not always addenda to the psychotic features.

Classically, this syndrome is seen frequently in alcoholism and has been described as a complication of other types of intoxication (vide infra). It has also occurred after head injury and has been seen in association with vitamin B deficiency, including the cutaneous manifestations of pellagra. The disorder is not altogether specific for alcoholism (*vide infra*) and polyneuritis may or may not be present. Increase in spinal fluid protein has been noted. Wernicke's syndrome 1 is often a complication.

The modest burden of this treatise (paper) is to document briefly the causes of Korsakoff's syndrome (psychosis) which have been encountered in 12 years practice of neurosurgery in an African setting; namely:

(1) Head injury.

(2) Alcoholism.

(3) Barbiturate over-dosage.

(4) Lysergic Amide ("Wee") intoxication.

(5) Cerebral malaria

(6) Diabetes.

(7) Post-ictal states

(8) Cerebro-vascular accidents.

(9) Intracranial haemorrhage.

(10) Cortical atrophy.

HEAD INJURY: Fractures of the base of skull especially when the three fossae have been involved, are some of the causes of Korsakoff's psychosis. Clinical observations over the past twelve years or so have shown that the limbic system is involved in fractures of the base of skull; and that the mamillothalamic tract, the postero-medial hypothalamic zone, the antero-medial and the antero-lateral thalamic zones bear the brunt of the confusion that is usually concomitant with fractures of the bases of the skull. Almost all cases encountered have been brought into hospital in an unconscious state. Bleeding from the nose and ears have been noted as also periorbital haematomata and subconjunctival haemorrhages without any definable edges.

The clinical patterns have been as follows:-

(1) Unconsciousness followed a few days or weeks or rarely months later by state of wakefulness in which the patient's speech is incoherent, abusive and offensive, and in many instances eaccophonous; in which the patient displays shamrage, salivates excessively and spits at attending physicians, nurses and paramedical staff; in which patient is usually incontinent of urine and faeces, and in which the patient avoids food and shows no signs o hunger or thirst.

Following the above stage is the state of gradual ambulation, increased and voracious appetite and much emotional lability. This is the stage in which patients usually show very poor memory for recent events, but amazingly good memory for remote events. At this stage also, they become garulous, loquacious-facetious in behaviour, and are visited by grandious and gargantuan ideas about themselves, and make wild statements as to their supposedly untold wealth, achievements and importance on the world scene of any imaginable human activity. The above stage progressively dovetails into that of gradual recovery in which the patient recovers the power of speech, social grace, poise, circumspection, memory and vegetative functions. There may be permanent anosmia (loss of sense of smell,) or trunkal ataxia.

(2) It is noteworthy that until comparatively recently, Ghana held global pride of place in the amount of alcohol consumed per person and was second only to the United States in the total amount of alcohol consumed by a nation. However, or, in spite of this impressive record, relatively few cases of Korsakoff's psychosis following alcholism have been encountered in clinical neurosurgical practice in this country.

Delirium tremens and epileptic attacks in alcoholism are usually precursors of the Korsakoff's syndrome which latter, is then usually in bloom and flower!

(3) Barbiturate overdosage is sometimes a culprit in the genesis Korsakoff's psychosis. This has been the underlying cause of distur-

bances of recent memory and of loquacity and heightened sense of self-importance, and spending spree in many patients who have presented at the Neurosurgical Clinic for the treatment and follow-up of the above complaints. These patients are referred to the Neurosurgical Clinic because of the clinical impression of intracranial space occupying lesions. The mainstay of efficacious management of these patients embraces good history-taking and clinical examination, relevant investigations and appropriate medication.

Lysergic acid intoxication has in recent times featured prominently among the reasons for admitting several patients presenting with Korsakoff's psychosis. The march of clinical events is similar to that due to head injury.

