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**HARNESSING TRADITIONAL, COMPLEMENTARY &
ALTERNATIVE MEDICINES FOR CONTEMPORARY PHARMACY
PRACTICE IN NIGERIA**

PRESENTED BY

**PHARM. (MRS.) ZAINAB UJUDUD SHARIFF
(FPSN)**

***DIRECTOR, TRADITIONAL, COMPLEMENTARY & ALTERNATIVE
MEDICINES DEPARTMENT, FEDERAL MINISTRY OF HEALTH***



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INTRODUCTION

- ❑ The history of Natural Medicine is as old as mankind itself.
- ❑ In ancient times, Apothecaries (formulators of medicine) worked with monks, priests and physicians using medicine, religion and occultism to treat people based on experimentation, observation, and assumptions.
- ❑ Treatments/medication came directly from nature, nature; plant materials, plant parts, minerals, animal tissues, water, sun and air.
- ❑ Documentation - material medica lists 600 plants used for 1700 years by Discorides. Shen Nung, Father of Chinese Medicine.
- ❑ Nigerian Herbal Pharmacopia, 2008 contains 22 plants
- ❑ Pharmacy went through various developmental stages with contributions from different Nations such as China (Emperor Shen Nung), Greece (Hippocrates), Egypt (Isis), Rome and Arabia (Avicenna)
- ❑ Separated Pharmacy from medicine concluded by Fredrick II (Emperor of Germany and King of Sicily into essential points in the Edict include



INTRODUCTION CONT'D.....

- 1) Complete separation of the pharmaceutical profession from the medical profession and forbidding any business relationship
- 2) Compulsory use of a prescribed formulary (pharmacopoeia) to guarantee reliability and uniformity of compound drugs.
- 3) Pharmacy shops to be licensed.

- “80% of the world population that live in the rural areas use TCAM as primary form of healthcare.” – WHO
- Types of Health Care system recognized by WHO are;

1) 1. Orthodox or Conventional Medicine

Traditional or Indigenous Medicine

Complementary & Alternative Medicines





BASIC DEFINITIONS

- ❑ **Natural Medicine:** this is a method of healing that employs various natural means to empower an individual to achieve the highest possible level of health. This draws on the wisdom of many countries such as Ayurveda (India), Taoism (China) and Hippocrates (Greece).
- ❑ **Traditional Medicine** is “the total combination of knowledge and practices, whether explicable or not, used in diagnosing, preventing and eliminating physical, mental or social diseases and which may rely exclusively on past experience and observation handed down from generation to generation, verbally or in written, thereby promoting the role of therapies in health system.” – WHO
- ❑ **CAM** are group of non – orthodox and traditional therapies that may be used alone to complement orthodox or other non-orthodox therapies in the treatment and prevention of diseases in both human and veterinary patients.

BASIC DEFINITIONS CONT'D



- ❑ **Herbal Medicines** are prepared, finished and labelled crude medicinal plants parts e.g. roots, stem bark, flower, seeds, leaves etc. It is prepared and processed medicinal plants into herbal drugs.
- ❑ **Phytomedicines** refers to prepared, processed and standardized medicinal plants constituents with therapeutic benefits.
- ❑ **Supplements or Functional Food:** Food or part of food that provides medicinal or health benefits e.g Vit C, E, garlic, magnesium, zinc etc.
- ❑ **Nutraceutical:** Foods or parts of food with scientifically proven health benefits and diseases treatment or prevention. Also known as supplements, phytochemical, functional and nutritional foods e.g antioxidants, dietary supplements, vitamins & minerals.
- ❑ **Ethno-pharmacy** is the interdisciplinary science that investigates the perception and use of pharmaceuticals (especially traditional medicine) within a given human society. It includes prevention and treatment of diseases.



