PARLIAMENT
REPUBLIC OF TRINIDAD AND TOBAGO

SSPA

10th Report

JOINT SELECT COMMITTEE ON
SOCIAL SERVICES AND
PUBLIC ADMINISTRATION

On an

Inquiry into the potential benefits of traditional, complementary and alternative medicine in the treatment of non-communicable diseases affecting the Trinidad and Tobago population

FOURTH SESSION (2018/2019) 11TH PARLIAMENT

OF THE REPUBLIC OF TRINIDAD AND TOBAGO

REPORT

OF THE

JOINT SELECT COMMITTEE ON SOCIAL SERVICES AND PUBLIC ADMINISTRATION

ON AN

INQUIRY INTO THE POTENTIAL BENEFITS OF TRADITIONAL, COMPLEMENTARY AND ALTERNATIVE MEDICINE IN THE TREATMENT OF NON-COMMUNICABLE DISEASES AFFECTING THE TRINIDAD AND TOBAGO POPULATION

Date Laid in the HoR: **Date Laid in the Senate:**

An electronic copy of this report can be found on the Parliament website:

The Joint Select Committee on Social Services and Public Administration

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THE COMMITTEE

Mr. Paul Richards
CHAIRMAN

Mr. Esmond Forde, MP
VICE-CHAIRMAN

Mrs. Glenda Jennings-Smith, MP
MEMBER

Brig. Gen. (Ret.) Ancil Antoine, MP
MEMBER

Mrs. Christine Newallo-Hosein, MP
MEMBER

Mr. Rohan Sinanan
MEMBER

Ms. Khadijah Ameen
MEMBER

Ms. Allyson West
MEMBER

Committee Mandate and Establishment

1.1.1 Section 66 of the Constitution of Trinidad and Tobago declares, that not later than three months after the first meeting of the House of Representatives, the Parliament shall appoint Joint Select Committees to inquire into and report to both Houses in respect of Government Ministries, Municipal Corporations, Statutory Authorities, State Enterprises and Service Commissions, in relation to their administration, the manner of exercise of their powers, their methods of functioning and any criteria adopted by them in the exercise of their powers and functions.

1.1.2 Motions related to this purpose were passed in the House of Representatives and Senate on November 13 and 17, 2015, respectively and thereby established, *inter alia*, the ***Joint Select Committee on Social Services and Public Administration.***

1.1.3 Standing Order 91 of the Senate and 101 of the House of Representatives outline the general functions of a Committee of this nature. They are as follows:

a) "To examine Bills and review all legislation relating to the relevant Ministries, departments or bodies or as may be referred to it by the House;

b) To investigate, inquire into, and report on all matters relating to the mandate, management, activities, administration and operations of the assigned Ministries, departments or bodies;

c) To study the programme and policy objectives of Ministries, departments or bodies and the effectiveness of the implementation of such programmes and policy objectives;

d) To assess and monitor the performance of Ministries, Departments and bodies and the manner of the exercise of their powers;

e) To investigate and inquire into all matters relating to the assigned Ministries, Departments and bodies as they may deem necessary, or as may be referred to them by the House or a Minister; and

f) To make reports and recommendations to the House as often as possible, including recommendations for proposed legislation."

Powers of the Joint Select Committee

1.1.4 Standing Orders 101 of the Senate and 111 of the House of Representatives outline the core powers of the Committee which include *inter alia*:

- to send for persons, papers and records;
- to sit notwithstanding any adjournment of the Senate;
- to adjourn from place to place;
- to report from time to time;
- to appoint specialist advisers either to supply information which is not otherwise readily available or to elucidate matters of complexity within the Committee's or Sub-Committee's order of reference;
- to communicate with any Committee of Parliament on matters of common interest; and
- to meet concurrently with any other Committee for the purpose of deliberating, taking evidence or considering draft reports.

Membership

1.1.5 The Committee comprises the following members:

1.	Mr. Paul Richards	Chairman
2.	Mr. Esmond Forde, MP	Vice-Chairman
3.	Mrs. Glenda Jennings-Smith, MP	Member
4.	Brig. Gen. (Ret.) Ancil Antoine, MP	Member
5.	Mrs. Christine Newallo-Hosein, MP	Member
6.	Mr. Rohan Sinanan	Member
7.	Ms. Khadijah Ameen	Member
8.	Ms. Allyson West	Member

Secretariat Support

1.1.6 The following officers were assigned to assist the Committee:

1.	Mr. Julien Ogilvie	-	Secretary
2.	Mr. Johnson Greenidge	-	Assistant Secretary
3.	Ms. Aaneesa Baksh	-	Graduate Research Assistant
4.	Ms. Janelle Mills	-	Parliamentary Intern

TABLE OF CONTENTS

ABBREVIATIONS

DAC	Drug Advisory Committee
DIU	Drug Inspectorate Unit
CAM	Complementary and Alternative Medicines
HSC	Herbal Subcommittee
MBTT	Medical Board of Trinidad and Tobago
MoH	Ministry of Health
UWI	University of the West Indies

TABLE OF APPENDICES

EXECUTIVE SUMMARY

2.1.1 At its twenty-second (22nd) meeting held on April 18, 2018, the Committee resolved to inquire into the potential benefits of traditional, complementary and alternative medicine in treating non-communicable diseases. The Committee agreed on the following inquiry objectives:

1. **To examine the views of medical professionals on the potential benefits of non-traditional forms of treatments such as acupuncture and Aryuvedic treatments in the treatment of non-communicable diseases;**

2. **To determine whether research has been conducted by the Faculty of Medical Sciences, UWI on the benefits of non-traditional treatments (including but not limited to aloes, green papaw, orange peel, ginger, turmeric etc.);**

3. **To determine whether organic medications based on bacteria, enzymes, and plants can contribute to improving the health status of the population; and**

4. **To examine existing and possible arrangements and requirements for regulating the use of alternative medical treatments in Trinidad and Tobago.**

2.1.2 The Committee acquired both oral and written evidence based on the objectives listed above. Oral evidence was received during two (2) public hearings held with various stakeholders ***(See Appendix I)*** on June 13 and December 7, 2018. Some of the significant issues highlighted during the course of this inquiry include:

i. The existing body of research on medical professionals' views on the potential benefits of CAM is severely limited;

ii. Despite their general satisfaction with CAM treatments, many persons continued to use conventional medications;

iii. There are non-medical benefits of CAM such as its cost-effectiveness and the ability of the user to take control over his treatment;

iv. There is a small body of local scientific research on the efficacy of plant and marine extracts in treating diseases;

v. While international research exists, there is no local research on organic medications using marijuana extracts, given the current legislative framework;

vi. International research suggests that specific medicines incorporating marijuana extracts are effective in treating the symptoms and side effects of certain NCDs;

vii. Legislation for the regulation of herbal drugs commenced in 1999 and implementation is now long overdue;

viii. There is a need to create legislation to regulate non-herbal TM and CAM;

ix. While there is a board to regulate conventional medical practitioners (MBTT), there is no counterpart for the regulation of CAM practitioners;

x. The importation, production and sale of medical marijuana and marijuana-derived medications are illegal, despite international research on their efficacy for treating certain NCDs.

2.1.3 Based on these findings and other matters which arose during the inquiry, the Committee has proffered recommendations which it believes will address the issues highlighted. A summary of these recommendations follows this Executive Summary.

2.1.4 The Committee looks forward to reviewing the Minster's response to this Report, which becomes due, sixty (60) days after it is presented to the Houses of Parliament.

SUMMARY OF RECOMMENDATIONS

RECOMMENDATIONS FOR IMPLEMENTATION IN THE SHORT-TERM

(To be implemented within 3 to 6 months of the presentation of the report)

I. That the MoH place a higher priority on the implementation of the Regulations for Herbal Medicinal Products following the completion of the review consultations. An implementation plan for achieving this objective inclusive of specified timeframes may assist with advancing this process that has been significantly delayed.

RECOMMENDATIONS FOR IMPLEMENTATION IN THE MEDIUM-TERM

(To be implemented within 7 months to 12 months of the presentation of the report)

I. That the MoH, in collaboration with the Medical Board of Trinidad and Tobago (MBTT) survey the registered members of the Board, working in the private and public sector, on their attitudes toward non-conventional medical treatments. The survey should probe:

   i. Practitioners' actual experiences with prescribing CAM treatments;

   ii. Qualifications and/or continuing education in CAM;

   iii. Reasons for prescribing CAM or abstaining from prescribing CAM to treat NCDs;

   iv. The courses of treatment utilised when prescribing CAM to treat NCDs. This should include the techniques utilising locally developed substances/products and seek to identify said substances/products;

   v. Credible and documented evidence of the benefits and/or drawbacks of such treatments for patients. This data is expected to expand the existing knowledge base on the attitudes of practitioners towards the potential benefits of CAM in treating NCDs (Bahall and Legal 2011).

II. That the MoH, in collaboration with the UWI Faculty of Medical Sciences, invite submissions by local practitioners of traditional medicine/CAM including, but not limited, to acupuncture and Ayurveda. Participants should be invited to submit the following:

   i. Name and location of the CAM practice/establishment;

ii. Practitioners' actual experiences with prescribing CAM treatments;

iii. Medical qualifications and education, inclusive of same in relation to CAM;

iv. The courses of treatment utilised when prescribing CAM to treat NCDs. This should include the techniques utilising locally developed substances/products and seek to identify said substances/products;

v. Credible and documented evidence of the benefits and/or drawbacks of such treatments for clients. This data is expected to expand the existing knowledge base on the attitudes of practitioners towards the potential benefits of CAM in treating NCDs (Bahall and Legal 2011).

III. That the MoH and the UWI seek to compile all relevant international research supporting the efficacy of organic medications currently approved by the Drugs Advisory Committee of the MoH.

IV. That the UWI apply for the relevant license from the MoH to conduct research studies on the pharmaceutical properties of marijuana (cannabis) treatments.

V. That the MoH consult with the Ministry of the Attorney General and Legal Affairs and relevant stakeholders to consider whether there is a need to amend existing legislation to commence the following, notwithstanding the illegal status of cannabis:

i. to facilitate the scientific testing of marijuana based medicines by local tertiary level institutions and their affiliates and medical and pharmaceutical agencies; and

ii. to allow the sale of marijuana based substances which have been scientifically proven to have medicinal properties and have been subjected to the necessary clinical trials.

RECOMMENDATIONS FOR IMPLEMENTATION IN THE LONG-TERM

(To be implemented within 2 years of the presentation of the report)

I. In line with the recommendations of the WHO Traditional Medicine Strategy, 2014-2023, that the MoH collaborate with the UWI Faculty of Medical Sciences, Faculty of Science and

Technology and Faculty of Food and Agriculture to develop a long-term research strategy for:

i. Expanding the existing descriptive research on the prevalence of CAM use to treat NCDs throughout the country;

ii. Giving specific emphasis to researching CAM use in Tobago;

iii. Collecting scientific evidence on the risks and benefits of these forms of CAM, including cost-effectiveness.

II. That the MoH give consideration to partnering with regional and/or international funding agencies for conducting evaluative studies to measure the effectiveness of local medicinal plants and herbs for treating NCDs. One of the terms of reference should involve investigating potential and feasible options for commercializing and monetizing herbal remedies that are indigenous to Trinidad and Tobago and or herbal remedies which may have the highest potential health benefits to the population.

III. That the MoH provide the UWI with technical or financial assistance to support basic scientific research into the pharmaceutical properties of plants, enzymes and bacteria which are confirmed to be indigenous to Trinidad and Tobago.

IV. That the MoH seek to partner with relevant stakeholders to create a technical working group for the creation of a comprehensive, national policy on CAM practices and practitioners. The policy should be aligned with those provided by the WHO and Commonwealth member states.

V. That in its draft national policy, the MoH give consideration to:

i. The creation of a national register of CAM practitioners;

ii. The creation of a regulatory board, similar to that of the MBTT or a sub-board of the MBTT to regulate CAM practitioners;

iii. The creation of educational standards for CAM practitioners, requiring qualifications from accredited international and/or regional institutions in the respective field(s).

VI. That the MoH consider partnering with the Ministry of Education, UWI, UTT etc. to explore the feasibility of introducing accredited training programmes in CAM.

VII. Subject to the conduct of the necessary feasibilities studies, the legislative framework should be modified with a view to facilitating greater commercialization and monetization of CAM remedies.

INTRODUCTION

Background

Non-Communicable Diseases in Trinidad and Tobago

3.1.1 According to the World Health Organization (WHO), **non-communicable diseases (NCDs),** also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors. **The main types of NCDs are cardiovascular diseases[1], cancers, chronic respiratory diseases[2] and diabetes.**

3.1.2 NCDs are a pressing public health concern both internationally and locally. In Trinidad and Tobago, high morbidity and mortality rates have been reported for hypertension[3], heart disease, cancer[4] and diabetes[5]. At the national level, strategies to facilitate the management of these conditions include the Chronic Disease Assistance Programme (CDAP) which administers free medications. In addition to conventional pharmaceutical medications, increased attention has been given to the viability of traditional and complementary medicines. The Committee sought to examine the extent to which these medicines can contribute to NCDs treatment in the nation.

Traditional, Complementary and Alternative Medicines

3.1.3 The World Health Organization (WHO)[6] defines **traditional medicine** as a wide variety of practices, treatments and approaches to improve health that incorporate plants, animals or mineral materials. Traditional medicines are typically indigenous or have been used in a country over a significant period of time. Conversely, **complementary medicine and**

[1] Cardiovascular diseases include a myocardial infarction and cerebrovascular accident [heart attack and stroke].
[2] Chronic respiratory diseases such as chronic obstructive pulmonary disease and asthma.
[3] The incidence ranged from 26.3% in a 2012 PAHO Report, to 30.4% in a study by the Ministry of Social Development conducted between 2006 and 2008.
[4] Between 1995 and 2009, cancer incidence was 29,512 and there were 18,216 cancer deaths. Breast cancer was the most commonly type diagnosed among women, while prostate cancer was more common among men, according to Warner et al. 2018. "Cancer Incidence and Mortality Rates and Trends in Trinidad and Tobago." *BMC Cancer,* 18, 712. https://doi.org/10.1186/s12885-018-4625-x.
[5] In a 2012 PAHO report the prevalence was estimated at 14.5% among adults aged 20 to 79, with about 88 – 90% of patients having Type 2 diabetes.
[6] World Health Organisation (WHO). "Traditional and complementary medicine policy". Accessed on May 15, 2018. http://apps.who.int/medicinedocs/documents/s19582en/s19582en.pdf.

alternative medicine (CAM) refers to a broad set of health care practices that are not part of that country's own tradition of treatment and are not integrated into the dominant health care system.

3.1.4 Traditional medicines and CAM include:

- **Biologically based practices** – e.g. vitamins and mineral supplements, natural products, herbal medicines and unconventional diets;
- **Medicinal Cannabis (Marijuana)** - the dried flowers – with or without seeds, and leaves of the female plant;
- **Manipulative and body-based approaches** – e.g. massage, chiropractic medicine and osteopathic medicine;
- **Mind-body medicine** – these approaches aim to achieve harmony between body and mind, and include spiritual, meditative and relaxation techniques;
- **Alternative medical systems** – such as acupuncture, which asserts that vital energy flow can be restored by placing needles at critical body points;
- **Energy medicine** - this approach uses therapies that involve the use of energy—either bio field- or bio electromagnetic-based interventions, such as in Reiki therapy.

The Use of Traditional Medicine and CAM in the Treatment of Non-Communicable Diseases[7]

3.1.5 Traditional medicine and CAM are used worldwide for treating NCDs. Traditional herbal medicines are the most popularly used treatments, but alternative treatment approaches are gaining popularity. To acknowledge the usefulness of these approaches for supporting well-being, the WHO published its Traditional Medicine Strategy 2014–2023 which provides guidelines to support the introduction and integration of traditional medicine and CAM into member states' healthcare systems.

3.1.6 In Trinidad and Tobago, traditional medicine originated from the practices of the First Peoples and later by migrants such as enslaved Africans, indentured East Indians, and Chinese immigrants. However, both traditional medicine and CAM remain prevalent. These

[7] WHO. 2015. *Non- Communicable Diseases Progress Monitor*, 2015. World Health Organization, Geneva

include herbal medicines, massage therapy, megavitamins, folk remedies, energy healing, homeopathy, chelation therapy, Reiki therapy, Chinese and Ayurvedic medicine and acupuncture.[8]

Legislative Provisions in Trinidad and Tobago related to Traditional Medicine and CAM

3.1.7 According to Section 4 (b) of the Dangerous Drugs Act, Chapter 11:25:

"The Minister may, subject to Regulations made under section 57—

(b) Issue licenses for the cultivation, gathering or production, at a stated place, of opium poppy, marijuana, or coca plant."

Evidently, the Dangerous Drugs Act was not intended to provide for the regulation of medicinal herbs and plants that are incorporated in local traditional medicine.

3.1.8 Additionally, herbal medications are currently not regulated under the Food and Drugs Act, Chapter 30:01 and there is no legislative framework for regulating other CAMs and CAM practitioners. As a result, there are serious concerns about the effects of the unregulated CAM industry on customer health and safety. **For example, appeals have been made to regulate the herbal medicine industry due to worries that local sellers of herbal medicines exploit customers by misrepresenting their curative capabilities[9].**

Other Concerns Related to Traditional Medicine and CAM in Trinidad and Tobago[10]

3.1.9 In addition to the unregulated herbal industry, other concerns regarding traditional medicine and CAM include; the inaccessibility of certain types of CAM and its providers and the lack of support, knowledge, and integration of CAM into the conventional health care system.

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[8] Bahall, Mandreker and Legall, George. 2017. *Knowledge, attitudes, and practices among health care providers regarding complementary and alternative medicine in Trinidad and Tobago.* BMC Complement Altern Med. Accessed on June 6, 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5343420/

[9] Trinidad and Tobago Guardian. May 12, 2013. Headache for herbalists. Accessed on June 6, 2018. http://www.guardian.co.tt/news/2013-05-12/headache-herbalists

[10] Bahall M. 2017.Prevalence, patterns, and perceived value of complementary and alternative medicine among cancer patients: a cross-sectional, descriptive study. BMC Complement Altern Med. Accessed on June 6, 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5493839/

3.1.10 When conventional medication/treatment is unavailable or inaccessible due to high costs, some persons seek simpler and inexpensive forms of CAM. Moreover, a 2017 study by Mandreker Bahall noted that there is a need for health authorities to conduct research to ensure safe and evidence-based practices related to CAM. Furthermore, there is a need for the relevant state authorities to play a role in training doctors and providing evidence-based information on CAM therapy which should be integrated with conventional medicine.