(4) Cerebral malaria, or for that matter nerve tissue malaria, has led to admissions of many patients who initially presented with Korsakoff's psychosis and finally responded to anti-malarial therapy. A notable example is that of a young female teacher who suddenly became violent to her students, boisterous and irritable because her lover, the then Head of State, had eloped with another woman. What made her sad fate more poignant was the fact, according to her, that her boyfriend, a Major-General in the Ghanaian Army, had refused to write her, since the latter had been posted to the Middle East. Added to all this was the exasperating fact that the cheques she had issued for vast sums of money, had not been honoured. She did extremely well on anti-malaria treatment.

And yet there was another female patient, aged 39 on admission, who, 48 hours before admission, had suddenly become febrile and headachy. She vomited three times and collapsed four times. She thereafter became hallucinatory and subsequently had ideas of grandeur and of persecution, and was loquacious and bewailed the loss of her vast fortune, which she did not have.

Examination showed that she was weak on the left side of the body, following a fit, that her speech was post-ictally incoherent. Her brain scan appearances were those of right frontal subdural collection! Subsequent right frontal craniotomy and evacuation of epifrontal, prefontal and subfrontal haemotoma were performed. She has since been discharge and has gone back to work.

(5) Diabetes and more so pre-diabetic coma are one of the causes of Korsakoff's psychosis.

Korsakoff's psychosis due to diabetes and diabetic pre-coma is well illustrated by the following case-history.

A 55-year old male patient recently presented at the Neurosurgical Clinic because in recent months his family and colleagues had found his behaviour odd. Suddenly, a managing director of a reputable firm he began to issue directives that many cars be bought for the company. For the payment of these cars he issued huge cheques which later bounced. He also had many of the firm's vehicles sold and gave some away as gifts to individuals. He sold most of his property and freely gave the proceedes away. He had dismayingly bloated and grand ideas of his untold wealth. His generosity was a morbid affair. His behaviour was sometimes violent, his language insipid and eaccophonous. He had wonderful and roseate ideas about his great mission to suffering humanity. His memory for remote events was impressively good.

His memory of his recent behaviour and utterances was equally impressively poor. A known diabetic who had not had treatment for about two years, he had some tremor of the limbs. His random blood-sugar was 496mgm% and his fasting blood sugar was 405-mgm%. Brain scan had been normal. The immediate institution of anti-diabetes therapy (DAONIL, Rastinon and Diabenese) clinically favourably reversed his condition. His memory for recent events returned, and has since instituted appropriate judicial action to recover his property, and since taken active measures to seek reparation.

(6) Post-ictal states, cerebro-vascular accidents, intracranial haemorrhage and cortical atrophy are also some of the causes of cases of Korsakoff's psychosis which have been encountered in clinical neurosurgical practice at Korle Bu Teaching Hospital, Accra.

Discussion:

The basic lesion in all above cases of Korsakoff's psychosis, with respect to the impairment of memory for recent events is most probably impairment of electrical activity along the mamillo-thalamic tract. Intact mamillo-thalamic tract is basically concerned with the phenomenon of recent memory.

From observations and experience over the last 14 years or so, as a common denominator, the brain suffers several and repeated petechial haemorrhages, with consequent petechial softening of appropriate brain tissue and overall swelling of the brain, the latter accounting for the features of confabulation grandiose ideas and odd and antisocial behaviour.

The lesions in the brain in cerebral malaria are essentially ischaemic and are due to the capillaries being blocked by masses of parasite-containing erythrocytes and by pigment derived from the break down of these cells (Malariology, 1949). The brain is swollen, and the cortex of cerebrum and cerebellum is much congested. Patechial haemorrhages may be seen, and sometimes are very numerous, especially at the junction of the grey and white matter. As the parasites always remain inside the vessels they do not excite much local cellular response. The result of the obstruction of the many small vessels that are involved is widespread tissue destruction. The necrosis leads to proliferation and aggregation of Hortega cells-the so-called Durck nodules. The Purkinge cells may be reduced in number and the surviving cells may show homogeneous or ischaemic changes (2); some of these changes could be due to hyperpyrexia.

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