TYPES OF TM PRACTITIONERS

- ❑ **Traditional Bone Setters:** Use herbs to treat orthopedic cases
- ❑ **Traditional Birth Attendants:** Also referred to as traditional mid-wives. They use herbs to provide both antenatal and post natal cares, as well as delivery of babies.
- ❑ **Herbalists:** use herbs to treat all forms of diseases.
- ❑ **Traditional Surgery:** Undertake circumcision of babies and traditional body marks.
- ❑ **Veterinary Healers:** They specialize in treating animals



TYPES OF TM PRACTITIONERS CONTINUES

- **Spiritual Healers:** Spirit possessing cult with its origin from ancient times. They are mostly women possessing particular spirits.
- **Herbs sellers:** involve in selling of various herbs and other ingredients for traditional medicines
- **Traditional Psychiatrist:** involve in the use of herbs and means to treat mental cases.
- **Faith Healers:** involves religious leaders who use the holy books to promote healing through divine intervention.
- **Hunters & fishermen**

Traditional medicine practice



SPIRITUAL HEALERS



TM Raw material



Traditional surgery

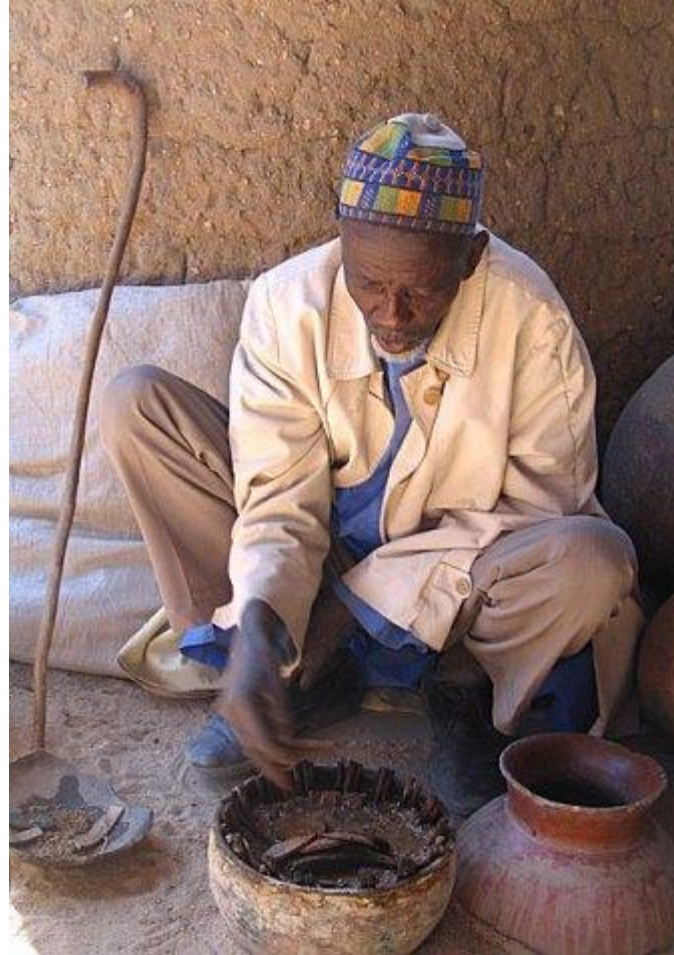


Herb Sellers

Traditional Medicine Practice



Use of Animal Parts in TM



TM HEALER

TYPES OF CAM PRACTICE

- ❑ **Hydrotherapy:** use of water for treatment
- ❑ **Aromatherapy:** use of aromatic compounds from plants materials, for healing benefits
- ❑ **Homeopathy:** alternative medicine based on the principle of treating like with like
- ❑ **Acupuncture:** a way of treating disease by the insertion of special needle (acupuncture needle) into the body at specific points (acupuncture points) to get rid of pain and diseases.
- ❑ **Herbalism:** use of herbs as medicines, food & body care products.

TYPES OF CAM PRACTICE CONT'D

- ❑ **Massage therapy:** use of pressure to work on the body
- ❑ **Osteopathy:** complementary medicine based on the principle that the structure and functions of the body are closely integrated, and that a person's well-being is dependent upon the neurological, muscular, skeletal and visceral structures working in balance together.
- ❑ **Naturopathy:** Alternative medicine based on the healing power of nature premised on the fact that human body is equipped with inherent ability to heal itself.
- ❑ **Chiropractic:** complementary medicine that focuses on disorders of the muscles, bones and nerves, such as pain in the back, neck, joints, arms and head.