Conduct of the Inquiry

3.1.11. Prior to the commencement of the public hearings, the Committee issued invitations to specific stakeholders to present written submissions based on the subject of the inquiry and following objectives:

1. **To examine the views of medical professionals on the potential benefits of non-traditional forms of treatments such as acupuncture and Aryuvedic treatments in the treatment of non-communicable diseases;**

2. **To determine whether research has been conducted by the Faculty of Medical Sciences, UWI on the benefits of non-traditional treatments (such as aloes, green papaw, orange peel, ginger, turmeric etc.);**

3. **To determine whether organic medications based on bacteria, enzymes, and plants can contribute to improving the health status of the population; and**

4. **To examine existing and possible arrangements for regulating the use of alternative medical treatments in Trinidad and Tobago.**

3.1.12. On Wednesday, June 13, 2018 and Friday, December 7, 2018, the Committee conducted public hearings with the following Entities and Officials **(See Appendix I for details)**:

- Ministry of Health
- Faculty of Medical Sciences, the University of the West Indies (UWI)

- Faculty of Science and Technology, the University of the West Indies (UWI)
- The Pharmaceutical Board of Trinidad and Tobago
- Dr. Lionel Gaskin Mayers - Soul Mind Body Renewal Institute (Acupuncturist)
- Dr. Asante Indira Van West-Charles–LeBlanc - Victoria Clinic (Acupuncturist) / Member of Ministry of Health Herbal Sub-Committee
- Mr. Marcus Ramkissoon - Caribbean Cannabis Institute
- Mr. Phillip Franco - Natural Balance, the Natural Medicine Centre/ Natural & Alternative Medicine Association of Trinidad & Tobago
- Dr. Ernest Hazelwood - Vibrant Health Limited

3.1.13. Subsequent to the public hearings of Wednesday, June 13, 2018 and Friday, December 7, 2018 the additional information requested was provided.

3.1.14. Oral and written submissions received from the entities appearing before the Committee provided a frame of reference for the Committee's deliberations on the subject inquiry.

3.1.15. The **Minutes of the Meetings** during which the public hearings were held are attached as **Appendix II and III** and the **Verbatim Notes** as **Appendix IV and V.**

KEY ISSUES, FINDINGS AND RECOMMENDATIONS

OBJECTIVE 1: To examine the views of medical professionals on the potential benefits of non-traditional forms of treatments such as acupuncture and Ayurvedic treatments in the treatment of non-communicable diseases

Public Hearing with Non-Traditional Health Care Practitioners

4.1.1. Five (5) stakeholders provided oral submissions to the Committee during a public hearing conducted on December 07, 2018 **(See Appendix I)**.

i. Dr. Lionel Gaskin Mayers - Soul Mind Body Renewal Institute (Acupuncturist)

ii. Dr. Asante Indira Van West-Charles–LeBlanc - Victoria Clinic (Acupuncturist)/ Member of Ministry of Health Herbal Sub-Committee

iii. Mr. Marcus Ramkissoon - Caribbean Cannabis Institute

iv. Mr. Phillip Franco - Natural Balance, the Natural Medicine Centre/ Natural & Alternative Medicine Association of Trinidad & Tobago

v. Dr. Ernest Hazelwood - Vibrant Health Limited

4.1.2. Stakeholders generally agreed that non-traditional medicines are effective medical interventions and should be promoted by local medical professionals. A variety of issues were discussed, including:

- The perception that CAM produces fewer side effects than conventional medication, and is thus a safer option;
- The view that CAM should not replace conventional medication/treatment, but instead used in conjunction with it;
- The view that CAM can successfully treat NCDs when used appropriately, e.g. considering dosage and interactions with conventional drugs;

- Examples from professional experiences with the effectiveness of CAM for the treatment of certain diseases including Ozone Therapy for Parkinson's disease and Acupuncture for hormonal regulation;
- CAM is actively prescribed by certain local practitioners for use alongside conventional medicine for treating NCDs, e.g. among cancer patients;
- Medicines with cannabis derivatives are used for treating NCDs.

The Views of Medical Professionals on Traditional Medicine and CAM Treatments

4.1.3. In general, local empirical research related to this topic is sparse; more studies were conducted on medical practitioners' perceptions toward conventional medicines than on their views towards traditional medicine and CAM medical treatments.

4.1.4. Nevertheless, the Committee found one recent study which surveyed health care practitioners' knowledge and attitudes towards CAM[11]. The sample comprised 362 participants from both the public and private health care sectors (including doctors, nurses, pharmacists and other health care providers).

4.1.5. While the majority of participants (50% - 75%) had fair knowledge of herbal, spiritual, alternative and the physical types of CAM, several (65% +) had little to no knowledge about alternative energy therapies and other therapeutic methods. Moreover, participants were generally reluctant to recommend CAM to patients despite using it themselves. Interestingly, doctors (26%) were least likely to recommend CAM while pharmacists (50%) were most likely to offer recommendations.

4.1.6. However, approximately half of all surveyed health professionals were of the view that a combination of conventional and CAM therapies is superior to the sole usage of

[11] Bahall M1,2, Legall G3. Knowledge, attitudes, and practices among health care providers regarding complementary and alternative medicine in Trinidad and Tobago. BMC Complement Altern Med. 2017 Mar 8;17(1):144. doi: 10.1186/s12906-017-1654-y.

conventional medicine. Pharmacists reported the strongest agreement with the idea that using CAM as a primary course of medical treatment is more effective than conventional medicine usage.

4.1.7. However, in a public hearing on June 13, 2018, Dr. Andrew Rahaman, President of the Council of the Pharmaceutical Board of Trinidad and Tobago, indicated that the sole use of herbal medicines is not advisable for serious ailments such as prostate cancer and glaucoma. Dr. Rahaman further stated that for these conditions, using herbal medicines as the primary medical treatment is ineffective and can ultimately increase patients' medical care costs.

Findings

4.1.8. Based on the preceding evidence, the Committee's findings are as follows:

i. The CAM practitioners interviewed at the Committee's public hearing acknowledged the effectiveness of CAM, particularly when used in conjunction with conventional medicines. Practitioners comprised certified medical doctors and professionals with considerable qualifications and experience in CAM;

ii. The stakeholders proffered that CAM interventions are effective in treating illnesses and chronic diseases such as Parkinson's disease, hormone dysregulation and cancer;

iii. One research study indicated that a sample of medical professionals generally held positive attitudes toward the effectives of CAM when used alongside conventional medicines. However, these attitudes did not appear to transfer into a willingness to prescribe CAM interventions;

iv. The same study revealed that participants' knowledge of energy therapies and other therapeutic interventions was limited;

v. When practitioners acknowledged the positive effects of traditional/CAM interventions, the evidence offered was restricted to anecdotes rather than documented evidence; and

vi. The existing body of research on the views of medical professionals on the potential benefits of CAM is severely limited.

Recommendations

In light of the foregoing, the Committee recommends the following:

A. That the MoH, in collaboration with the Medical Board of Trinidad and Tobago (MBTT) survey the registered members of the Board, working in the private and public sector, on their attitudes toward non-conventional medical treatments. The survey should probe:

vi. Practitioners' actual experiences with prescribing CAM treatments;

vii. Qualifications and/or continuing education in CAM;

viii. Reasons for prescribing CAM or abstaining from prescribing CAM to treat NCDs;

ix. The courses of treatment utilised when prescribing CAM to treat NCDs. This should include the techniques utilising locally developed substances/products and seek to identify said substances/products;

x. Credible and documented evidence of the benefits and/or drawbacks of such treatments for patients. This data is expected to expand the existing knowledge base on the attitudes of practitioners towards the potential benefits of CAM in treating NCDs (Bahall and Legal 2011).

B. That the MoH, in collaboration with the UWI Faculty of Medical Sciences, invite submissions by local practitioners of traditional medicine/CAM including, but not limited, to acupuncture and Ayurveda. Participants should be invited to submit the following:

vi. Name and location of the CAM practice/establishment;

vii. Practitioners' actual experiences with prescribing CAM treatments;

viii. **Medical qualifications and education, inclusive of same in relation to CAM;**

ix. **The courses of treatment utilised when prescribing CAM to treat NCDs. This should include the techniques utilising locally developed substances/products and seek to identify said substances/products;**

x. **Credible and documented evidence of the benefits and/or drawbacks of such treatments for clients. This data is expected to expand the existing knowledge base on the attitudes of practitioners towards the potential benefits of CAM in treating NCDs (Bahall and Legal 2011).**

OBJECTIVE 2: To determine whether research has been conducted by the Faculty of Medical Sciences, UWI on the benefits of traditional treatments (such as aloes, green papaw, orange peel, ginger, turmeric etc.)

4.2.1. "By written submission dated May 23, 2018, the UWI Faculty of Medical Sciences and School of Medicine submitted six (6) publications by researchers affiliated with the Faculty. The Committee reviewed same and the findings made are outlined below.

Perceived Benefits of Non-Traditional Treatments by Persons with NCDs

Cancer

4.2.2. Clement et al.[12] (2016) surveyed 150 prostate, breast and colorectal cancer patients from two (2) treatment centres that reported using herbal remedies and functional foods. The most popular of these foods included; soursop, wheatgrass, saffron, aloe vera, beetroot, carrots and papaya. Almost one-third of the patients (32%) believed that using these remedies was equally effective to conventional treatment, while a minority (14.7 %) perceived that they were more effective.

Heart Disease

4.2.3. Bahall[13] (2015) surveyed 329 adult cardiac patients attending a public clinic. 56.2% of patients used CAM and the most common types used were herbal medicine followed by spiritual therapies. Most participants were of the following opinions with respect to CAM treatments:

i. Promotes health and wellness (79.5%);
ii. Assists in fighting illness (78.9%);
iii. Addresses the limitations of conventional medications (69.2%);
iv. Alleviates symptoms (21.6%);

[12] Clement Y.N., Mahase V., Jagroop A., Kissoon K., Maharaj A., Mathura P., Quan C.M., Ramadhin D., & Mohammed C. "Herbal remedies and functional foods used by cancer patients attending specialty oncology clinics in Trinidad." *BMC Complement Altern Med.* 2016 Oct 21;16(1):399.

[13] Bahall M. "Complementary and alternative medicine usage among cardiac patients: a descriptive study." *BMC Complement Altern Med.* 2015 Mar 31; 15:100. doi: 10.1186/s12906-015-0610-y.

v. Costs less than conventional medications (21.6 %); and

vi. Has fewer adverse/damaging effects than conventional medications (29.7%), or they were disappointed with conventional medications (12.4%).

Hypertension

4.2.4. Clement et al.[14] (2007) studied CAM use among 265 herbal remedy users from 16 randomly selected primary healthcare facilities in Trinidad. Of this sample, 20% of hypertension patients used garlic as an herbal remedy. Many users perceived that herbs were equally efficacious (32%), and in some instances, more efficacious (14.7%) than conventional medicines. Garlic was the most commonly cited herb and was used to treat the common cold, fever and cough.

Renal Disease

4.2.5. Bahall[15] (2017) surveyed 101 patients with renal disease. A minority were CAM users (n = 19 respondents, 18.8%) and nearly all patients (98%) were satisfied with CAM. Only one user reported adverse effects. All CAM users used medicinal herbs (most commonly medicinal tea, garlic and ginger), and most also used spiritual therapy. The majority (73.7%) claimed to have received a specific benefit from CAM. However, none were willing to substitute conventional medication with CAM. 73.3% reported using CAM due to the high cost of conventional treatment.

HIV

4.2.6. Bahall[16] (2017) also examined CAM use among 343 HIV patients. 32.8% of the sample used CAM. Among these persons, 88.5% also used conventional medication. The most common CAM treatments were medicinal herbs (e.g. aloes, ginger and garlic) and spiritual therapy. Patients were generally satisfied with CAM therapy (n = 91 respondents, 80.5%). However, only 15% reported any specific benefits from CAM. The main reasons for CAM use were

[14] Clement YN, Morton-Gittens J, Basdeo L, Blades A, Francis MJ, Gomes N, Janjua M, Singh A. "Perceived Efficacy Of Herbal Remedies By Users Accessing Primary Healthcare In Trinidad." *BMC Complement Altern Med.* 2007 Feb 7; 7:4.

[15] Bahall M. **"**Use of complementary and alternative medicine by patients with end-stage renal disease on haemodialysis in Trinidad: A descriptive study." *BMC Complement Altern Med.* 2017 May 4;17(1):250. doi: 10.1186/s12906-017-1755-7.

[16] Bahall M. "Prevalence, patterns, and perceived value of complementary and alternative medicine among HIV patients: a descriptive study." *BMC Complement Altern Med.* 2017 Aug 23;17(1):422. doi: 10.1186/s12906-017-1928-4.

the desire to take control of their treatment (8.8%) or just trying anything that could help (18.8%).

Asthma

4.2.7. In another study, Clement et al.[17] surveyed 191 patients at a Chest Clinic in Trinidad. 30.4% used herbal remedies to relieve symptoms. The most common included ginger, garlic, aloes, shandileer, wild onion, pepper and black sage. More than half (53.8%) with severe symptoms thought that conventional medications worked better, while more than half (57.1%) with moderate symptoms thought that concurrent use of CAM with conventional medications gave better relief.

Findings

4.2.8. Based on the preceding evidence, the Committee's findings are as follows:

i. Across the research studies, there was a common profile of herbal medicine used to treat NCDs, including garlic, aloes, ginger;

ii. The studies revealed that persons with NCDs who used CAM treatments were generally satisfied with their effects;

iii. The studies typically collected global descriptions of the perceived effectiveness of CAM treatments rather than specific descriptions about physical and/or emotional and mental health benefits;

iv. Despite their general satisfaction with CAM treatments, many participants continued to use conventional medications;

v. There were mixed findings regarding patients' perceptions on the superiority of using CAM alone versus concurrent use with conventional medication;

[17] Clement YN, Williams AF, Aranda D, Chase R, Watson N, Mohammed R, Stubbs O, Williamson D. "Medicinal herb use among asthmatic patients attending a specialty care facility in Trinidad." *BMC Complement Altern Med.* 2005 Feb 15;5:3.

vi. The studies noted non-medical benefits of using CAM such as its cost-effectiveness and the ability to take control over one's treatment;

vii. There is a lack of local clinical trials and evaluative studies to measure the objective effectiveness of non-conventional treatments in the management of NCDs; and

viii. Given that the current legal framework prohibits and or restricts the possessing and using marijuana, there is limited local research on the benefits of medical marijuana (cannabis) for treating NCDs.

Recommendations

In light of the foregoing, the Committee recommends the following:

A. In line with the recommendations of the WHO Traditional Medicine Strategy, 2014-2023, that the MoH collaborate with the UWI Faculty of Medical Sciences, Faculty of Science and Technology and Faculty of Food and Agriculture to develop a long-term research strategy for:

iv. Expanding the existing descriptive research on the prevalence of CAM use to treat NCDs throughout the country;

v. Giving specific emphasis to researching CAM use in Tobago;

vi. Collecting scientific evidence on the risks and benefits of these forms of CAM, including cost-effectiveness.

B. That the MoH give consideration to partnering with regional and/or international funding agencies for conducting evaluative studies to measure the effectiveness of local medicinal plants and herbs for treating NCDs. One of the terms of reference should involve investigating potential and feasible options for commercializing and monetizing herbal remedies that are indigenous to Trinidad and Tobago and or herbal remedies which may have the highest potential health benefits to the population.

C. That the UWI apply for the relevant license from the MoH to conduct research studies on the pharmaceutical properties of marijuana (cannabis) treatments.

OBJECTIVE 3: To determine whether organic medications based on bacteria, enzymes, and plants can contribute to improving the health status of the population

4.3.1. Limited evidence was received by the Committee on the efficacy of locally sold organic medications. However, the MoH provided a list of herbal medications which have been recommended for use by the MoH.

Herbal Drugs Approved by the MoH

4.3.2. In a submission dated July 5, 2018, the Ministry indicated that 31 herbal drugs were approved by the Chemistry, Food and Drugs Division. These include vitamin tablets, fish oil supplements and a variety of herb extract tablets. The standards which must be satisfied for herbal drugs to be approved include:

1. Safety;
2. Potency (efficacy);
3. Purity; and
4. Labeling and packaging of the product that is in conformance with the requirements of the Food and Drugs Act and Regulations.

4.3.3. The Chemistry, Food and Drugs Division performs chemical evaluation on herbal medications when appropriate to ensure that the substances conform to the standards. Therefore, it can be inferred that these medications are assumed to have some level of efficacy for promoting wellbeing. However, the Committee did not receive documentation outlining details of any research/clinical evaluations regarding the usefulness of the approved herbal drugs.

UWI Laboratory Research on Plant Extracts for Treating Diseases

4.3.4. There is a dearth of local information on the efficacy of organic medications. Nevertheless, the Committee was informed that the UWI has conducted relevant, basic scientific research

on plant extracts and marine organisms for treating illnesses and diseases. Moreover, regional and international information on medical marijuana was made available for review.

Liver Injury

4.3.5. Williams et al.[18] (2016), researchers from the UWI Faculty of Medical Sciences (FMS), conducted a laboratory experiment and reported that extracts of the plant Leonotis nepetifolia (also known as shandilay, Christmas candlestick, klip dagga and lion's ear) reduced the risk of liver injury in mice trials.

Epilepsy

4.3.6. Addae et al.[19] (2017) from the UWI FMS studied extracts of the Jasmine plant in mice trials. The researchers found that higher dosages of these extracts had beneficial effects in mice exhibiting acute partial complex epilepsy.

Leukaemia

4.3.7. Ramcharan et al. [20](2010) from the UWI FMS and Faculty of Food and Agriculture (FOA) conducted laboratory research with three plants that were collected locally: Flemingia strobilifera, Spermacoce verticillata and Ficus pumila. The researchers found that crude extracts of the plants displayed cytotoxicity against a leukaemia cell line. The researchers proposed that antioxidant compounds in the plants were responsible for their cytotoxic activity.

UWI Research on Marine Organism Extracts

4.3.8. An article by Fang et al.[21] (2016) noted the potential usefulness of a class of peptides extracted from marine organisms such as sea sponges. Other studies were cited which found

[18] Williams AF, Clement YN, Nayak S, Rao AVC. "Leonotis nepetifolia Protects against Acetaminophen-Induced Hepatotoxicity: Histological Studies and the Role of Antioxidant Enzymes." *Studies in Natural Products Chemistry* 2016(4). DOI 10.4172/2329-6836.1000222.

[19] Addae JI, Pingal R, Walkins K, Cruickshank R, Youssef FF, Nayak SB. "Effects of Jasminum multiflorum leaf extract on rodent models of epilepsy, motor coordination and anxiety." *Epilepsy Research* 131 (2017) 58–63.

[20] Ramcharan G1, Clement YN, Maxwell AR. "Cytotoxic activity of selected West Indian medicinal plants against a human leukaemia cell line." *West Indian Med J.* 2010 Dec;59(6):597-601.

[21] Fang W-Y, Dahiya R, Qin H-L, Mourya R, Maharaj S. "Natural Proline-Rich Cyclopolypeptides from Marine Organisms: Chemistry, Synthetic Methodologies and Biological Status." *Marine Drugs* 2016, 14 (194). doi:10.3390/md14110194

that the peptides exhibited a range of biological properties including: cytotoxicity, antibacterial activity, antifungal activity, immunosuppressive activity, anti-inflammatory activity, anti-HIV activity, repellent (antifouling) activity, antitubercular activity and antiviral activity.

International Research on Medicines containing Marijuana

4.3.9. Given that the possession and sale of marijuana are illegal, there are currently no medicines on the local market containing marijuana derivatives. However, medications involving these substances are sold in other countries. In a submission by Marcus Ramkissoon, the Director of the Caribbean Cannabis Institute dated November 7, 2018, it was noted that specific medications with marijuana extracts, namely THC, are used in the USA to inhibit chemotherapy-induced nausea and vomiting among cancer patients. Another medicine has been approved in Canada for treating cancer-associated pain. Other medicines were noted to be used internationally for NCDs including asthma (e.g. Asmasol sold in Jamaica). The article review also listed extensive research and clinical trials on cannabinoids such as CBD and THCV, which significantly alleviated symptoms related to diabetes, respiratory problems, cardiovascular diseases and cancers. However, medications based on outcomes from many of these studies have yet to be approved and released for sale in the respective countries of origin.