FOREIGN CAM PRACTICE



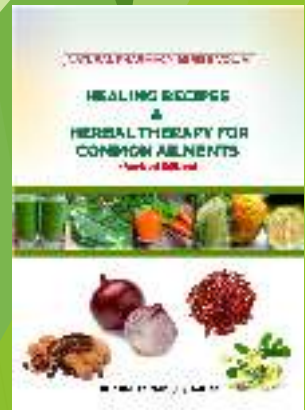
CAM THERAPY



THEORY OF CAM

INTEGRATIVE MEDICINE

- ▶ Integrative Medicine: this is a healing-oriented medicine that takes account of the whole person, including all aspects of lifestyle. It emphasizes the therapeutic relationship between practitioner and patient, it's informed by evidence, and makes use of all appropriate therapies.
- ▶ , a new approach that is more realistic, result oriented with maximum impact is to have both conventional and TCAM .



ROLES OF GOVERNMENT IN TCAM

- **The Federal Government has taken several positive steps in using science, technology and innovation to develop TCAM in Nigeria. Prominent areas include;**
- **1966 – Research into local herbs by university of Ibadan**
- **1979 – First National Science Conference on TM was organized by FMoH**
- **1988 – Establishment of the National Institute of Pharmaceutical Research & Development (NIPRID)**
- **1993 – National Council for Art & Culture (NCAC) set-up botanical garden in Getso, Kano state and now in some other states like Bayelsa**
- **1997 – Nigerian Natural Medicine Development Agency in Federal Ministry of Science and Technology has a data base of plants found in each zone and carried out training of TMPs**

ROLES OF GOVERNMENT IN TCAM CONT'D

- 1997 - 2006: Traditional Medicine (TM) was a Programme under the department of Health, Planning, Research & Statistics, FMOH
- 2007: A division of Traditional Medicine Development (TMDD) was established in the Department of Food and Drug Services (FDS) with the following mandates:
 - 1) To accelerate the integration of Traditional Medicine into the conventional Healthcare System of the country
 - 2) To promote herbal medicine products development and commercialization.

ROLES OF GOVERNMENT IN TCAM CONT'D

- **2013: Inauguration of three (3) Committees on Herbal, Complementary and Alternative Medicines Development with the mandate to develop:**
 - 1) A Curriculum for the training of Herbal Medicine Practitioners at the Medical Schools in Nigeria.
 - 2) Modules for the Development of TM into medical students training curriculum
 - 3) TM modules into nursing students training curriculum and
 - 4) Expansion of TM modules in the Pharmacy Students' Curriculum

- **2018: Upgrading of the TMD division to a status of a Department of Traditional, Complementary & Alternative Medicines with 4 – divisions viz; TM, CAM, HCAM Promotion & Commercialization & TCAM R&D**

ONGOING ACTIVITIES OF TCAM

- 2007 TM Policy review
- Herbal Pharmacopeia - 2008 (22 APIs)
- Essential Medicinal Plants List in-progress
- TCAM Council Bill
- Institute of TCAM
- Training of TMPs
- Update of CAM by DMC -> 32
- Expert Committee on HP
- Expert Committee on Protocols for Verification and Validation of Covid-19 Herbal Products & related diseases.
- Expert Committee on Essential Medicine Plants Lists
- SON approved 10 standards on ATM

GLOBAL MARKET FOR TCAM (MEDICINAL PLANTS)

- ❑ **Current global market for medicinal plants - \$100 billion
China has 25% followed by India**
- ❑ **2050 projection - \$5 trillion**
- ❑ **2008 – India made \$2 billion from medicinal plants products, including 35 different plant-based raw materials. Generates \$6b annually, from the development & commercialization of moringa oleifera**
- ❑ **Europe annually imports 400, 000 tons of medicinal plants from Africa**



- ❑ Europe spends US \$1 billion/annum on medicinal plants (raw materials) from Africa and Asia
- ❑ 1993 Cameroun generated \$40 million from *Prunus Africana*. Kenya and Uganda also export this plant to Europe.
- ❑ South Africa exports 3 plants (worth USD \$84 million) out of the 24 000 of their indigenous plants used in traditional remedies
- ❑ Madagascar's major source of income is from medicinal plants - *Catharanthus rosae*
- ❑ Burkina Faso, Mali & Ivory Coast export *Entenda Africana* (chewing stick)
- ❑ Nigeria has about 8000 species of medicinal plants but not a major player in the global traditional medicine market.