Findings

4.3.10. Based on the preceding evidence, the Committee's findings are as follows:

i. There exists a small body of local scientific research on the efficacy of plant and marine extracts in treating diseases;

ii. While international research exists, there is no locally produced information regarding organic medications using marijuana extracts, given the current legislative framework; and

iii. International research suggests that specific medicines incorporating marijuana extracts are effective in treating the symptoms and side effects of certain NCDs.

Recommendations

In light of the foregoing, the Committee recommends the following:

A. That the MoH and the UWI seek to compile all relevant international research supporting the efficacy of organic medications currently approved by the Drugs Advisory Committee of the MoH.

B. That the MoH provide the UWI with technical or financial assistance to support basic scientific research into the pharmaceutical properties of plants, enzymes and bacteria which are confirmed to be indigenous to Trinidad and Tobago.

C. That the MoH consult with the Ministry of the Attorney General and Legal Affairs and relevant stakeholders to consider whether there is a need to amend existing legislation to commence the following, notwithstanding the illegal status of cannabis:

1. **to facilitate the scientific testing of marijuana based medicines by local tertiary level institutions and their affiliates and medical and pharmaceutical agencies; and**
2. **to allow the sale of marijuana based substances which have been scientifically proven to have medicinal properties and have been subjected to the necessary clinical trials.**

OBJECTIVE 4: To examine existing and possible arrangements for regulating the use of alternative medical treatments in Trinidad and Tobago

Legislation for Regulating the Use of Alternative Medical Treatments in Trinidad and Tobago

The Dangerous Drugs Act

Marijuana Use

4.4.1. The Dangerous Drugs Act Chap. 11:25 is the main legislation related to regulation of alternative medicinal substances, namely marijuana. The Act is limited in scope since it is restricted to the granting of licenses for production of opium poppy, marijuana, and coca plant. The MoH, in a public hearing on June 13, 2018, stated that no such licenses have been issued. Further, despite the growing public support for the decriminalization of marijuana for medicinal use, neither marijuana in its raw form, nor any medicine containing its derivatives/extracts has been legally approved for medicinal or other purposes.

Marijuana and Research

4.4.2. Consequently, it is also illegal for entities to use marijuana in academic or scientific research. However, the Ministry indicated that it would consider applications for the appropriate license which would permit the use of marijuana for such purposes. Further, according to a written submission of October 12, 2018, the MoH intends to consult key stakeholders for the preparation of draft regulations on the use of marijuana in scientific/academic research.

Lack of Regulation of Non-Traditional and Contemporary Medications

4.4.3. According to the MoH, there is currently no legislative provision that governs the use of non-traditional and contemporary medications. The Ministry attributed this to "limited local scientific evidence and experts required to verify the use, efficacy and safety of non-traditional medicines in the treatment of NCDs[22]." Due to the lack of relevant legislation, the Ministry stated that it is unable to take legal action against distributors of products which are branded as containing therapeutic/medicinal properties.

[22] Information received from a written submission by the MoH dated May 24, 2018.

Potential Dangers of Medicinal Plant Use

4.4.4. The Ministry noted that "the potential risks and/or adverse implications for a country that lacks a regulatory framework may include the potential harm as a result of drug interactions, toxicity, dosage variability and contamination as manufacturers are not submitting clinical efficacy and safety data for their products before distribution to the population[23]."

4.4.5. Additionally, an article by Paul and Seaforth[24] (2011), members of the Caribbean Herbal Medicine Research Institute, University of Trinidad and Tobago, noted that caution should be taken when utilizing medicinal plants in traditional Caribbean folk remedies since previous research identified seventeen (17) medicinal plants that contained known toxins.

4.4.6. The Ministry noted that there is an immediate need for a regulatory framework and the allocation of human resources and funds to effectively monitor the sale and use of traditional medication.

Plans to Implement New Legislation for the Regulation of Herbal Medicines

4.4.7. However, the MoH has developed plans for the regulation of herbal medicines. Following consultations in 1999, draft regulations were created in 2001 and then updated in 2004. At present, there is a 2004 version of the Draft Regulations for Herbal Medicinal Products under review. These regulations would augment the terms of the Food and Drugs Regulations by proposing more stringent requirements for the labelling of herbal medicines, restricting the import and export of certain types of herbal drugs, and would require manufacturers and distributors to obtain licenses prior to producing and/or selling the products.

4.4.8. The MoH indicated in a submission of July 5th, 2018, that the Herbal Subcommittee (HSC) is reviewing these regulations and tentatively expects to submit them to the Drug Advisory Committee (DAC) "for approval by December 2018. Thereafter, an implementation plan for the Herbal Medicines Regulations would have to be developed and then submitted to the

[23] Information received from a written submission by the MoH dated May 24, 2018.
[24] Paul, JHA, Seaforth, CE. "Harmful plants in Caribbean folk medicine." *Focus on Alternative and Complementary Therapies* 16 (4). https://doi.org/10.1111/j.2042-7166.2011.01123.x

Chief Parliamentary Counsel (CPC) for legal drafting as an amendment to the Food and Drugs Regulations." However, there is currently no existing or draft regulations that address non-herbal, alternative medical treatments.

Lack of Legislation for the Regulation of Practitioners of TM and CAM

4.4.9. At present, there is also no legal framework for the regulation of practitioners of TM and CAM. According to the MBTT, members of the Board are not required to indicate if they are practitioners of CAM, nor is CAM recognized as a specialty or subspecialty by the MBTT. [25] Further, the MoH does not currently have a comprehensive register of such practitioners within the nation.[26] However, the MBTT indicated that it supports the regulation of the CAM industry.

4.4.10. In a public hearing on December 7, 2018, several suggestions were proffered by stakeholders for the regulation of CAM practitioners including:

1. Legislation requiring all CAM practitioners to be certified by an accredited institution;
2. The establishment of a regulatory board for medicinal cannabis administration;
3. The creation of a regulatory board for CAM practitioners;
4. The creation of a mandatory, national registry of CAM practitioners, which may be complemented by a voluntary regulating system.

Entities involved in Regulating CAM

4.4.11. The following units assist the MoH to fulfill its responsibility for the regulation of medicines and registration of conventional medical practitioners:

1. **Drug Advisory Committee (DAC)** – this body advises the Minister on the drugs that may be registered, imported, distributed and sold in the nation. Approximately 31 herbal substances have been approved and recommended for use by the MoH.[27]

2. **Herbal Subcommittee (HSC)** – this was a recently established body tasked with providing guidance to the Drug Advisory Board and the Minister on, *inter alia,* the

[25] Information received from a written submission by the MBTT dated October 11, 2018.
[26] Information received from a written submission by the MoH dated September 28, 2018.
[27] Information received from a written submission by the MoH dated July 5, 2018.

public dispensation and regulation of herbal substances that are found locally and internationally.

3. **Drug Inspectorate Unit (DIU)** – this Unit is responsible for the monitoring of drugs distributed by pharmacies.

4. **Medical Board of Trinidad and Tobago (MBTT)** – this board is one of three with responsibility for registering medical practitioners (doctors). The other boards are the Trinidad and Tobago Registered Nurses Council (TTNC), and the Council of Professionals (for psychiatrists and social workers).

The Drug Advisory Committee – Approval of Herbal Products for Sale

4.4.12. As aforementioned, the Drug Advisory Committee recommends to the line Minister herbal medicines approved for use in the nation. While 31 herbal products have been approved for use, in a written submission of October 12, 2018, the MoH indicated that approximately 39 other herbal drugs were pending approval at the Chemistry, Food and Drugs Division. The application period of these drugs spanned from 2013 to 2014. The reason for the backlog was not provided.

4.4.13. Moreover, pursuant to the Dangerous Drugs Act previously described, no medicines, herbal or otherwise, containing cannabis extracts have been approved for distribution or are currently under review by the Drug Advisory Committee.

Findings

4.4.14. Based on the preceding evidence, the Committee's findings are as follows:

i. Legislation for the regulation of herbal drugs commenced in 1999 and implementation is now long overdue;

ii. There is a need to create legislation to regulate non-herbal TM and CAM;

iii. While there is a board to regulate conventional medical practitioners (MBTT), there is no counterpart for the regulation of CAM practitioners;

iv. Thirty-nine (39) herbal drugs were submitted to the Chemistry, Food and Drugs Division between 2013 and 2014 are still awaiting approval. This delay may affect the populations' access to potentially beneficial medicines; and

v. The importation, production and sale of medical marijuana and marijuana-derived medications are illegal, despite international research on their efficacy for treating certain NCDs. Further, regional countries (Antigua, Jamaica) have allowed certain marijuana based medicines to be sold on their markets.

Recommendations

In light of the foregoing, the Committee recommends the following:

A. That the MoH place a higher priority on the implementation of the Regulations for Herbal Medicinal Products following the completion of the review consultations. An implementation plan for achieving this objective inclusive of specified timeframes may assist with advancing this process that has been significantly delayed.

B. That the MoH seek to partner with relevant stakeholders to create a technical working group for the creation of a comprehensive, national policy on CAM practices and practitioners. The policy should be aligned with those provided by the WHO and Commonwealth member states.

C. That in its draft national policy, the MoH give consideration to:

iv. The creation of a national register of CAM practitioners;

v. The creation of a regulatory board, similar to that of the MBTT or a sub-board of the MBTT to regulate CAM practitioners;

vi. The creation of educational standards for CAM practitioners, requiring qualifications fromaccredited international and/or regional institutions in the respective field(s).

D. That the MoH consider partnering with the Ministry of Education, UWI, UTT etc. to explore the feasibility of introducing accredited training programmes in CAM.

E. Subject to the conduct of the necessary feasibilities studies, the legislative framework should be modified with a view to facilitating greater commercialization and monetization of CAM remedies.

Your Committee respectfully submits this Report for the consideration of the Parliament.

Mr. Paul Richards
Chairman

Mr. Esmond Forde, MP
Vice-Chairman

Mrs. Glenda Jennings-Smith, MP
Member

Brig. Gen. (Ret.) Ancil Antoine, MP
Member

Mrs. Christine Newallo-Hosein, MP
Member

Ms. Khadijah Ameen
Member

Mr. Rohan Sinanan
Member

Ms. Allyson West
Member

May 24, 2019

APPENDICES

Appendix I

Persons who appeared and provided oral evidence

Name of Official	Portfolio	Organization
Public Hearing Held on June 13, 2018		
Mr. Richard Madray **Mr. Brian Armour** **Mr. Farz Khan** **Ms. Jennifer Rodriguez** **Ms. Asante Charles-Le Blanc**	Permanent Secretary Chief Medical Officer Ag. Director, Chemistry, Food and Drugs Division Manager, Pharmacy Services Member, Herbal Sub-Committee	Ministry of Health (MoH)
Prof. Terence Seemungal **Prof. Yuri Clement** **Dr. Gabriel Brown** **Mrs. Valerie Sealey-Tobias** **Dr. Sandeep Maharaj**	Dean Professor of Pharmacology, Department of Para-Clinical Sciences Lecturer (Avian Medicine), School of Veterinary Medicine Assistant Lecturer, UWI School of Nursing Lecturer in Pharmacy	Faculty of Medical Sciences, University of the West Indies (UWI)
Prof. Jayaraj Jayaraman **Dr. Nigel Jalsa** **Mrs. Yasmin Baksh-Comeau**	Professor, Biotechnology and Plant Microbiology Lecturer, Chemistry, and Biochemistry Curator, National Herbarium	Faculty of Science and Technology, UWI
Mr. Andrew Rahaman	President of the Council, Pharmaceutical Board of Trinidad and Tobago	The Pharmaceutical Board of Trinidad and Tobago

Public Hearing Held on December 7, 2018		
Dr. Lionel Gaskin Mayers	Acupuncturist	Soul Mind Body Renewal Institute
Dr. Asante Indira Van West-Charles–LeBlanc	Acupuncturist	Victoria Clinic/ Member of MoH Herbal Sub-Committee
Mr. Marcus Ramkissoon	Consultant	Caribbean Cannabis Institute
Mr. Phillip Franco	Naturopath / Medical Herbalist, President, the Natural Medicine Centre/ Natural & Alternative Medicine Association of Trinidad & Tobago	Natural Balance, the Natural Medicine Centre/ Natural & Alternative Medicine Association of Trinidad & Tobago
Dr. Ernest Hazelwood	Owner	Vibrant Health Limited

Appendix II

MINUTES OF THE TWENTY-FOURTH MEETING OF THE JOINT SELECT COMMITTEE OF PARLIAMENT APPOINTED TO INQUIRE INTO AND REPORT ON SOCIAL SERVICES AND PUBLIC ADMINISTRATION, HELD IN THE A.N.R. ROBINSON MEETING ROOMS, LEVEL 9, OFFICE OF THE PARLIAMENT, TOWER D, #1A WRIGHTSON ROAD, PORT OF SPAIN, ON

PRESENT

Members

Dr. Dhanayshar Mahabir	Chairman
Mr. Esmond Forde, MP	Vice-Chairman
Mrs. Glenda Jennings-Smith, MP	Member
Brig. Gen. (Ret'd) Ancil Antoine, MP	Member
Mrs. Christine Newallo-Hosein, MP	Member
Mr. Rohan Sinanan	Member
Ms. Allyson West	Member
Ms. Khadijah Ameen	Member

Secretariat

Mr. Julien Ogilvie	Secretary
Mr. Johnson Greenidge	Assistant Secretary
Ms. Ashaki Alexis	Graduate Research Assistant

CALL TO ORDER AND ANNOUNCEMENTS

1.1 The Chairman called the meeting to order at 9:32 a.m. and welcomed those present.

CONFIRMATION OF MINUTES OF THE TWENTY-THIRD MEETING HELD ON MAY 16, 2018

2.1 The Chairman invited Members to examine page-by-page, the Minutes of the Meeting held on May 16, 2018.

2.2 The Committee approved the following amendments:

i. Page 7:

   a. Item (xxxii) – after the words ***"Street Dweller Initiative"*** insert the words ***"aimed at encouraging persons to be relocated and rehabilitated"*;**

   b. Item (xxxv) – replace the word ***"couches"*** with ***"coaches"***; and

ii. Page 9:

   a. Item (xlix) – replace the words ***"; and"*** with ***"."***;

   b. Item 6.5(ii) – replace the word ***"their"*** with ***"its"***; and

   c. Item 6.5(iv) – delete and replace with ***"That the Ministry seek to adequately resource the SDU as a matter of urgency to improve the Unit's coordinating capacity to ensure that site visits can be conducted in a timely manner;"***;

   d. Item 6.5(v) – replace the words ***"endeavor to increase"*** with ***"initiate the process of increasing"***; and

   e. Item 6.5(vi) – delete and replace with ***"The Ministry hold discussions with the audit community to encourage firms to provide audit services at a discounted price. This would assist in ensuring that NGOs can furnish timely accounts of their expenditure; and"***; and

   f. Item 6.5(v) – replace the words ***"to be filled by rehabilitated persons"*** with ***"and be filled"***.

2.3 The Minutes were confirmed with amendments on a motion moved by Mrs. Christine Newallo-Hosein, MP and seconded by Brig. Gen. (Ret'd) Ancil Antoine, MP.

MATTERS ARISING FROM THE MINUTES

Inquiry into non-traditional medications in the treatment of non-communicable diseases

3.1 With reference to Item 5.1(i), page 3 **–** The Chairman advised that:

   a. The Secretariat received submissions from the Ministry of Health and the Faculty of Medical Sciences, UWI. UWI's submission comprised a number of academic articles/papers relevant to the matter of alternative medicine; and

   b. A Draft Inquiry Proposal for the inquiry into non-traditional medications was circulated for the consideration of Members by email on June 11, 2018.

PRE-HEARING DISCUSSIONS

4.1 The Chairman informed Members that representatives of the following entities were expected to participate in the day's hearing:

i. **Ministry of Health**

ii. **Faculty of Medical Sciences, UWI (St. Augustine Campus)**

iii. **Faculty of Science and Technology, UWI (St. Augustine Campus)**

iv. **Pharmacy Board of Trinidad and Tobago.**

4.2 The Chairman noted that the Medical Board of Trinidad and Tobago was invited. However, the Secretary to the Board advised the Secretariat that due to prior commitments, no representatives of the Board were able to attend.

4.3 The Chairman informed Members that the day's hearing was pursuant to *the inquiry into the potential benefits of non-traditional medications in the treatment of non-communicable diseases in Trinidad and Tobago.*

4.4 The Chairman advised Members that no *Issues Paper* was prepared by the Secretariat for this hearing. Rather members were referred to the following documents:

a. *Draft Inquiry Proposal re: an inquiry into the potential benefits of non-traditional medications in the treatment of non-communicable diseases in Trinidad and Tobago; and*

b. *Summary of academic articles/research papers received from the Faculty of Medical Sciences, UWI.*

4.5 Members briefly discussed and agreed on the approach to questioning to be adopted during the hearing.

OTHER BUSINESS

Proposed Date and Agenda for Next Meeting

5.1 Discussion commenced on whether additional hearings are required to better inform the Committee's report to Parliament on its inquiry into non-traditional medications.

5.2 The Committee agreed that subsequent to its deliberations on the evidence received at the day's hearing, a decision will be taken on whether the Committee will meet on July 04, 2018 to review the Draft report on the Committee's inquiry into mental health or to convene a second hearing on non-traditional medications.

5.3 Members also agreed to consider all outstanding draft Reports via round-robin email and to forward their comments to the Secretariat over the Fixed Recess period.

5.4 The Secretariat was instructed to:

a. reserve July 04, 2018 for a possible second public hearing re: the inquiry into non-traditional medications; and
b. complete all outstanding draft Reports and circulate for the consideration of Members over the Fixed Recess period.

SUSPENSION

5.5 The Chairman suspended the meeting at 10:25 a.m.

Public Hearing with Stakeholders re: An inquiry into the potential benefits of non-traditional medications in the treatment of non-communicable diseases in Trinidad and Tobago.

6.1 The meeting resumed in public at 10:32 a.m. in the A.N.R. Robinson Meeting Room (East), Level 9.

6.2 The following persons joined the meeting:

Ministry of Health

Mr. Richard Madray	-	Permanent Secretary
Mr. Brian Armour	-	Chief Medical Officer Ag.
Mr. Farz Khan	-	Director, Chemistry, Food and Drugs Division
Ms. Jennifer Rodriguez	-	Manager, Pharmacy Services
Ms. Asante Charles-Le Blanc	-	Member, Herbal Sub-Committee, Ministry of Health

Faculty Medical Sciences, UWI

Professor Terence Seemungal	-	Dean, Faculty of Medical Sciences, UWI
Professor Yuri Clement of	-	Professor of Pharmacology, Department of Para-Clinical Sciences
Dr. Gabriel Brown	-	Lecturer (Avian Medicine), School of Veterinary Medicine
Mrs. Valerie Sealey-Tobias	-	Assistant Lecturer, UWI School of Nursing
Dr. Sandeep Maharaj	-	Lecturer in Pharmacy

Faculty of Science & Technology, UWI

Prof. Jayaraj Jayaraman	-	Professor, Biotechnology and Plant
Dr. Nigel Jalsa	-	Lecturer, Chemistry and Biochemistry

		Microbiology
Mrs. Yasmin Baksh-Comeau	-	Curator, National Herbarium

Pharmaceutical Board of Trinidad and Tobago

Mr. Andrew Rahaman	-	President of the Council

6.3 The Chairman welcomed the officials and introductions were exchanged.

Key Issues Discussed

6.4 The following are the key subject areas/issues discussed during the hearing**:**

Issues discussed with the Ministry of Health (MoH)

i. The Medical Board Act prescribes that doctors are duly registered with the board after completing an approved curriculum at a recognized tertiary educational institute;

ii. The Ministry is unable to take legal action against persons, who sell products which are branded as containing therapeutic/medicinal properties;

iii. The absence of legislative provisions that govern the use of non-traditional and contemporary medications;

iv. Since 1999 consultations were conducted on herbal medicine and based on those consultations, regulations were drafted in 2001. At present, there is a 2004 version of the draft regulations before the Chief Parliamentary Counsel (CPC) for review;

v. There is no register or regulations for Acupuncture and Aryuvedic practitioners in Trinidad and Tobago;

vi. The professional bodies with responsibility for the registration of medical practitioners are the Medical Board of Trinidad and Tobago (MBTT), the Trinidad and Tobago Registered Nurses Council (TTNC) and the Council of Professionals relating to medicine. The Council of Professionals includes psychiatrists and social workers and is also within the ambit of the law and oversight under the Ministry;

vii. International best practice defines herbal and alternative substances as substances that support the treatment of diseases and not cure diseases;

viii. The absence of registration and regulation for practitioners of non-traditional and alternative medicine may lead to negative health effects. Persons tend to use non-traditional medicine as primary rather than supportive treatments;

ix. The lack of funding and the cost associated with conducting studies and trials on the effects and benefits of the use of non-traditional and alternative medication;

x. The Drug Advisory Committee is responsible for advising and recommending to the Minister, the drugs that may be registered, imported, distributed and sold in Trinidad and Tobago. The Committee is in process of producing a policy which will allow for better regulation of herbal based medication;

xi. The Drug Advisory Committee has recommended herbal substances with medicinal properties to the Minister to be approved for sale. The Drug Advisory Committee has recommendedapproximately10 herbal supplements for the Minister's approval;

xii. A Herbal Sub Committee was established within the Ministry. The functions of this committee include providing guidance to the Drug Advisory Board and the Minister on *inter alia* the public dispensation and regulation of herbal substances that are found locally and internationally.

xiii. The need to understand the difference between supplemental and medicinal herbs/plants;

xiv. Tertiary educational institutions offer courses in traditional and herbal medication;

xv. There are conventional drugs that do not meet the scientific rigor to be included in the formulary pharmacopeia but are used as alternative medicine;

xvi. Conventional drugs can be accessed through pharmaceutical companies and pharmacies as over-the-counter medication. International disclaimers are placed on conventional drugs;

xvii. The creation of an electronic database which contains all the information on particular drugs that is accessible to the public. At present, the database is internal to the Ministry;

xviii. The immediate need for a regulatory framework and the allocation of human resource and funds to effectively monitor the sale and use of traditional medication. The provisions of the Dangerous Drugs Act, Chap. 11:25 are inadequate to effectively monitor the use of this type of medication;

xix. No licenses have been issued in accordance with Section 4 of the Dangerous Drugs Act, Chap. 11:25; and

xx. The Drug Inspectorate Unit is responsible for the monitoring of drugs distributed by pharmacies.

Issues discussed with the University of the West Indies (UWI)

i. The importance of ensuring that scientific research is conducted to support the views/notions on the negative or positive effects associated with the use of traditional medication. Currently, traditional medication is used based on its folkloric value and without the support of adequate scientific research.

ii. There is a need to conduct research into the various types of alternative treatments that are available to the public of Trinidad and Tobago;

iii. Research has been conducted at the FMS[28] and FST[29], UWI in three areas:

- Descriptive pharmacology research;
- Basic scientific research; and
- Experiments using animal models.

iv. Additionally, a number of studies have been conducted on plants with medicinal properties used to treat conditions such as asthma, cancer, hypotension, high blood pressure and diabetes;

v. In 2015 a national survey on the use of medication drafted from plants was executed and involved 50 villages. The University used the findings of this survey to determine the herbs/plants that are commonly used;

vi. In addition, another study that involved doctors and herbal specialists was conducted in 2015. In this study, the University was also able to capture the perspective of specialist medical doctors on the use of medicinal herbs;

vii. The use of imported herbs/plants is preferred to those grown locally;

viii. Over local 100 medicinal herbs can be used to treat fever, vomiting, and diarrhoea;

ix. Research is being conducted on marine sponges by FST[30];

[28] Faculty of Medical Sciences, University of the West Indies – St. Augustine Campus
[29] Faculty of Science and Technology, University of the West Indies – St. Augustine Campus

x. An overview of the process involved in analysing the chemical components of medicinal herbs/plants;

xi. Alternative medicine has an 83% effective rate, while traditional medication such as antibiotics have an 87% effective rate in the treatment of non-communicable diseases;

xii. There is a lack of evidence on the effects of medicinal herbs/plants on humans. Currently, evidence has been collected solely from studies on animal subjects. There are prevailing safety concerns regarding human trials;

xiii. Studies on the effects of medicinal herbs/plants have been published by faculty members of the UWI;

xiv. Currently patients attempt to treat multiple conditions with one medicinal herb/plant;

xv. There is a lack of interest from local pharmaceutical companies as it relates to the research conducted by the UWI on the benefits of the use of medicinal herbs/plants. However, international pharmaceutical companies have contacted the University to obtain local herbs/plants to be tested in their labs;

xvi. The University aims to provide comprehensive scientific evidence on the benefits of local herbs/plants with medicinal properties;

xvii. The need for implementation of legislative provisions to protect local herbs/plants with medicinal properties;

xviii. There are medical doctors who utilize alternative/complementary medication to support traditional treatment;

xix. MBTT controls the practices of doctors that are registered with the Board;

xx. Furthermore, according to Section 22(1)(c) of the Medical Board Act, Chap. 29:50, if a person claims to be a medical doctor and is not registered with the MBTT the doctor can be prosecuted by the law. However, if a person does not claim to be a medical doctor but instead claims to sell products that cure/prevent diseases then the MBTT has no jurisdiction over such an individual;

xxi. A patent cannot be placed on herbs/plants and their medicinal properties in their natural form. However, one can patent the process used to extract the

[30] Faculty of Science and Technology, University of the West Indies – St. Augustine Campus

properties contained within the herbs/plants and the products derived from a herb/plant;

xxii. The need for partnership with regional and international companies to conduct studies on the effects of the use of medicinal herbs/plants and alternative medication;

xxiii. The majority of pharmaceutical drugs have been derived from traditional/herbal medication. However, these drugs are differentiated by a significant amount of supporting scientific evidence;

xxiv. Some herbs/plants used to treat ailments may contain a high level of toxins that are hazardous to human health;

xxv. A large number of studies conducted on the substances contained in CO Q10 are available to the public;

xxvi. Medical students are offered a 3 credit course in the use of complementary and traditional medication;

xxvii. There are over 600 compounds in the cannabis plant whereas the media and public tend to focus on the THC compound;;

xxviii. A lack of research studies both locally and regionally on the medical benefits of medicinal marijuana/cannabis;

xxix. The need for clinical studies to be conducted in order for a drug to be approved;

xxx. UWI has the human resource capital to conduct research on the medicinal benefits of various herbs and plants including marijuana/cannabis. However, a lack of funding and legislative provisions has prevented the UWI from undertaking this type of rigorous research;

xxxi. Research was conducted by the University on the use of cannabis to treat cancer. However, only a small sample was examined during that study;

xxxii. The Government has engaged UWI to provide assistance in the collection of the different types of marijuana plants grown in Trinidad and Tobago;

xxxiii. There are over 3600 species of vascular plants in Trinidad and Tobago. Furthermore, the University was able to identify 900 species of plants that are used for medicinal purposes;

xxxiv. The commercializing of products derived by plants in Jamaica and the possibility of same occurring in Trinidad and Tobago. The new strategic plan of the

University and it's faculties includes the incorporation of entrepreneurship and innovation;

xxxv. Patents are not being issued for research conducted by the UWI. However, the University is in the process of pursuing patents.

Issues discussed with the Pharmaceutical Board of Trinidad and Tobago

i. Notwithstanding the benefits of the use of alternative medication, there are also negatives effects associated with its use;

ii. The need for legislative provisions to regularize this form of treatment;

iii. Non-traditional and alternative medication is used to support pharmaceutical medications in the treatment of diseases. Unfortunately, a large segment of the population uses non-traditional and alternative medicine as their mainline treatment which results in ineffective treatment;

iv. A course is available to pharmacists at the School of Medicine in UWI on complementary medicine;

v. Some persons are resistant to the use of non-traditional or complementary medication based on the side effects associated with this form of treatment; and

vi. Pharmacies obtain their license to distribute and store dangerous drugs or narcotics through the Drug Inspectorate of the Narcotics Committee.

Recommendations proffered during the Public Hearing

The following recommendations emanated from the discussions:

i. That more public resources be directed at research on the medicinal benefits of the herbs/plants grown in Trinidad and Tobago;

ii. That the University of the West Indies protects and patents its intellectual property with respect to research conducted on non-traditional medication;

iii. That all medicinal plants with the potential to generate economic opportunities for Trinidad and Tobago in the field of pharmacology, such as medicinal marijuana, are collected and stored;

iv. That legislative provisions be enacted for the regulation of non-traditional and alternative medication in Trinidad and Tobago;

v. That the University of the West Indies collaborate with the Ministry of Agriculture, Land and Fisheries to identify the medicinal properties of plants grown in Trinidad and Tobago; and

vi. That the University of the West Indies work in collaboration with international universities with regards to conducting research on non-traditional medication.

Requested information

6.5 The Committee requested the following from:

The Ministry of Heath

i. A detailed update and overview of the legal action that was initiated by the Ministry of Health against herbal practitioners? The planned action of the Ministry was reported by the *Trinidad and Tobago Guardian* in an Article entitled "Headache for herbalists" dated May 12, 2013;
ii. A status update on the Draft Regulations aimed at regulating the use of Herbal Medicine;
iii. A copy of the draft regulations mentioned at (ii) above;
iv. The amendments to the draft regulations which have been proposed thus far by the Herbal Sub-Committee;
v. A list of the members of the Herbal Sub-Committee;
vi. A list of the herbal substances recommended for use by the MoH;
vii. The policy position of the Ministry on medications containing cannabis (marijuana) which have been approved in foreign territories; and
viii. The options available to a resident of Trinidad and Tobago should he/she wish to import or purchase such medication for personal use.

Faculty of Science & Technology, University of the West Indies

i. A list of herbs/herbal substances produced in Trinidad and Tobago that can assist in the treatment of non-communicable diseases; and
ii. A list of the international pharmaceutical companies that have engaged the UWI, St. Augustine Campus with respect to research conducted on plants found in Trinidad and Tobago which may be potentially helpful in the treatment of non-communicable diseases;
iii. An electronic copy of all published research papers (over a 10 year period) and or academic articles which originated within the Faculty of Science & Technology (formerly the Faculty of Natural Sciences) and which focused on research conducted on plants found in Trinidad and Tobago, which may contain medicinal properties.

ADJOURNMENT

7.1 Closing remarks were made by the chief officials present.

7.2 The Chairman thanked Members and gave closing statements.

7.3 The meeting was adjourned at 12:38 p.m.I certify that these Minutes are true and correct.

Chairman

Secretary

July 09, 2018

Appendix III

MINUTES OF THE TWENTY-SEVENTH MEETING OF THE JOINT SELECT COMMITTEE OF PARLIAMENT APPOINTED TO INQUIRE INTO AND REPORT ON SOCIAL SERVICES AND PUBLIC ADMINISTRATION, HELD IN THE A.N.R. ROBINSON MEETING ROOMS, LEVEL 9,

OFFICE OF THE PARLIAMENT, TOWER D, #1A WRIGHTSON ROAD, PORT OF SPAIN, ON

PRESENT

Members

Mr. Paul Richards	Chairman
Mrs. Glenda Jennings-Smith, MP	Member
Brig. Gen. (Ret'd) Ancil Antoine, MP	Member
Mrs. Christine Newallo-Hosein, MP	Member
Mr. Rohan Sinanan	Member
Ms. Allyson West	Member

Secretariat

Mr. Julien Ogilvie	Secretary
Mr. Johnson Greenidge	Assistant Secretary
Ms. Ashaki Alexis	Graduate Research Assistant

ABSENT

Mr. Esmond Forde, MP	Vice-Chairman (excused)
Ms. Khadijah Ameen	Member (excused)

CALL TO ORDER AND ANNOUNCEMENTS

1.2 The Chairman called the meeting to order at 10:14 a.m. and welcomed those present.

1.3 Members were advised that Mr. Esmond Forde, MP and Ms. Khadijah Ameen asked to be excused from the day's proceedings.

CONFIRMATION OF MINUTES OF THE TWENTY-SIXTH MEETING HELD ON NOVEMBER 21, 2018

2.4 The Chairman invited Members to examine page-by-page, the Minutes of the Meeting held on November 21, 2018.

2.5 The Committee approved the following amendment:

iii. Page 6, Item (vii) – after the word ***"handbooks"*** insert the words ***"Consultations are"*** ;

2.6 The Minutes were confirmed with amendments on a motion moved by Mrs. Christine Newallo-Hosein, MP and seconded by Brig. Gen. (Ret'd) Ancil Antoine, MP.

MATTERS ARISING FROM THE MINUTES

Follow-up on the responses to the Committee's Third Report on Geriatric Homes

3.2 **Item 11.2, page 10;** Members were advised that a request for additional information was sent to the MSDFS *re: Follow-up on 3rd Report on the regulation of geriatric care facilities/old age homes.*

3.3 **Item 4.1, page 2;** The Chairman suggested as a follow-up exercise that the Committee collaborate with the MoSDFS with a view to undertaking site visits to the Geriatric Care Facilities/Homes that were asked to cease operations by the Ministry. Discussion ensued.

3.4 With respect to the Chairman's proposal, it was agreed that the Committee will request the Inspections Reports which were generated further to the Ministry's inspections of these Homes. These reports will then be reviewed by the Committee and thereafter a plan of action will be formulated.

Consideration of Draft Proposal for an inquiry into childhood obesity

3.5 Members considered the Draft Proposal and discussion commenced on the objectives of the inquiry and the stakeholders to be engaged.

3.6 The Committee agreed that:

i. Objective 2 is amended to read as follows: ***"To assess the services and facilities available to counteract and or alleviate childhood obesity"***; and

ii. The following will be added to the list of stakeholders to be engaged:

a. National Parents Teachers Association (NPTA)

b. Trinidad and Tobago Unified Teachers Association (TTUTA)

c. Relevant NGOs

PRE-HEARING DISCUSSIONS

8.1 The Chairman reminded Members that the purpose of the day's hearing was to seek feedback from local practitioners of Complementary and Alternative Medicine (CAM) regarding *the potential benefits of traditional medications in the treatment of non-communicable diseases.*

8.2 The Chairman informed Members that the following local practitioners were expected to participate in the day's hearing:

- **Dr. Lionel Gaskin Mayers**
  Soul Mind Body Renewal Institute (Acupuncturist)
- **Dr. Asante Indira Van West-Charles–LeBlanc**
  Victoria Clinic (Acupuncturist) / Member of Ministry of Health Herbal Sub-Committee
- **Mr. Marcus Ramkissoon**
  Caribbean Cannabis Institute
- **Mr. Phillip Franco**
  Natural Balance - The Natural Medicine Centre/ Natural & Alternative Medicine Association of Trinidad & Tobago
- **Dr. Ernest Hazelwood**
  Vibrant Health Limited

8.3 The Chairman confirmed that Members were in receipt of the following:

i. Dossier of research on the medicinal benefits of Marijuana submitted by Mr. Marcus Ramkissoon on November 07, 2018;

ii. Written submission from Mr. Phillip Franco dated December 05, 2018; and

iii. *Issues Papers* on questions to Practitioners of CAM prepared by the Secretariat.

8.4 Members briefly discussed and agreed on the approach to questioning to be adopted during the hearing.

OTHER BUSINESS

Proposed Date and Agenda for Next Meeting

6.1 Members were reminded of the Committee's decision at its last meeting to meet on **Wednesday January 16, 2019.** At this meeting the committee will conduct its first public hearing *re: the inquiry on childhood obesity* with officials of the MoH and MoE.

SUSPENSION

7.1 The Chairman suspended the meeting at 10:44 a.m.

2ND PUBLIC HEARING RE: AN INQUIRY INTO THE POTENTIAL BENEFITS OF NON-TRADITIONAL MEDICATIONS IN THE TREATMENT OF NON-COMMUNICABLE DISEASES IN TRINIDAD AND TOBAGO.

8.1 The meeting resumed in public at 10:48 a.m. in the A.N.R. Robinson Meeting Room (East), Level 9.

8.2 The following persons joined the meeting:

Local Practitioners of Complementary and Alternative Medicine

i. **Dr. Lionel Gaskin Mayers**
Soul Mind Body Renewal Institute (Acupuncturist)

ii. **Dr. Asante Indira Van West-Charles–LeBlanc**
Victoria Clinic (Acupuncturist) / Member of Ministry of Health Herbal Sub-Committee

iii. **Mr. Marcus Ramkissoon**
Caribbean Cannabis Institute

iv. **Mr. Phillip Franco**
Natural Balance - The Natural Medicine Centre/ Natural & Alternative Medicine Association of Trinidad & Tobago

v. **Dr. Ernest Hazelwood**
Vibrant Health Limited

8.3 The Chairman welcomed the witnesses present and introductions were exchanged.

Key Issues Discussed

8.4 The following are the key subject areas/issues discussed during the hearing**:**

Issues discussed with Dr. Lionel Gaskin Mayers - Soul Mind Body Renewal Institute (Acupuncturist)

i. The application of Ozone Therapy as a form of alternative medicine used to treat non-communicable diseases such as Parkinson's disease;

ii. The public has several misunderstandings regarding the benefits and risks associated with Complementary and Alternative Medicine (CAM) due to a lack of knowledge;

iii. Acupuncture and Homeopathic medicine have proven to be effective in the treatment of non-communicable diseases;

iv. The lack of laboratories equipped to conduct analysis and tests which are necessary to verify the medical impact of both pharmaceutical and herbal medicine;

v. The existence of two types of B12 vitamins; Cyanocobalamin is a synthetic form of vitamin B12 found in supplements, while methylcobalamin is a naturally occurring form that obtained through foods. Furthermore, methylcobalamin is easily digested by the body while cyanocobalamin contains traces of cyanide and is not easily digested;

vi. The need for more robust scientific research within the various branches of CAM;

vii. The need for improved collaboration between medical practitioners and CAM practitioners including herbal experts;

viii. An estimated 70% of patients, tend to resort to CAM as a last resort in the treatment of non-communicable diseases, especially cancer; and

ix. The need for regulations to govern the practice of CAM. These regulations should not stifle the practice of traditional or instinctive medicine.