CONTEMPORARY PHARMACY PRACTICE IN TCAM

- 40 – 45% of pharmaceutical drugs are from plants origin
- The 1st Serve of Fact Sheets on CAM (with information on essential oils, preparations, packaging & storage) was launched by the British Pharmaceutical Conference in September 2000 by Prof. William Dawson.
- Some CAM elements form parts of some Pharmaceutical care plan.
- Training in CAM e.g almost all 16 schools of Pharmacy in the UK offer courses in CAM



- ❑ **Supplements/herbal products sold in pharmacy shops e.g Ruzu bitters, Switish bitters**
- ❑ **Synthetics/medicines – ACTs**
- ❑ **Nutritional supplements – Multivitamins, Vit. E, A, C, Garlic, Moringa, Zinc, etc**
- ❑ **Essential oils e.g Eucalyptus oil, Ginger oil etc**
- ❑ **Cosmetics**



ROLES OF PHARMACISTS

- ❑ **Pharmacists are better trusted to collaborate with TMPs in the development of herbal (medicinal) products.**
- ❑ **Pharmacists should be in the main lead in the development of Herbal Pharmacopeia**
- ❑ **Pharmacists should collaborate with TMPs, scientists and researchers in the development of new medicines and APIs for pharmaceutical drugs.**
- ❑ **Processing, Packaging, Labelling & marketing of therapeutic herbal preparations requires a professional input of pharmacists.**
- ❑ **The roles of Pharmacists in ensuring the standards, quality and safety of TCAM products can not be over emphasized.**



TCAM ON HEALTH, SOCIO-ECONOMIC & NATIONAL DEVELOPMENT GROWTH

A. HEALTH DEVELOPMENT

- Universal health coverage, appropriate use and integration into the main health care delivery system
- Accessed by about 80% in rural area
- Improved health indices
- National Drug Policy
- Provides alternatives to patients
- New medicines, R&D



TCAM ON HEALTH, SOCIO-ECONOMIC & NATIONAL DEVELOPMENT GROWTH

SOCIO-ECONOMIC

- ❑ Research for raw materials and boosts agricultural cultivation
- ❑ Reduce importation of herbal products and promotes exportation
- ❑ Encourages small and large scale production
- ❑ Job creation
- ❑ Low-hanging fruits
- ❑ Cultivation/utilization of 79 million arable land
- ❑ Access to ABS (Access to Benefit Sharing) and potential for investment through harnessing of biological resource and TM knowledge.
- ❑ Development of host communities through human capital development research.



TCAM ON HEALTH, SOCIO-ECONOMIC & NATIONAL DEVELOPMENT GROWTH

National Developmental Goal

- ❑ **Alleviates poverty**
- ❑ **Boosts national health profile**
- ❑ **Enhances value addition of indigenous medicinal plants**
- ❑ **Harnessing TCAM is in line with the nation's economic diversification Programme.**
- ❑ **Improve health and welfare of the populace.**
- ❑ **Increase foreign collaboration on training and research eg: India and China**
- ❑ **Trade Related Intellectual Property Rights (TRIPS).**



CHALLENGES

- ❑ Poor recognition and acceptability of TM .
- ❑ Lack of political will by government.
- ❑ Inadequate funding.
- ❑ The Non- passage of the Traditional Medicine Council Bill for regulation of both practice and products.
- ❑ Lack of cooperation and coordination amongst practitioners.