Issues discussed with Dr. Asante Indira Van West-Charles-LeBlanc - Victoria Clinic (Acupuncturist) / Member of Ministry of Health Herbal Sub-Committee

i. That Herbal Medicine and other forms of Complementary and Alternative Medicine (CAM) should be used in conjunction with pharmaceutical treatments;

ii. The need to establish a regulatory system to manage persons in the practice of CAM. Such a system should be established by legislation and managed via a statutory body or board (e.g. The Trinidad and Tobago Board of Natural Medicine);

iii. The absence and need for a depository of all persons in the practice of CAM;

iv. Lack of understanding and acceptance amongst the orthodox medical fraternity as it relates to the use of CAM in the treatment of illnesses/disorders/diseases. As a result, CAM is generally disregarded by the medical fraternity as a form of treatment;

v. Actions should be taken against persons who claim to be medical practitioners and are not registered with the Medical Board of Trinidad and Tobago (MBTT);

vi. Some herbal or natural substances are potentially harmful;

vii. That both a voluntary regulating system which is managed by the body of CAM practitioners and merchants and a system regulated by law may be utilized to regulate CAM use;

viii. The current factors that are hindering the Ministry of Health from developing a regulatory framework regulate herbal medicine and CAM;

ix. The production, supply and prescription of herbal substances are not regulated under the Food and Drugs Act, Chap. 30:01;

x. The Herbal Sub-committee of the Drug Advisory Committee (DAC) is currently in the process of drafting a policy to regulate the use of Herbal Medicine and Complementary and Alternative Medicine (CAM);

xi. The functions of the Herbal Sub-committee, DAC include providing guidance to the Drug Advisory Board and the Minister on *inter alia* the regulation and public dispensation of herbal substances;

xii. Herbal medication should be assessed and approved by the Drug Advisory Committee (DAC);

xiii. The need for collaboration between CAM practitioners and registered doctors in the medical fraternity as it relates to the combined use of CAM and pharmaceutical drugs in the treatment of illnesses/disorders/diseases;

xiv. The need to educate practitioners of Western Medicine on the use and benefits of CAM;

xv. The existence of a herbal society and guild in the United States;

xvi. Both CAM and pharmaceutical drugs have side-effects. However, the side effects associated with the use of herbal medicine and other forms of CAM are significantly lower than pharmaceutical drugs;

xvii. Local Oncologists do prescribe CAM in conjunction with pharmaceutical treatments for Cancer patients. The *Soursop* plant is used as a natural treatment for breast cancer;

xviii. The need for CAM to be included into the Bachelors of Medicine programmes of local tertiary institutions with a view to curbing the stigma associated with CAM through education;

xix. The need for research and development to ascertain information on the benefits of CAM in the treatment of illnesses/disorders/diseases. Furthermore, public funding should be allocated for research and development in CAM;

xx. The MOH is in the process of ensuring that all laboratories are standardized to conduct trials and testing on the components of pharmaceutical medication; and

xxi. The need for consistent communication between medical practitioners and persons in the practice of CAM.

<u>Issues discussed with Mr. Marcus Ramkissoon - Caribbean Cannabis Institute</u>

i. Antigua and Barbuda are set to legalize the regulated production and supply of cannabis for religious and medical purposes. That country's Cannabis Bill, 2018 has two main functions: (1) regulating the production, supply and prescription of medicinal cannabis for patients; and (2) permitting religious groups to possess, cultivate and supply cannabis;

ii. The need for the *World Health Organization (WHO) Guidelines on developing consumer information on proper use of Traditional, Complementary and Alternative Medicines* to be adhered to by CAM practitioners in Trinidad and Tobago which will promote proper use of herbal and alternative medicines. Furthermore, legislative provisions must align with said international standards/guidelines;

iii. That all persons in the practice of CAM should be certified by an accredited institution;

iv. The need for the establishment of a regulatory board as it relates to the administration of medicinal cannabis;

v. Some pharmaceutical companies in Trinidad and Tobago dispense herbal supplements. However, there are herbal supplements that are not dispensed through pharmaceutical companies due to the fact that they are not standardized;

vi. That Cannabis in its raw form should not be dispensed by pharmacies;

vii. The notion that Cannabis is recommended and not prescribed by registered physicians in Trinidad and Tobago for the treatment of certain non-communicable diseases;

viii. There are thousands of species of cannabis, each with a different cannabinoid profile which has different effects;

ix. Herbal practitioners cannot 'prescribe' but instead they may 'recommend' the use of herbal medicine in the treatment of illnesses/disorders/diseases;

x. Some pharmaceutical companies in Antigua and Barbuda are permitted to dispense drugs that contain Cannabis compounds;

xi. The need for accountability mechanisms for CAM practitioners and the urgent need for penalties and the introduction of some level of oversight as it relates to the practice of CAM;

xii. The benefits of Cannabis (THC)[31] inhalation in the treatment of non-communicable diseases;

xiii. That Cannabis should have its own legislative provisions apart from CAM;

xiv. The decriminalization and legalization of Cannabis in Jamaica; and

xv. The need for the Ministry of Health to consult with herbal specialists and CAM practitioners regarding a possible legal framework for the regulation of Traditional medicine or Complementary and Alternative Medicine (CAM).

[31] Tetrahydrocannabinol (THC), natural compounds found in plants of the Cannabis genus. Furthermore, THC is the main psychoactive compound in marijuana.

Issues discussed with Mr. Phillip Franco - Natural Balance - Natural Medicine Centre/ Natural & Alternative Medicine Association of Trinidad & Tobago

i. The need for legislative provisions to regulate the production, supply and prescription of herbal medication;

ii. There exists a diverse range of CAM practitioners in Trinidad and Tobago, both qualified and non-qualified;

iii. A need to regulate the marketing and promotion of non-registered persons involved in the practice of CAM;

iv. On average there are over 100,000 deaths per year in the US as a result of the improper use of pharmaceutical drugs. However, there is only a handful of deaths as a result of CAM usage;

v. The use of herbal substances is regulated in countries such as the United States, New Zealand, Canada, and Europe which may provide a rubric for Trinidad and Tobago;

vi. That a voluntary system be utilized in the interim for the regulation of CAM. Government support is necessary for the holistic integration of natural medicine into the health system;

vii. The success of CAM in the treatment of non-communicable diseases is dependent on patients use i.e. the appropriate use of CAM whether alone or in conjunction with pharmaceutical drugs; and

viii. The need for the establishment of a regulated and accessible database to record all drugs that are imported into Trinidad and Tobago.

Issues discussed with Dr. Ernest Hazelwood - Vibrant Health Limited

i. Mind, Body and Spiritual Intervention as a form of CAM;

ii. All plants contain medicinal properties. Scientific research is needed to record these properties;

iii. That the production, supply and prescription of herbal medication be legalized. Furthermore, there is a need for proper documentation and certification with respect to dispensing of CAM treatments;

iv. The need for accredited training for CAM practitioners;

v. Scientific research is available on the potential benefits of Herbal Medicine and many forms of CAM;

vi. Herbal substances are used on a daily basis for cooking and as traditional 'backyard' remedies for illnesses;

vii. The need for the Ministry of Health to undertake public awareness and education initiatives regarding the use and potential benefits of herbal substances and CAM; and

viii. Pharmaceutical drugs have proven to be ineffective in the treatment of certain illnesses/disorders/diseases.

SUSPENSION

8.5 Closing remarks were made by the witnesses present.

8.6 The Chairman thanked all present and gave closing remarks.

8.7 The Chairman suspended the meeting at 12:25 p.m.

POST-HEARING DISCUSSION

9.1 The Committee reconvened and engaged in brief post-hearing discussions in relation to the issues raised during the public hearing. Members agreed to forward comments/recommendations to be included in the Committee's report.

ADJOURNMENT

10.1 The meeting was adjourned at 12:34 p.m.

I certify that these Minutes are true and correct.

Chairman

Secretary

December 19, 2018

Appendix IV

VERBATIM NOTES OF THE TWENTY-FOURTH MEETING OF THE JOINT SELECT COMMITTEE ON SOCIAL SERVICES AND PUBLIC ADMINISTRATION, HELD IN THE ANR ROBINSON MEETING ROOM (WEST), LEVEL 9, (IN CAMERA), AND THE ANR ROBINSON MEETING ROOM (EAST), LEVEL 9 (IN PUBLIC), OFFICE OF THE PARLIAMENT, TOWER D, THE PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, #1A WRIGHTSON ROAD, PORT OF SPAIN, ON WEDNESDAY, JUNE 13, 2018 AT 9.30 A.M.

PRESENT

Dr. Dhanayshar Mahabir	Chairman
Mr. Esmond Forde	Vice-Chairman
Mrs. Christine Newallo-Hosein	Member
Mr. Rohan Sinanan	Member
Ms. Khadijah Ameen	Member
Mrs. Glenda Jennings-Smith	Member
Ms. Allyson West	Member
Brig. Gen. Ancil Antoine	Member
Mr. Julien Ogilvie	Secretary
Mr. Johnson Greenidge	Assistant Secretary
Ms. Vahini Jainarine	Legal Officer

Mr. Chairman: Good morning, members. Welcome to this, the Twenty-Fourth Meeting of the JSC on Social Services and Public Administration. We have a quorum and I welcome members present. To date I have no excuses or absence or request for leave, so I assume that all members will be here in good order as the meeting progresses. Before us are the Minutes of the last meeting held on, Wednesday May 16, 2018. I invite members—I trust that you all have copies of the Minutes. I invite members to review the Minutes and we will review the Minutes page by page and make our necessary adjustments.

Page 1. Are we okay with page 1? Page 2. Are we good with page 2?

Mrs. Newallo-Hosein: Yes.

Mr. Chairman: Page 3. Any adjustments or adjustment to page 3? None I presume. Page 4. I

am okay with page 4. Page 5. I have no change to page 5. Page 6.

[*Brig. Gen. Antoine enters committee room*]

And at this point I would like to welcome our colleague MP Ancil Antoine.

Brig. Gen. Antoine: Good morning.

Mr. Chairman: Good morning, colleague. We are at the point where we are reviewing the Minutes. So if you need some time to settle in, we are at page 6 of the Minutes, but if you have any recommended changes from page 1 to page 5 please let me know and I will revisit. So we are on page 6. I am okay with page 6. Page 7.

Mrs. Newallo-Hosein: Chair, page 7, 35. "Life couches" instead of "life coaches".

Mr. Chairman: Oh. "Life couches". Excellent. Yes, they are life coaches. So we change the word "couches", in the second line to "life coaches". So that change is noted. Any other change on page 7? There being no other change on page 7, I move to page 8. I am okay with page 8. Are we all good with page 8?

Page 9, I have some changes that I would recommend. The first change I would recommend on page 9 is (xlix), there is an "and" there. We need to remove that. If we go to page 9, (xlix):

> Currently there are 60 beds available at the various intervention centres to accommodate 415 street dwellers: and—we need to take out the "semicolon" and "and" and just put a full stop there.

Mrs. Newallo-Hosein: Chair, excuse, is it to remove the word "and" or is it that something was omitted? I just wanted to make sure.

Mr. Ogilvie: In the editing? It is just a tidying-up.

Mr. Chairman: So the "and" has to go, it has nothing else to go in there. Under 65(2), it says that:

> The Ministry review their mandate.

The Ministry is one Ministry. So the Ministry review "its" mandate. I think we need to pay particular—after my experience in the Senate yesterday, I think we need to pay particular attention to English and drafting and the use of language. There used to be a course at the university called the "Use of English". I do not know if it is still being taught. But it is simple things just to make it consistent, that the Ministry review its mandate.

Under 65(3): that international standards and best practice be considered by the Ministry

in the—it is supposed to be two words.

Mr. Ogilvie: Space.

Mr. Chairman: Right, space. "In the", it is 65(3). Normally the computer programme would alert you that this is not a word.

[*Mr. Forde enters committee room*]

Good morning MP Forde. Welcome MP Forde. Good to see you. [*Crosstalk*] Yes, I was told that you would not the making it and then—and I said something has to be drastic for Sen. Forde not to be able to make it—MP Forde. I have elevated you to Senator.

Mr. Forde: Tunapuna comes first.

Mr. Chairman: [*Laughter*] Yes, I know the competition you suspect will come in Tunapuna. It is a private joke between me and MP Forde on the Tunapuna constituency.

Mr. Sinanan: Is it that you are going up for—

Mr. Chairman: Is it that you are contemplating. [*Laughter*] Okay, 65(4). This is what I would recommend. It says that: The Ministry—it should be really "seeks" because the Ministry is singular. The Ministry seeks to adequately resource the SDU as a matter of urgency to improve the units coordinating capacity and to ensure that site visits can be conducted. I would recommend that we remove the word "readily" and say, "that site visits can be conducted in a timely manner".

So my recommendation for the precision is that, to ensure that "site visits can be conducted in a timely manner" as opposed to "readily conducted". Are we in agreement with that proposed change? Stylistic change. Okay.

65(5), it says that: The Ministry endeavour to increase the number. I would recommend that the Ministry "initiates the process of" increasing the number of beds. That the Ministry "initiates the process of" increasing the number of beds. It does not change a substance but certainly it alters the readability of the sentence.

Under 65(6), says that: the Ministry engage private audit firms with a view to obtaining audit services at a discounted prices. This would assist in ensuring that NGOs—I would recommend "can furnish timely audited accounts of the expenditure". Instead of "efficiently and effectively" account for the expenditure I would say, this would assist in ensuring that the NGOs can furnish timely audited accounts of their expenditure.

Mrs. Newallo-Hosein: That would be correct because being in the Ministry it is the timely

receipt.

Mr. Chairman: It is a timely—

Mrs. Newallo-Hosein: Because you would not get funding if you do not have it on a timely basis submitted.

Mr. Chairman: And again it should be, "the Ministry engages". I know we are talking about audited firms, but it is one Ministry engaging. So it is, the Ministry engages private audited firms.

Ms. West: So the Ministry is going to bear the cost of the audit?

Mr. Chairman: No, no, no. The Ministry would not bear the cost. The Ministry will simply exercise whatever moral suasion it can. We cannot mandate the Ministry to bear that type of cost, but we are saying that since the work of the Ministry is being hindered in some way by the NGOs not supplying the timely audited accounts, the Ministry should do whatever it can do to assist these NGOs with respect to getting the accounts audited in a timely manner. And if it is that there is a moral suasion that could be used, whatever mechanism, but it is not going to be—

Ms. West: I understand that. So what if he engages in that sentence.

Mr. Chairman: The Ministry engages private auditing firms. The Ministry engages—

Ms. West: With a view to—

Mr. Chairman: With a view to obtaining audited services at a discounted price. So it means that if we are saying—

Ms. West: So that sentence is misleading.

Mr. Chairman: Right. We should say—

Ms. West: So that suggest that the Ministry is going to pay.

Mr. Chairman:—is going to pay and we are—the "Ministry liaises", because "engages" means that there may be some implication for them to pay. It is not the Ministry's function, absolutely not the Ministry's function. The Ministry encourages audited firm. Could we say—because what the Minister is saying is that, "engages" means that there may be some financial implications which is absolutely not so. So could we say, do you have recommended word that the Ministry, because the idea is to exercise moral suasion, simply sending a letter from the PS to the auditing firms indicating whether they can assist with this NGOs—

Mr. Forde: "Look into". That the Ministry look into private audit firms—look at.

Mr. Chairman: You see we want the Ministry—

Mr. Forde: "Engage" might be too strong a word there.

Ms. West: "Hold discussions with".

Mr. Chairman: Holds discussions.

Mrs. Newallo-Hosein: But Senators if you would permit. It is a recommendation that we are putting forward?

Mr. Chairman: Yes, yes.

Mrs. Newallo-Hosein: Just out of—I mean, being the devil's advocate, do you think that persons would feel comfortable having an audit firm who may have been recommended by the Ministry to be utilized because of a cheaper service. What if the auditor comes back with a report saying that this NGO is probably not fit to—I do not know—

Mr. Chairman: A conflict of interest.

Ms. West: I am not seeing that the Ministry should be recommending any particular firm. They would have discussions with the audit community to encourage them to facilitate cheaper audits. So the individual NGOs they still have the opportunity to decide which auditor they want to go with.

Mr. Chairman: I think that, from what I recall the Ministry simply engage—because they have not had their dialogue with them before. And out of the hearing it was recommended that they should, because it is the Ministry now and their work is being hindered in some way that they should engage in dialogue to assist, because each single entity may not have the necessary wherewithal to liaise with an auditing firm. But the Ministry as a whole can seek whether in fact they ought to have a meeting. You see, what I had in mind was that the Ministry would call a meeting of the auditing firm, invite them and ask them, are you willing in the public interest to discharge this function so that, it is corporate social responsibility that you will not charge full corporate pricing for an NGO which is a non-profit organization. You are going to audit for this particular, may be half the fee—I leave that to the accountants—

Mr. Ogilvie: So "hold discussions".

Mr. Chairman: "Hold discussions". Because this was something missing that we thought—and the Ministry officials did not think that it is something outside their remit, because they do have a function to discharge.

Ms. West: We are kind of in Matters Arising so I will raise it [*Inaudible*]. I had discussions with a few NGOs before I came into public service and I got the impression, the problem was deeper

than just auditing their accounts. They do not have an idea how to prepare accounts. So they really need more support from auditing firms or accounting firms in terms of getting their books and records right. They can then join into—

Mr. Chairman: It is recommended by the Secretariat that the Ministry holds discussions with the audit community to encourage firms to provide services at a discount. And it would end up as you said, more than auditing, because technical, keeping of books. Because out of the hearing we came to understand that there are many of these NGOs who simply know how to do the NGO work, but they do not know how to organize their accounts and their books and make account of their, and we need to help them so that they can continue to discharge their functions. Very good. So that is one of those coming. But by no means did we recommend that the Ministry itself would pay for the auditing of these NGOs. That is not something that I think is within our remit nor is it—[*Interrupted*]. Yes, yes.

And under 65(7), in the last line it says:

Furthermore that the life coach position is regularized to be filled by rehabilitated persons.

I would remove "to be filled by rehabilitated persons" and that furthermore that the life coach position is regularized and be filled. Because in the first sentence we said that the private sector be engaged by the Ministry regarding the employment of person who have been rehabilitated. And it continues further:

That the life coach position is regularized and be filled.

Because we did indicate elsewhere that the life coach position was going to be from rehabilitated person. So for again, for clarity of exposition I would just say:

…to be regularized, to be filled by rehabilitated persons and be filled.

Those are the recommendations on the Minutes that I have picked up. Are there any other recommendations for the amendment, adjustments of the Minutes?

Mrs. Newallo-Hosein: Yes, just going back to page 7, 32, The IAU is formed to undertake the street dwelling initiative. I think that what is missing is that they were informed to undertake the actual removal. So just having the street dweller initiative does not really spell out what is the purpose of—

Mr. Chairman: Do we have access to the verbatim to see exactly what was the statement of the officials on this one? Because this I remember was a contentious issue on the IAU.

Mrs. Newallo-Hosein: It is very contentious because of the fact that we, Trinidad and Tobago, being signed on to the human rights cannot remove anyone off the street forcibly. It must be voluntarily. And therefore the IAU was very specific to going out to the actual street dwellers and speaking with them and encouraging them to accept being relocated to a facility that will help with their rehabilitation. And that is what was the contentious issue, that they removed an entire unit that was responsible for that and replaced it with nothing. And they now have a unit with only four persons and they have accepted responsibility for doing an exceptional count.

Mr. Chairman: Very well. So do we have the verbatim?

[*Secretary confers with the Chairman*]

This is from Ms. Reyes-Borel.

Mrs. Newallo-Hosein: You see, being removed off the streets.

Mr. Chairman: Right, so it says—[*Crosstalk*]

Mrs. Newallo-Hosein: This encompasses a lot of other Ministries.

Mr. Chairman: Okay, what I did not get clear was what was the legislation, if any, which governed this inter-agency unit, because removing persons off the street would involve some constitutional issues. And I am not clear. I do not know if you are clear MP on what was the legal basis of this unit.

Mrs. Newallo-Hosein: There is no—we are signed them as I said to the human rights laws and as a result of it you cannot forcibly remove anyone off of the streets. So the IAU unit was developed so that persons can go out from the unit with a social worker, with a member of the Ministry of Health and the police and these three combine would go out and, you know persuade—

Mr. Chairman: Moral suasion.

Mrs. Newallo-Hosein: And they were never forced, none.

Mr. Chairman: This was very important to clarify. They were supposed to use various arms of the State to encourage person who are sleeping or living on the streets to take advantage of the facilities offered by the State with respect to accommodation.

Mrs. Newallo-Hosein: And as a result of it, there is recorded successful voluntary removals. From since that time when the unit was dismantled last year, there has not been any recorded successful removals neither rehabilitation.

Mr. Chairman: Are you recommending that the IAU was formed to undertake the street dweller

initiative aimed at encouraging persons to utilize facilities of the State and to cease living on the streets.

Mrs. Newallo-Hosein: Well I would not use the words "cease living", but to take the opportunity to be relocated. But also, they work with the other agencies which was key, you know, because when you spoke to the Ministry at the time they had no relationship. They spoke about, well that is the Ministry of Health, if you remember, well that is really the police, whereas the IAU unit had employed with them Special Reserve Police. So you did not have to go and call Ministry of National Security asking to provide anyone.

Mr. Chairman: So I need to see the amendment to the Minute then. The IAU was formed to undertake the street dwellers initiative which was aimed at encouraging persons to seek alternative accommodations or aimed at encouraging persons to do what?

Mrs. Newallo-Hosein: To be relocated to the various CSDP centres.

Mr. Chairman: To be relocated and rehabilitated.

Mrs. Newallo-Hosein: Yes.

Mr. Chairman: Yeah, I think that captures it. The IAU was formed to undertake the street dwellers initiative aimed at encouraging persons to be relocated and rehabilitated. However the unit was discontinued. And I think that captures what it is.

Mrs. Newallo-Hosein: And also you have to include where they work with the other Ministries, the other agencies.

Mr. Chairman: Okay, but do we need to do that, because the IAU, de facto, work with other agencies. Do we need to spell that out again? It is an inter-agency. So by definition it works with other agencies. I do not think we need to spell out that but we need to know what the function was. It was aimed at encouraging persons to be relocated and rehabilitated. Or we could add, to satisfy, if we need to put it for the record, the IAU which was comprised of—

Mrs. Newallo-Hosein: Well they were not comprised of.

Mr. Chairman:—of the police, the social work department of the Ministry and who else?

Mrs. Newallo-Hosein: Ministry of Health.

Mr. Chairman: And the Ministry of Health.

Mr. Forde: But, Mr. Chairman, again, in terms of—we are going into, we are identifying the scenario, right, and we want to spell it out at the same time and I am sure whether the unit was disbanded or not, when the opportune time comes to go to deal with the issue, the necessary

agencies and other departments will be contacted, whether Ministry of Health, whether the police, whether St. Ann's as the case may be. Because I doubt the unit will go out on its own in order to deal with street dwellers unless they are well prepared, unless they are, if they have to have whatever artillery that they need to have. So whether it was disbanded or not I think definitely once it is happening from a social point of view—

Mr. Chairman: There is enough institutional knowledge—

Mr. Forde: Even the Port of Spain City Corporation I know sometimes gets involved because you have seen it on the news where the Port of Spain City Corporation has been trying to deal with it. So let us just decide what we are putting in and move on.

Mr. Chairman: Okay. MP are you okay with the fact that we simply say it was aimed at encouraging persons to be relocated and rehabilitated?

Mrs. Newallo-Hosein: Absolutely.

Mr. Forde: But that is what was said.

Mr. Chairman: It should be in the Minutes.

Mr. Forde: I cannot go and say now that she did not say that. It is in the verbatim. I am just saying—

Mr. Chairman: So all we are saying is that the IAU was formed to undertake the street dwellers initiative aimed at encouraging persons to be relocated and rehabilitated just for clarity and to ensure that there is precision in the language. However, the unit was discontinued, and that seems to be in order.

Okay, there being no further—maybe I am being presumptuous, are there any further adjustments or amendments to the Minutes? There being no further amendments can I have a member move that the Minutes be accepted.

[*Moved by Mrs. Newallo-Hosein*]

[*Seconded by Brig. Gen. Antoine*]

We move now to Matters Arising. Before I move to Matters Arising I want to propose, pursuant to today's enquiry whether colleagues in the Committee would be amenable to a second hearing to conclude, if necessary, during the last week of June; the last Wednesday in June—I think that is around maybe Wednesday 27th. I was advised by the Secretariat that we could have our meeting in the first week of July but I do not wish to push everything for that first week. I do not know what will happen if Parliament will go on a break.

Mr. Forde: If I may say, Mr. Chairman, we going double parliamentary session. We are starting back session next Friday with regard to Private Members' Day, which is, again, we do not want to say we are not having Private Members' Day. So Private Members' Day and then after that we are going back to back, twice per week in order, between now and the end of the session. I do not want to identify to be presumptuous in terms of identifying what Bill we are coming, but our sessions will be starting from 10.

Mr. Chairman: Could I recommend to colleagues then that we make tentative plans because the Secretariat will have to put things in place if our second hearing on the subject at hand is to be completed in two weeks. They will have to put things in place. So could they make tentative plans for Wednesday the 27th and if, in fact, the House, either Chamber is meeting on Wednesday, we can readjust to July the 4th. So that once—

Mr. Forde: Session is supposed to close the first week in—

Mr. Chairman: Friday, July, I think, the 7th. I think Friday July the 7th.

Hon. Member: The 6th.

Mr. Forde: That would be tentative in terms of having additional technocrats?

Mr. Chairman: Yes. Additional—

Mr. Ogilvie: Not technocrats, it would be stakeholders.

Mr. Chairman: Stakeholders.

Mr. Forde: Individuals coming to give us information.

Mr. Chairman: You see, my view is if we are able to have one more hearing I am reasonably sure we would be able then to collate all the evidence that is necessary at this stage. So that we could have the report prepared and after this last meeting for this current Third Session I am hoping that we would be able to review the reports which are in the pipeline. I was advised by the Secretariat that there is a big report on mental health that they are almost three-quarter complete with and I am hoping then that come July and August the Secretariat will have the time to complete all the reports outstanding on the hearings conducted thus far including the one on alternative medications.

Mr. Forde: So tell me something, Mr. Chairman, again for guideline through the Secretariat, it is during our break, our vacation break, the Secretariat will be in a position to collate and put together all these—it is not to say that they have to get it in time for July 4th.

Mr. Chairman: No, no. In fact, what I am hoping is this. Once we go on break and the

Secretariat, of course, is still conducting its own work, we have reports, incomplete reports, that since there are no hearings to plan in July and August for, we would be able to get the reports circulated to us as soon as they finish in draft form, all members will then have sight of the reports and they will be able to report to the Secretariat in a timely fashion so that by the end of August the reports which are in the pipeline should be finished. We may have a meeting when we return in September, we have a couple weeks in September before the Third Session prorogues and we may have one last meeting just to go through all the reports to ensure that we are good with them and then we can have them—

Mr. Forde: Just for the record, what reports we have in the system?

Mr. Chairman: Could I get the advice from the Secretariat on the reports? I know mental health is due. Which other report is due? [*Chairman confers with Secretary*]

Mr. Ogilvie: The TT card, the food card.

Mr. Chairman: The Food Card initiative. I think we have about four.

Mr. Forde: But, Mr. Chairman, let us ensure rather than we leave with a lot of these reports in limbo, I would like us to know that we can finish off what we have in the system, fireworks. What is the status with fireworks?

Mr. Ogilvie: It has been tabled.

Mr. Chairman: Tabled.

Mr. Forde: So we finished off that already. So we have the food card, mental health—

Mr. Ogilvie: Contract employment and follow-up reports on the food card, that is optional.

Mr. Chairman: I would just need the guidance of the Secretariat. Secretariat, given the work, you alone know the work involved, including the one before us. Do you think that in July and August you will be able to do the needful so that come the first week in September, when we resume, that we could have sight of the finalized report and we just have a meeting to approve the reports or maybe make amendments to the recommendations. Is that a target that is reasonable?

Mr. Ogilvie: I suspect that save for the report maybe on contract employment we should be able to deliver the other report barring members of the team, procedural leave and so on.

Mr. Chairman: Ideally I would want to have all hearings conducted by me done, completed by—

Mr. Ogilvie: July the 4th.

Mr. Chairman: Yes. So we could review. But if it is that they are not done by that time I am hoping that July and August will give us enough time and we communicate via email as we have done in this Committee. We send the drafts as soon as they are done so that we have sight of them and we can give you the feedback. We follow the standard procedure. As you know in this Committee we do not meet unnecessarily. We meet when it is absolutely necessary.

Mr. Forde: But no, my point, Mr. Chairman, right, we are going into this alternative medicine that we want to take and I do not want it to come across that you know, from your point of view, as the Chairman, and again, the Chairman would guide the Committee as we go along, but then each of us have our own individual thoughts, in that we want to come 13th of June, something as important as this, which again can take—yes, we are only preparing a report, whatever happens to the report in the end, we cannot say. But the thing about it is, I want us to ensure that we make sure that we get added information, we have enough time in order to study it before we can put our signatures toward whatever it is because we are talking alternative which includes—everything had been listed in the particular draft. So I do not want us to come across as "we rushing" in order to ensure. I want to ensure that we are timely—

Mr. Chairman: But MP, could I intervene? We are not rushing. What, in fact, we are rearranging our timeline and from my experience in the Committee, we normally find that two hearings on a subject usually are adequate, but then as you know the Committee has the process of follow-ups subsequent to the initial reports. So there is nothing preventing as subsequent Committee undertaking a follow-up enquiry with respect to an initial enquiry that was done. And so I think it is important for us to undertake this investigation, complete it, take the evidence and file our report so that we have some document to work with for the future. In the Fourth Session and the Fifth Session, the Committee may decide to revisit the issue, there is nothing preventing the Committee from revisiting, as in fact, we did revisit school violence.

And so I—I am being harassed by the Secretariat with respect to—[*Crosstalk*] the Secretariat is kind of like telling me I cannot talk to my members. [*Laughter*] So MP Forde, I understand fully well your caution, so it is in this context I am saying let us aim for a second hearing on this topic which I am sure will generate a lot of interest, and once we are completed with today's enquiry we will make the necessary determination. Sometimes these hearings take on a life of their own in that you find that you have opened a Pandora's Box and so many other issues are arising. It is left, of course, up to the Committee to make a decision as to when to

truncate and when to revisit, because we do have a number of matters on this that you would want to treat with.

Mr. Forde: Just remember the two words you just used, eh.

Mr. Chairman: What is that?

Mr. Forde: Truncate.

Mr. Chairman: Yes, yes, at some time the Committee has to make a decision that we have taken enough evidence and given our priority we need to just look at what we have collated so far and move on to this second subject, given that the Committee has a tradition of always revisiting. In fact, I would recommend that in the Fourth Session you see this fireworks issue we need to get the Regulations from the Ministry of National Security circulated and prepared because I am being called regularly by the vested interest groups, when are we going to get the Regulations accompanying fireworks.

So that, MP Forde, I know that you are passionate about this one as well, so that to put closure on this matter, we, as far as it is practicable, I think we should aim to conclude our business by the end of the first week of July as Parliament is concluding its business before it goes on break, and we should aim for one last meeting during the first two weeks of September before Parliament is prorogued. And in that way we would conclude without leaving anything in the pipeline, we would conclude a lot of our work and I will be able to pass on the Committee to a chairman free of encumbrances, the encumbrance being, that Committee members can always revisit, but then of course you would have new matters before you.

This morning's hearing is interesting. I am sure it will generate a lot of interest because we are investigating a matter which has always been part of the Trinidad and Tobago cultural landscape for a long time and we have not had the benefit in Trinidad and Tobago of getting objective views on a number of the issues that are of interest to the Committee. We have practitioners here of homeopathic medicines. They are collecting money and so on. Is it that this ought to be regulated? We need to find—this is preliminary, we have had practitioners of acupuncture. We have had practitioners of Ayurvedic medicine. We have these individuals who are offering health care services.

I think we need to find out what are the views, if any, of the medical professions, because I know in some jurisdictions when someone is obtaining acupuncture treatment, it is covered by the national insurance health plan. I do not know what the views are of the medical practitioners.

We need to inform policy, Government's policy, the policy of the Opposition, the policy of anyone vying for office, on what should be their position, if any, on this matter. So that we have the stakeholders who are going to appear before us. We have a range now, of over-the-counter items, both healing and non-healing which are sold. The question is, are we ensuring that there are standards that are adhered to? If a company says it is supplying a particular vitamin, are we sure that vitamin is what it says it is? Are they prescribed by doctors or do you rely on the judgment of the pharmacist alone to guide you on the use of these items that you do not need a prescription for?

We also have supplements which are recommended by doctors, not prescribed, they are recommended, and I know for a fact if someone has a cholesterol problem and you experience side effects of muscle pain, many doctors recommend that you take a CoQ10. Do we have doctors in the panel today?

Hon. Member: But of course.

Mr. Chairman: Right, very well. I would want to find out, under what conditions are you recommending this particular and do you accept the dosages and so on, on this particular item? We have in Trinidad too, a lot of research going on by the medical faculty on items which were traditionally used. We have the list of research, I hope that you all have seen the list circulated by the scientists.

[*Secretary confers with Chairman*]

But we do have medical doctors in the Ministry of Health. Very well.

We have representatives from the Faculty of Science and Technology. Surprisingly—I was very surprised when I saw the technical papers that they produced on items. I am curious, I do not know if Members are as curious as I am with respect to—so how do you go about identifying an item that may have medicinal qualities? Is it that you take traditional information with things like carailli for diabetes, the turmeric for inflammation, and you research that and having had your research output published in technical journals, what then? Are you doing to try to see if you could patent these findings in the form of pharmaceutical drugs? Is there any role then for the Government, having seen your research being published by international journals, to work with you to manufacture pharmaceuticals and to get patents for them? And I think that is an area in which Trinidad and Tobago should be looking at carefully because we let a lot of these initiatives go by. Take for example, the use of neem leaves; it is not medical, but in agriculture,

neem is used as organic pesticides. I do not see why—I am sure our research at the Faculty of Agriculture would have done some work on that. I understand if you put neem around your plants bachacs do not go there. That is organic as opposed to chemical. How do you go about identifying? Do you have a list of plants? There are certain things in Trinidad, like, one called "datura". I do not know what the biological name is, but it does have some hallucinogenic properties. So it is medicine? Right. [*Secretary confers with the Chairman*]

Very well. Excellent, so there is the issue of medicinal cannabis. It is now prescribed in North American jurisdictions and in Europe. Can you prescribe it? The answer is, yes. The problem is with respect to the pharmacies, the pharmacy cannot store it. So, if it is that there is a child with epilepsy and this child, it is recommended by her colleagues—oh, you have to leave? Thank you very much for your presence, colleague, you will be missed at the hearing, at the public hearing so—

Mrs. Newallo-Hosein: I asked for permission from earlier.

[*Mrs. Newallo-Hosein leaves the committee room*]

Mr. Sinanan: Chair, this is just advice from others. I know we normally use two sessions on average. Because in most of this areas that we would have gone into, you would have had a lot of research already done, you would have had professional who could do it. This area that we are going into is not as simple as it seems. It is a whole new field with little or no information. So you really feel that two sessions you could do a report?

Mr. Chairman: No, no. We would play it by ear. We would play it by ear.

Mr. Sinanan: The reason why I telling you that, is that MP Forde would have said earlier about trying to get some of the work done to ensure that we close off whatever we have open. Because this is a field that is everybody have their own opinion without any scientific information in order to do a proper report. You just called two items, "datura". I mean everybody know that "datura" is bush rum. Some people refer to it as bush rum, but there are so many things that we talk about that we know it is good, traditionally, but nobody "doh" even know what is the dosage and you cannot expect pharmacies and so to prescribe if nobody could measure dosage. Because no set of research was ever done and my scare is that people, there are certain people who want to push things like this, some people who make a living from things like this, and their opinion could dictate the report, the contents of the report, without actually going out there. Because if we have to do a report I think we need to get people who would have had good experience, bad

experience. So it might have to be just not calling in these professionals so that everybody who have an interest that actually getting out further and understanding, because a lot of people have been damaged with these things—

Mr. Chairman: Exactly, because if you do not know the dose that something—[*Interruption*] You do need—but you see, in all of our enquiries we do have closure at some point with the follow-ups. So that is how we have proceeded in the past. In all the areas whenever there is a need to look at the matter again, to relook at it, there is a phase one, because the issues are never going to be fully completed. Take the case of mental health. Mental health was a very long involve—but we had to come to closure at some time, but because of the work that was done and the report issued, the report itself generated the opportunity for further enquiry, because the report indicated that there are some things we need to do now, but there are other things that we need another report for.

10:15 a.m.

So that in that context, the Committee will make a decision as to what point, when to truncate. Do we have enough to provide a full report and we deliberate at that time what should be the objectives of the second follow-up enquiry? And in that way it continues and there is—no issue is ever closed in social services.

Mr. Sinanan: I just want to caution—

Mr. Chairman: Very well.

Mr. Sinanan: This one, I would not want us to even think we could do this in two sessions.

Mr. Chairman: But let us see exactly what we could do and we could subdivide at some point in time. I think you are right. You may want to get people who are not bona fide professionals. Right now we are dealing with the bona fide professionals, people who are certificated, the Pharmacy Board, the Medical Board, the Registered MB/BS. We are getting those people. At some time you might want to get people who call themselves alternative practitioners and that might be another enquiry, because at some time—

Ms. West: And then we may have to look at the legal limitations.

Mr. Chairman: We have people who practise acupuncture, people who practise a type of medication called, I think it is Ayurvedic; there is the homeopathic. These are people, I do not know if they have the qualifications, the training. Or do you just put a shingle out and say: "I am one of those?"

Ms. West: Which is one of the things we have to look into. So it is a broad topic.

Mr. Chairman: It is a broad area. Right now we are looking at the professionals, the people who are bona fide, certified and who have done research, and who the country says, "You are authorized to speak on this." We want to hear their views. But I take it, there are people out there—

Mr. Sinanan: Trinidad is the first place in the world that have a cure for AIDS, and we actually advertise on the radio that they have cure for everything, and I am wondering well, if we so good with that, how come America "eh" have it yet.

Mr. Forde: And we could enquire from them today what they are doing about those people, because we have the relevant department.