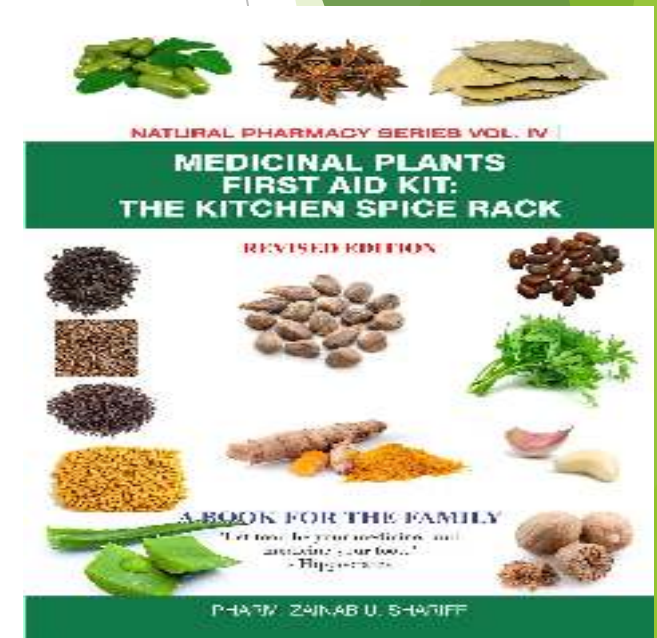
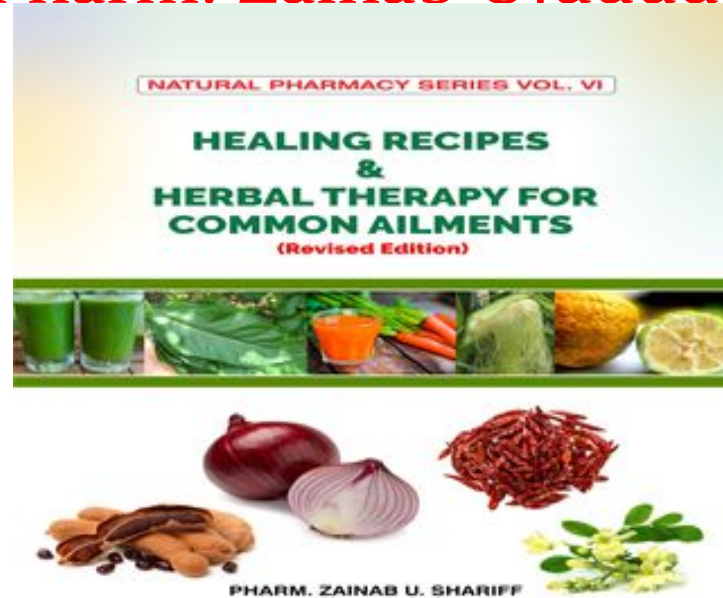
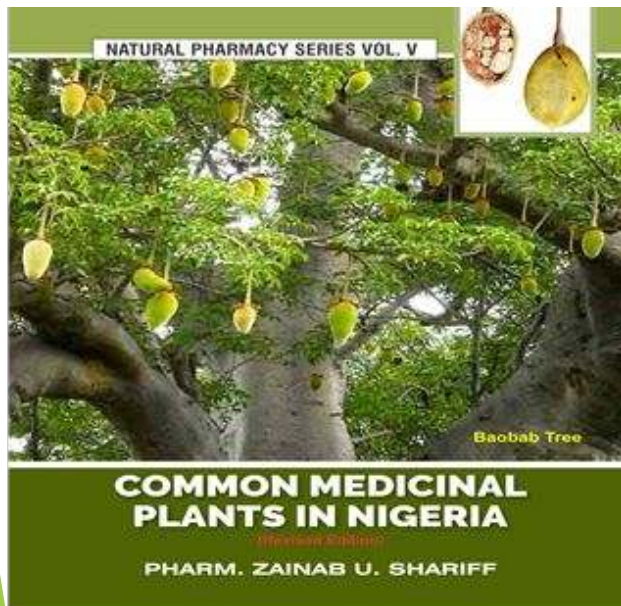
CONCLUSION

- ▶ The integration of TCAM into the health care delivery system provides opportunity for patients/ individuals to access alternative healthcare services and facilitate the attainment of universal health coverage.
- ▶ The modern pharmacist as an apothecary should have knowledge of TCAM in order to diversify its services such as aromatherapist, which can lead to local production, research & increase in revenue generation especially at community practice level.



FOR FURTHER INFORMATION ON MEDICINAL PLANTS & TRADITIONAL/ALTERNATIVE MEDICINE:

PURCHASE the following publications by
Pharm. Zainab Uiudud Shariff:



- ❑ **COMMON MEDICINAL PLANTS IN NIGERIA**
- ❑ **HEALING RECIPES & HERBAL THERAPY FOR COMMON AILMENTS**
- ❑ **MEDICINAL PLANTS FIRST AID KIT: THE KITCHEN SPICE RACK**



Thank
you!