Mr. Chairman: Exactly.

Mr. Forde: When those people do those things—Mr. Sayers—do they go and check Mr. Sayers to find out what he putting in those things?

Mr. Chairman: We are going to speak to the professionals. I want to get the professional view, and I will tell you why I want to get the professional view too. When a woman is menopausal and she experiences the problem of hot flashes, I know for a fact that established gynaecologists, obstetricians, will prescribe an over-the-counter medication called Black Cohosh. It is not a prescription; it is a recommendation, which, if you do not use it—and this is from a registered—I mean, one of the well-established ones.

I want to know how come it came to you, as a medical doctor that this is what you should recommend to a patient. When a patient has the back pains associated with Statins, the Lipitor and so on, and that is a big problem in Trinidad—you must take CoQ10. If you do not take that—not that it will work for everybody, but if you do not take that, it becomes unbearable. So that there is a scope for the over-the-counter. The question is, where does that knowledge reside? Is it in the medical community? Is it in the pharmacy board? Are the pharmacists required to know about everything that he sells, in terms of Saw Palmetto for cancer of the prostate, for depression, St. John's Wort? Does the pharmacist have the requisite knowledge? My questions to the pharmacy board—and I glad they are here—is: Are you expecting that all registered pharmacists know exactly what these supplements are, and can do? So that we need to look at the registered pharmacists to find out what kind of training they offer their staff as well, to recommend to people for the use of these non-prescription medications.

And one last point, and I know we have 10 more minutes. But I slept once in the Parliament and the unfortunate thing about that was that, in the Opposition, Faris Al-Rawi was speaking and I am right behind him, and in two minutes I fell asleep and that came on camera and it was circulated. How did that happen? That was around 11 o'clock in the night. It is true I was tired, but I made the error of having a cup of chamomile tea half hour before. I was not aware that chamomile can put you to sleep. I was not aware.

Mr. Forde: You have to drink peppermint in the night. Chamomile is for sleep.

Mr. Chairman: I had this chamomile and Sen. Al-Rawi at that time is pounding away, and I am sleeping and snoring away. I felt very much ashamed. I was not aware that that has the effect.

Mr. Forde: For you to sleep on Faris, things had to be bad, "yuh know".

Mr. Chairman: That is my point. Things were bad. My point is, if you fall asleep with Sen. Faris Al-Rawi in Opposition—Sen. Al-Rawi as AG is different, but in Opposition—you have to be in deep sleep. So we have a lot to discuss and I am sure we will, as Sen. Sinanan indicated, generate a lot of interest.

Mr. Sinanan: This will have a lot of discussion especially with this whole—you could use whatever terminology you want, it comes down to if you want to legalize marijuana, and that now opens up a whole set of—you really do not want to have a report without actually getting people to ventilate.

Mr. Chairman: And since we are dealing with medicines, there is a huge division between recreational and medicinal and this has been recognized in Europe since the year 2000.

Mr. Sinanan: But it took them decades before, and for us to come and generate a report in two weeks, or three weeks—

Mr. Chairman: But, Senator, you see, you have to understand one thing. Trinidad and Tobago operates in a global environment now. We are no longer a country that is an island onto itself. We do need to always subscribe to international best practice. I mean, I have gone on a limb on a number of issues in the social sector in which people dispute. But once you are internationally, and once your medical practitioners are always in continuous contact with their colleagues abroad via email, communication, seminars, and treatments which are readily available abroad should, in my mind, not be denied, especially if it will improve the health status of the population.

Mr. Sinanan: I agree with that but, you see, we have also a social system here. Take, for

instance, LGBT or how you call it, it is accepted all over Europe but that does not mean that we could just impose that in our society, because you see what is happening with the religious—

Mr. Chairman: But, Senator, it does not mean that we cannot talk about it.

Mr. Sinanan: No, we can talk. I am just putting—

Mr. Chairman: And in any event, decisions are going to have to be made by the Government. Our job is to take evidence, get the facts before us, make recommendations, and the Cabinet, headed by the Prime Minister, will make the necessary decision.

Ms. West: And the important thing, to jump in here, is that we have proper evidence. I do not know how much of that is currently available. Have we looked into the success of these practices outside of Trinidad and Tobago, that kind of thing? And I would also like to caution that in this crunch period where we are going to have a lot of back-to-back sessions, that the Committee gets the time to read the material that would be sent to us.

Mr. Chairman: Excellent. Very good. Now it is 10.23. I was advised that in the enquiry proposal that there are some possible questions that were posed and these questions are for the consideration of members. So we will take a few minutes to look at what the possible questions are, on page 25 of that which was generated, the draft enquiry proposal, and we will just decide. As usual, we simply allow members who are invited, of the panel, to inform us, objectively and impartially, on what their views are with respect to the practice that is in Trinidad and Tobago, of alternative medicines.

So we suspend now and will proceed at 10.30 to the meeting room which I understand is just across from here. And this is recorded?

Mr. Ogilvie : Yes, this is recorded and broadcast subsequently.

10.26 a.m.: *Meeting suspended.*

10.30 a.m.: *Meeting resumed.*

MINISTRY OF HEALTH

Mr. Richard Madray	Permanent Secretary
Mr. Brian Armour	Chief Medical Officer Ag.
Mr. Farz Khan	Director, Chemistry, Food and Drugs Division
Ms. Jennifer Rodriguez	Manager, Pharmacy Services
Ms. Asante Charles-Le Blanc	Member, Herbal Sub-Committee, Minister of Health.

FACULTY MEDICAL SCIENCES

Professor Terence Seemungal	Dean, Faculty of Medical Sciences, UWI
Professor Yuri Clement	Professor of Pharmacology, Department of Para-Clinical Sciences
Dr. Gabriel Brown	Lecturer (Avian Medicine), School of Veterinary Medicine
Mrs. Valerie Sealey-Tobias	Assistant Lecturer, UWI School of Nursing
Dr. Sandeep Maharaj	Lecturer in Pharmacy

FACULTY OF SCIENCE & TECHNOLOGY

Dr. Nigel Jalsa	Lecturer, Chemistry and Biochemistry
Prof. Jayaraj Jayaraman	Professor, Biotechnology and Plant Microbiology
Mrs. Yasmin Baksh-Comeau	Curator, National Herbarium

PHARMACEUTICAL BOARD OF TRINIDAD AND TOBAGO

Mr. Andrew Rahaman	President of the Council, Pharmaceutical Board of Trinidad and Tobago

Mr. Chairman: Good morning, everyone. Welcome to this the 24th meeting of the Joint Select Committee on Social Services and Public Administration. I would like to welcome this morning all of our viewers and listeners on the various Parliament social media platforms: Facebook, Twitter, ttparliament.org, the Parliament's YouTube channel, Parlview, our various media fora. I welcome everyone and I invite them to send in whatever questions they may have to the Secretariat during the course of the hearing this morning.

I would like to welcome our representatives before us. But before I do that, I would like to indicate to everyone assembled this morning that this is our Committee's first public hearing pursuant to our enquiry into the potential benefits of non-traditional medications in the treatment of non-communicable diseases in Trinidad and Tobago. This is a very broad subject. We would seek to narrow the focus as we proceed, and we will be posing the questions that are relevant at this time with the understanding that we will have to continue the taking of evidence in subsequent hearings.

At this point in time, I would like to ask the members of the panel and the representatives who are here with us this morning to introduce themselves, briefly. And may I start with the Ministry of Health?

Introductions made.

Mr. Chairman: At this point in time I would like to invite members of the Committee to introduce themselves before I ask the representatives of each of the organizations here this morning to offer us brief opening remarks—brief one minute, maximum two minutes, opening remarks and then we proceed with the full enquiry.

Introductions made.

Mr. Chairman: Before I ask representatives to offer us brief opening remarks, may I remind all stakeholders about the objectives of our enquiry. The first objective: to determine the views of medical professionals. And by medical professionals I mean all individuals, whether they are registered with the medical board or not. Once you are researching in the field of medicine I will consider you a relevant professional.

1. To determine the views of medical professionals on the potential benefits of non-traditional form of treatment, such as acupuncture and Ayurvedic treatments in the treatment on non-communicable diseases.
2. To determine whether research has been conducted by the Faculty of Medical Sciences—and may I add other areas in Trinidad and Tobago, UWI—on the benefits of non-traditional medication on items such as aloes, orange-peel, ginger, tumeric, green paw paw, et cetera, things which have traditionally been used in Trinidad and Tobago and not necessarily prescribed by medical professionals.
3. To determine whether over-the-counter items, such as Omega 3, CoQ10, Black Cohosh, St. John's Wort, et cetera, are recommended by registered medical practitioners and under what circumstances.
4. To determine whether homeopathic treatments are used by established doctors and whether persons offering such treatments should be registered by the Medical Board of Trinidad and Tobago.
5. To determine whether organic medications based on bacteria, enzymes and plants can contribute to improving the health status of the population; and
6. To examine existing and possible arrangements for regulating the use of alternative medical treatments in Trinidad and Tobago.

The objectives are very wide. The objectives are very broad. This is fully understood by the Committee. Our purpose this morning would be to really get to the truth in this broad area and to

chart the way forward so that ultimately the health status of the people of Trinidad and Tobago can be protected and can be promoted. And we have come to this enquiry because we need to find the truth with respect to current information that is held by the registered practitioners in Trinidad and Tobago.

So I would ask, at this point, for brief opening remarks from the representatives of the various organizations. And may I start with the Permanent Secretary, Mr. Madray, to address us briefly on this subject?

Mr. Madray: Good morning again. In line with what you have just indicated, this forum serves as a great opportunity to review, assess, address the limitations of, and where possible, gain consensus on our policies and strategies with respect to non-traditional medications. I therefore look forward to the discussions that we are about to have and to recommendations on the way forward. Thank you.

Mr. Chairman: Thank you very much, Mr. Madray. May I ask for Prof. Terence Seemungal, Dean, Faculty of Medical Sciences, UWI, to address us briefly?

Prof. Seemungal: Thank you, Chairman. I think that this investigation or review is very timely and we do need to look more seriously at the alternatives available to the people of Trinidad and Tobago and to regulate it in some way. So I think this is a very good idea. Thank you very much.

Mr. Chairman: Thank you very much, Prof. Seemungal. Prof. Jayaraman?

Prof. Jayaraman: Thank you, Chairman. Just to concur with the views of Dean Seemungal, because it is high time to open up discussion about this, because the public wants to know what exactly can be used and what can be sold outside and what can be bought. And we, as researchers attached to the University of the West Indies, are doing plenty of basic research along with the medical sciences. So we have some data. So the opening of this will give a clear idea about the situation here. And also we have plenty of natural resources—plants—here, and once we start exploring them it will provide some import substitution and also open up some industries. So that there is a lot of potential and this is a very timely discussion, and I appreciate this.

Mr. Chairman: Thank you very much, Prof. Jayaraman. And now may I ask Mr. Andrew Rahaman, the President of the Pharmaceutical Board to address us briefly?

Mr. Rahaman: So we, in our profession, also appreciate the work that will be put into this Committee. While there are some benefits to these products, at this point in Trinidad, I am of the

opinion, and the profession is of the opinion, that it is doing more harm than good at this point because of the absence of regulations. So we really need some form of regulation because of the harm that is being done at this point.

Mr. Chairman: Thank you very much, Mr. Rahaman. As Chair, I will pose a couple of early questions and then I will open the discussion to colleagues. And I want to address, first of all, questions to both Prof. Seemungal and Prof. Jayaraman. First, Prof. Seemungal and then followed by Prof. Jayaraman, the question is: Could you briefly indicate what have been your definitive findings so far as published in the established journals with respect to the research that you and your colleagues have done at the Faculty of Medical Sciences? And the second follow-up question is: How did you go about selecting the items for review and research that resulted in these published papers? So Prof. Seemungal.

Prof. Seemungal: Thank you, Chairman. I think I could classify the types of work being done into three areas: One is descriptive pharmacology in which we are looking at what is actually in use in the population. The other one is basic science research in which they are looking at the role of the chemicals and isolating some of them from plants; in some cases, marine organisms. And the third one is experiments using animal models. And I have got experts in the three areas here with me so I will ask—and with regard to selection, I think the people who do it are perhaps the best people to answer that, so I will call on Prof. Clement, and then on Dr. Maharaj from the pharmacy school to explain.

Prof. Clement: Thank you, Mr. Chair and members. My area mostly is in the survey of medicinal plants use in Trinidad and I have done quite a number of studies in different conditions, such as asthma, cancer, hypertension, high blood pressure, diabetes. We also did a national survey a few years ago where we looked at the use of plants in about 50 rural villages and we were able to describe what individuals use on an individual basis. And from that we were able to list a number of plants there were commonly used, and also to determine their perception of the effectiveness of these remedies. So from that perspective we were able to capture a lot of information, a lot of knowledge, folkloric knowledge, about herbal use and how people perceive it.

We also did a study with doctors and their knowledge and perception of herbs and what we found was that they accepted it but it was not the local herbs, it was more the imported herbs. And the reason for that was that there was more evidence for those plants, such as, say St. John's

Wort or Echinacea, or sulphur menthol as opposed to local herbs such as Bois Cano and plants that we find locally.

So there is a gap, we saw, in the medical profession between the acceptance and their knowledge about local herbs. We did a survey, as I said, recently, and people in the villages, they found many plants—about 100 of them—that they use for conditions such as fever, things like cooling, things like diarrhoea and vomiting. But that information is by survey and the perception that people have of these herbs. We do not have information basically on whether they really work, using trials, which is normally the gold standard for determining whether something works or not. So for the locals, we do not have that information and therefore people use it because of tradition and folklore, not so much because of the evidence.

Mr. Chairman: I am looking at the economics of it now, Prof. Clement. Have you been able to identify, in Trinidad and Tobago, maybe a couple of these herbs with the desired outcomes from your research, which, if we can commercialize, can result in something that could be a valuable over-the-counter medication sold internationally? You mentioned St. John's Wort. I know that. There are other things that are over-the-counter. But could you identify from your research of the 100 plants that you mentioned, maybe one or two of them in which there is such potential that with further research we may end up with a very good product for international marketability?

Prof. Clement: I will just answer shortly, but I will want to refer to Dr. Sandeep Maharaj for this. But I can mention that things like aloe vera is something that is very commonly used, but it is something that is used all over the world, so I do not think that we have any unique benefit from having something like aloe vera because it is used over. So I will refer to Dr. Maharaj to answer that.

Mr. Chairman: Very well. Dr. Maharaj?

Dr. Maharaj: Yes, good morning to the Chair and the Committee. Just to let you know, what we do, whenever we try to isolate and utilize a herb—

Mr. Chairman: Could you please activate the microphone?

Dr. Maharaj: Yes, good morning to the Chair and Committee. I am sorry. I will repeat myself. Whenever we try to isolate or utilize a herb for study, one of the very first things we look at is the potential of cost-effective method of treatment that potentially we will offer to the population. So it is not only that we look at the chemical efficacy and potency of it, but we also try to isolate to see if it is cost effective. And one of the challenges that we have recognized in

the research that we have done is that scalability and land mass to grow, cultivate and actually get these herbs into a potent form to be used in a very scientific method for treatment, sometimes can be proved as a challenge.

And we have recently, sort of, diversified research because we have one-quarter land mass—I am talking about the world now—but there is three-quarters ocean, and that is why we have started looking at marine sponges because of the ability to populate and grow because you are surrounded significantly by water, is a bit easier. And hence, we are looking at the potential there, of getting potential medical effects from the marine sponges and things that can be grown on the sea, because we recognize the challenges of scalability given your land size and mass.

Mr. Chairman: But have you been able to identify any plant or marine species of Trinidad and Tobago which offer, at this stage, such promise that it warrants further research? Because scalability notwithstanding, it can result in products which can compete internationally? With respect of over-the-counter I am talking about.

Dr. Maharaj: Definitely, Chairman. One of them you guys may very well know is "zebapique". It is used in Trinidad and Tobago and the scientific name is Neurolaena lobata. And "zebapique" we have found—and it has been utilized very well, and they have found it to have very effective wound-healing properties. And it is in the paper there that we have submitted to the Committee explaining it is 87 per cent effective, while traditional treatments, such as the antibiotics that are currently being used, are about 83 per cent effective. So, I mean, there is potential. It is for us to move it forward to the next stage.

Mr. Chairman: Very well. That means that there should be some collaboration, perhaps with the Ministry of Agriculture, Land and Fisheries, if it is a plant that can be cultivated. Is this information—the research that you do and that is published, is it available to the wider population? Or is it purely kept within the medical community?

Dr. Maharaj: It is available now in this age of technology. It is available to the entire public. It is on Google School, UPMed, any one of the databases.

Mr. Chairman: Very well. Thank you very much.

Ms. West: Chairman, a quick follow-up. Between the comments from Dr. Maharaj and Dr. Clement I am uncertain as to whether we are talking anecdotal, perception or we are talking science. I just want some clarity on that, please.

Dr. Maharaj: So in the case of "zebapique", Neurolaena Lobata, first the product was identified

by our good friends at the herbarium to verify that that is the genus, the species that we are using. I am giving the science behind it. We then phytochemically analyzed it to make sure that the types of chemicals that are required for wound-healing can be found in it. And then after we did animal model studies, in this case rats, whereby we utilized the rat model for wound-healing to make sure—and we compared the traditional, which we will consider the control; if you do nothing, if you just leave the rat there and the wound on its own, as well as if you actually utilize the product developed.

And in this regard we then checked to see the protein levels in the wound, to see the length of the wound and see how well it is healing, and we also checked to see the granulation through pathology, and from that we could clearly state it was 87 per cent effective in a 13-day period, while the traditional antibiotic used was 83 per cent effective, while the normal—if I just leave the wound alone—78 per cent was effective in the wound being healed.

Mr. Chairman: And were these results published in an international journal?

Dr. Maharaj: We published in international journals—

Mr. Chairman: Very well. Peer reviewed?

Dr. Maharaj: Ten citations already utilized elsewhere.

Mr. Chairman: Thank you very much. MP Ancil Antoine would like to come in.

Brig. Gen. Antoine: Are you aware that "zebapique" is used in the different forms in Trinidad and Tobago in terms of the common cold? And was any research done in that area? I was not aware of it dealing with wounds, but as a cure for the common cold.

Prof. Clement: Mr.Chair and member Ancil Antoine, if I could respond to both questions from member West and Antoine. In terms of the level of evidence, there are different stages of evidence and the gold standard for evidence is studies in humans. So although there are studies done in animals and in cells, that is not the ultimate evidence that we would require. That is the difference between herbs in Europe and North America as opposed to herbs in the Caribbean, in that, in those places they have a lot of studies and a lot of evidence done on work in humans.

So they conduct clinical trials and they were able to show from these compounds or these preparations, most of them standardized, where they know what the active compound is and how much of that active compound is in the preparation in humans, and they were able to have a definitive statement to say this extract works for this condition. In the Caribbean we do not have that sort of evidence. So though we have evidence from animal studies, we cannot always

extrapolate that evidence into human because it does not always work that way. Also, there arealso issues of safety. In an animal we are not able to determine whether, if you put it in a human, if it is also safe in the same concentration or the same dose.

Answering the question from member Antoine, the plants are used for many different conditions. So it might be used for wound-healing; it might be used for cough and cold; it might be used for fever. And we have found that in our survey that we did a few years ago that we have the same plant being used for multiple conditions, and therefore, we have to be careful what we say what the plant is being used for. Even in Trinidad, the plant may be used for one condition, but in Barbados, or Guadeloupe, or Martinique it may be used for something totally different.

So therefore, we have to be careful of that and also be careful of the name, because there is a scientific name and there is a common name. So in Trinidad we might have a common name, which is not found in another part of the world, not found in Barbados or Jamaica. But we have to be careful what we use in terms when we publish, the scientific name, because that name is the name that is common all over, but the common name might be different in different places.

Mr. Chairman: One follow-up from the Chair before I move to Prof. Jayaraman, because I do want to get Prof. Jayaraman into the—and the PS will come in. But has any researcher, to your knowledge at the UWI or anywhere in Trinidad and Tobago, been approached by a major pharmaceutical company, Novartis, Merck, Pfizer, with respect to some of the research you have done so that they could assist with the clinical trials and testing? Have we reached that stage?

Prof. Seemungal: Chair, not to my knowledge, but Ms. Comeau might be able to—

Mr. Chairman: Okay, Ms. Comeau?

Mrs. Baksh-Comeau: Chair, as Curator of the National Herbarium, I have been approached by pharmaceuticals abroad to actually collect material from Trinidad for them to send to their pharmaceutical labs for testing.

Mr. Chairman: What I am concerned about, looking at the interest of Trinidad and Tobago, is that I would like to have the research patented in Trinidad and Tobago and that we have the intellectual property that is associated with native plants. And that is another area of policy, because I do not wish for us to spend huge sums on research only to be utilized by entities abroad. We in Trinidad and Tobago should be able, in my mind, to market the promising products if, in fact, we can get to the stage of commercial applicability. But we will deal with that as the hearing proceeds.

It is good, Mrs. Comeau, to know that the foreign firms—I would imagine they are large pharmaceutical companies—are interested and looking at the kinds of—in the intellectual property we have with respect to plants in the herbarium in Trinidad and Tobago. So that will inform the deliberations of the committee. We have heard in the past of too much of our intellectual property going into the common domain and we have not been able to keep it for ourselves. So that I will be liaising with the university on how we may patent and secure our intellectual property with some of the research that we are doing. But, Prof. Jayaraman, we are not yet open, we are just preliminary. Prof. Jayaraman, you are also doing research.

Prof. Jayaraman: Yes.

Mr. Chairman: Could you indicate what have been the big successes that you have been able to secure which resulted in acceptance from the international community with respect to the matter at hand?

Prof. Jayaraman: Thank you, Mr. Chairman. We belong to basic sciences, the science and technology. We do basic research and we also support our colleagues and medical scientists. So we provide our support. So our focus is mainly on identification of the plants of potential particular value and also the seaweeds. We are also working on marine sponges lately. These are not just to, directly, you know, bring out a product that can be straight-away recommended for therapy, but understand the mechanism, what it is worth, and how it works.

l1.00 a.m.

So that is our area of specialization. Because just as simply suggesting something as a remedy is something happening for years, but we do not know exactly the scientific basis, the scientific mechanism. So our aim is to provide scientific evidence to whatever you recommend. So with the scientific evidence it becomes a real product at this point of time in the world because anything without scientific evidence or a basis has a very big selling point. So what we have been doing is about identification of plants and marine species that also include marine bacteria. We have plenty of candidates and many things we have not published.

I am coming to the point how to protect our resources and we are very careful about it, and characterization of the metabolites, the secondary metabolites, and the molecules, and my colleague Dr. Nigel Jalsa, is one of the experts—there are a few more people. I did not bring all of them, so he is here. So he can talk about it. And also, understanding that in vitro and in vivo activity that is in the lab to the test specimens, for example, a bacterium, a pathogenic bacterium,

or to the cell's lives—what is the activity? Whether it is toxic or nontoxic; whether it has a therapeutic value? So that has to be studied.

So these basic studies we do, and we are also trying to express certain therapeutic molecules in the plants. So whatever they synthesize outside by chemical derivatization or by synthetic chemistry, we can also do the same thing in the plants if you ask the plant to do it by minor modifications. So we are also doing this so that will have a tremendous potential in making maxims as well as other therapeutics molecules, and we are also doing some work on probiotics. We have identified several probiotic bacteria which have some kind of association with the existing living systems. So they may be found inside our body and also outside. Of course, we are eating them almost every day if you are eating vegetables.

Mr. Chairman: May I interject? The issue is, the research you are doing is simply voluminous, out of that research what definitively have you been able to find at this time which can be of interest to policy-makers to say that the research is so fundamental that we need to look at it to see to what extent it is going to improve the health status of Trinidad and Tobago and may even result in a merchantable product.

Prof. Jayaraman: Yes, some of them have reached to the stage of where it can be, given a kind of recommendation, but remember we are not supposed to do directly clinical trials. If we are supposed to do it, it is to happen only through our colleagues in the faculty of medical sciences. But we do some small animal module studies and a couple of our members have also done some kind of screening of the wild fruits as well as the local fruits, against the diabetes as well as some other non-communicable diseases.

Mr. Chairman: And Professor, is it that the research you have done so far has received acceptance from your peers internationally that they recognized that it has followed the methodology and the procedure, and that what you have found therefore can pass scientific muster?

Prof. Jayaraman: Yes. Part of them have been published. I do not have them right now in hand—

Mr. Chairman: That is okay.

Prof. Jayaraman:—but they have been published. They have been discussed in peer reviewed conferences, and some of them are published as student reports and a chunk of the stuff which we do not want to publish as our Chair pointed out, because the moment we found certain

[*Inaudible*] which has some potentially therapeutic molecules. You know it just went—the word went out and then I already got a call from people outside, what is [*Inaudible*], where is it available, can I have a sample? The same thing happened with some of our bacteria which I have identified, when we put a preliminary report we already got calls even from some of the companies.

Mr. Chairman: Thank you very much. You have pointed us—

Prof. Jayaraman: So we did not reveal. So we are working through our [*Inaudible*] for knowledge transfer and—

Mr. Chairman: Excellent. I need to stop, but I think you are raising a critical point with respect to what we have in Trinidad and Tobago as intellectual property in the herbarium. What we are developing from your research, I think we would need to look carefully at how, as a policy matter, we keep that so that having expended resources on it we can benefit as a country from the products which may develop. But, PS Madray wanted to make a point. PS Madray, you wanted to make a point?

Mr. Madray: Well, I think that the point I was going to make has been superseded by the contributions from others, but it was really along the lines of the importance of making sure that the scientific research supports a view and to note that what a therapeutic indicator at the first level of the research may not be supported by the phase two of the trial, or the phase three of the trial. So I think it is important that be understood by the layperson out there.

Mr. Chairman: Thank you very much, Mr. Madray. And now we have the floor with deep interest. So let me prioritize—

Mr. Forde: I will give way to the lady.

Mr. Chairman: No, no, no. I will allow the Vice Chairman—so the order is Vice Chairman, Sen. Ameen—any interest?—and then Sen. West.

Mr. Forde: I will be guided by the Chair. What we want to discuss today is basically non-traditional medication, to educate me and to also educate the listening public, what are considered non-traditional medication? Any member of the panel.

Prof. Seemungal: That is an extremely open question actually, but when you put it like that it is very difficult to define. But when you think—if you look at the training in medical school and how we train people on the use of drugs on medical interventions for which we say that there is evidence, these treatments and these practices are controlled by the medical council or the

medical board. Anything outside of that will be considered non-traditional or complementary.

Mr. Forde: So it is clear to say that once the medical doctor has not prescribed it, it is non-traditional? Is that fair enough to say?

Prof. Seemungal: That is a reasonable starting point because some doctors, as Prof Clement said, also use a non-traditional approach.

Mr. Forde: So the individual that is saying that he has the cure for AIDS, that is not a medical practitioner that is selling these various items at the side of the road, at the street corner, at his location. Is he or she operating legally or illegally in Trinidad and Tobago? The person who is saying, listen, I have the cure for AIDs, I have the cure for herpes, I have the cure for cancer as the case may be, how do we consider those individuals?

Prof. Seemungal: I could only give an opinion on that because I am not a legal expert, but the medical board controls practise only amongst those who are registered with the board. Also, according to the Medical Board Act, if someone holds him or herself out to be a medical doctor, then they are contravening the law and can be prosecuted. But if somebody stands at the corner of the road and says, here I have the cure for HIV and they did not hold themselves out to be a doctor, the medical board—as far as I understand it and as I said I am not a legal expert—does not have jurisdiction there.

Mr. Forde: Mr. PS, you care to shed any light there?

Mr. Madray: To say that there are—actually I will pass it over to the Chief Medical Officer.

Dr. Armour: Chairman and members, yes, in terms of the answer to the question, it is along the same lines with Prof. Seemungal, in terms of the Medical Board Act does prescribe for person to be duly registered with the Medical Board of Trinidad and Tobago after passing through an approved curriculum and an approved tertiary institution to be so recognized. So the short answer to the questions and I do concur with Prof. Seemungal in terms of in those instances as you described. Once somebody makes a claim, which is what it is—they make a claim that a product has certain therapeutic ability but they are not a registered medical practitioner legally, it is difficult within the legal framework of this country to take action in the current legal framework.

Mr. Forde: But Mr. Chairman—

Mr. Chairman: Is it a one burning question?

Mr. Forde: Yes, yes, it is. I just want to quote in May 12, 2013, the *Guardian* newspaper

published a report entitled "Headache for herbalists". That is the headline. The report claimed that the legal department of the Ministry of Health wrote the Director of Public Prosecutions—well the name is quoted—to take action against herbal practitioners who publicly advertise curing body illnesses, and to go on, was any action taken back then? I do not know. It is 2013. Mr. PS, was any action taken back then by the Ministry? What was the basis on which the Ministry decided to proceed with litigation at that time and so on? Any light can be shed on that information that is quoted in the *Guardian*?

Mr. Madray: We will have to respond subsequently.

Mr. Chairman: Once you have done the research you can respond in writing. Thank you very much, MP. May I ask Sen. Ameen to come in at this point?

Ms. Ameen: Mr. Chairman, the question from the Vice-Chairman falls into what I want to come to. In the absence of regulations, have you had any consultations or reached to the point to make any recommendations for legislation to govern these herbal or alternative medicine practitioners?

Mr. Madray: I will first make a point that in other jurisdictions non-traditional medication, herbal substances are defined as substances that support rather than cure. So that is an issue in our jurisdiction as to how we will treat with it. Yes, there are no regulations that govern non-traditional medication at this point, but such regulations are under review. There were draft regulations that had been done many years ago. In our most recent discussions that has emerged, but we have not yet followed up on the reasons why they were put on hold. We have checked with the Chief Parliamentary Counsel's office and we have been informed that they were put on hold there. We do know that we are currently reviewing those drafts. Perhaps the Chief Medical Officer or our head of Chemistry, Food and Drug could—

Mr. Chairman: Once you have reviewed, would you be in a position to supply the Committee with the outcome of the review?

Mr. Madray: Most certainly.

Mr. Chairman: Very well. But there is another issue, a follow-up from Sen. Ameen before I proceed to Sen. West and, that is, something such as acupuncture, it is used internationally. Do you know if acupuncture practitioners are registered in Trinidad; whether they must be screened by the Ministry of Health to determine that they say they can do what they can do; or can anyone simply claim that he has expertise in this field and set up a practice on that?

Dr. Armour: Thank you very much for the question. The short answer is that in the specific

example of acupuncture the answer is no. In terms of the registration of persons who are practising medicine or fields alike to medicine, we do have the professional bodies like the medical board and the nursing council. We also have council for professions related to medicine that is also within the ambit of law and under oversight of the Ministry of Health, so that includes like psychiatrists and social workers, persons who you will typically see in the traditional medicine. In terms of the other types of non-traditional medicine therapies, it is not regulated at this point in time by way registering members and part of it relates to the prior discussion that was had in terms of the level of scientific evidence.

Mr. Chairman: So the answer is they are not regulated and there is no register of people who practise acupuncture as we have, say of register of medical doctors, and if someone says he is a specialist in his field and someone chooses this form of therapy, he has no assurance that the practitioner is competent to actually administer the practise. That is so in Trinidad and Tobago? That is so?

Dr. Armour: No.

Mr. Chairman: Okay. The second is with respect to—I noticed that there is also Ayurvedic medicine, is it that we have practitioners who can practise that form of healing without being registered anywhere and they can simply claim they have these skills and they may or may not, are they also screened by anyone or is this caveat emptor, the public will have to undertake its own necessary enquiries?

Dr. Armour: Chairman, the short answer to your question is yes, they are also not currently registered in terms of the Ayurvedic medicine. In terms of the Medical Board Act and the medical council, they do have their entry requirements from matriculation to be registered, and within recent times I also have a specialist register which describes the postgraduate courses and qualifications in order to be registered as a specialist in the medical field. But these other fields at the current time, no, there are no regulations or no registration body for—

Mr. Chairman: Okay. Thank you very you much. So we may need to look at the Medical Board Act, but—is this a follow-up?

Mr. Forde: Indeed.

Mr. Chairman: Make sure it is a follow-up on this particular point.

Mr. Forde: Yes, it is. Now going back to the President of the Pharmacy Board, Mr. Rahaman, you mentioned in your opening statement with regard to absence of regulations more harm may

be done than good. I think it is probably a good time, Mr. Chairman, in terms of the regulations, in terms of these individuals who are operating not above board or whether under board, to hear what is the opinion and to expound on your earlier statement with regard to regulations and so.

Mr. Chairman: Yes, briefly because I do want to engage Mr. Rahaman at some other point, but Mr. Rahaman you can come in at this point.

Mr. Rahaman: Essentially it might well serve a good purpose to give one or two examples of instances where people have been—given the reason why I said it does more harm than good at this point, as was said before, that the products are really for the support or to assist with certain things, and there are many people who have been diagnosed with serious ailments, prostate cancer, and so on, that continued to use the items that have been said to support it. It is really an attempt to prevent, but these things have such a huge genetic link that these items are not sufficient to assist with either preventing that genetic outcome and they cannot assist with treatment.

So we have a large proportion of the population utilizing these medications under the guise that it is herbal and purer, and not interfered with by science. When they are actually diagnosed with problems, or they are experiencing the problems, the symptoms of particular ailments, glaucoma, and so on, and continuing to use the herbal medication while going blind, while leaving their prostate cancer to degenerate because they continue to use herbal preparations. So in the absence of education, and in the absence of regulation, it does not assist the plight of many persons, and the cost of medical care is triple or quadruple in those instances.

Mr. Chairman: So basically, persons are using the support medications, or items meant simply to support as mainline treatment, and that would result in an ineffective health outcome?

Mr. Rahaman: Yes.

Mr. Chairman: Very well. Thank you very much. Sen. West, you can come in now.

Ms. West: Thank you, Chair. I would like to go back to the original discussion involving the research into the various products in Trinidad and Tobago, and how we move forward with where we are in terms of those products. Is there a plan, is there a potential for us to move through the stages to commercializing these products and making them more widely available?

Prof. Jayaraman: I am not a legal expert, Senator, but to the extent of my knowledge I can comment on this. Those days of patenting a plant, or an animal, or even a gene are gone. So we no longer can patent the plant, but you can patent a product deprived from the plant. So the

straight answer here is, anybody can make a formulation out of one plant or more than one plant, and identify what other ingredients presented in that, what is of therapeutic value, and that can be patented as a product. So that is the only way how it can work. But unfortunately in many of these plants derived products, it is not a single molecule which has the therapeutic value or effect. It is a consortium of things. Many things come together; it is a synergistic activity. So we can study the profile of it, but at the end of the day what is going to act upon is a group of stuff together.

So in this case commercialization is fairly easier than going through the route of synthesizing and then derivatizing the compound and testing, it is a very long route, but this is pretty easy. This has been done by many people and we can take examples from other countries, for instance, Jamaica. So Jamaica has commercialized many of their products derived from plants and they are selling it. These are all registered and they even might be patented, and these are even exported outside primarily to North America.

So there is a big window of opportunity here, and again we can do this scientifically. It is not just like selling a bush medication. Well, it is just to get it and then make a powder and put in the capsule and then sell it, but let us do it scientifically where we verify, we provide the evidence, yes, this works. And, faculty of Medical Sciences, they do have the facility. They have experts and we also have the expertise to do some basic studies and prove the effect and say this works, and then that has a real value to be registered as a product. But the question of whether it can be straightaway patented, to my knowledge it cannot happen nowadays.

Ms. West: Yes, the sense I get, though, is that we have progressed only so far in terms of our research and we are up against the wall that is created by the clinical study process. So how do we get past that? How do we engage in that so that these products can not only be created and formalized, but can be internationally accepted?

Prof. Clement: Chair and Sen. West, I believe that our issue in the Caribbean is our size, and funding, and money; and research in humans is a big cost. So right now our research is restricted to the lab in animals, but as soon as you start talking about trials in humans that is where the cost is. Not only with the human, but also you have to have products that are standardized. So you must know in your product what is the active compound, how much of that active compound is in that, and you need to standardize that. That is a cost to the pharmaceutics department. They have to prepare compounds or preparations, they have to prepare also what we call placebos that

look and taste and smell just like what we are giving patients.

All of that is a lot of detail, you need resources in terms of personnel, in terms of expertise. You need people to make those preparations, you need people to give patients those preparations, you need to follow people up over months, over years, you need to test people for safety, you need to test them for outcomes that you are looking for. So all of that is a huge cost, and with our small economy I do not think that we sometimes think that that is so important to focus on, research and development. And even at that point when you have results from human studies, you need to convert that result into something that is commercial.

So you just do not jump from having results from a study and just start selling. You need to produce your preparation in some form that you are able to sell. And the reason why Europe, and North America, and Australia have a multibillion dollar industry, is because they have been able to supply the evidence that these things work for indications. So like St. John's Wort for depression, echinacea, [*Inaudible*] for prostate enlargement, they have invested a lot of money in providing the evidence for that, and they have used that evidence to commercialize and to bring that result into products that they could sell and they were able to do that successfully with having an industry that is worth billions of US dollars.

Mr. Chairman: Thank you very much. Professor, I need to interject because you have raised a very valuable point in response to Sen. West's position, in that, we are relatively small in size in relation to the jurisdictions in Europe and North America. Now, from my research I have been able to identify three types of pharma: the type produced by Pfizer, Merck, Novartis, Eli Lilly—chemicals—then you have another type produced by Regeneron and Celgene which is modifying the genes and working on the biopharm space; there is a third type plant-based where you can produce the St. John's Wort, echinacea, et cetera. In your opinion, given the small size, if you were told that we are resource constrained, where do you think we have the greatest potential in Trinidad and Tobago if we were to direct our energies for us to be able to create a space in the broad spectrum of pharma that you know it? It is plant, is it cells, is it chemicals? Where do you think we should go?

Prof. Clement: Chair, there are a number of ways that we can go. One, is that we can probably form partnerships with people outside and keep the intellectual property and benefit from that intellectual property. So I think what we should really do, we should probably focus on a few plants that have potential and we could provide the preliminary work and we could have a

partnership with those people.

Mr. Chairman: So you are thinking that maybe we should not go the Celgene, Regeneron, or Eli Lilly, Pfizer Merck Novartis, but maybe focus on what we have occurring as plants and use that as our basis for competitive advantage. There is a response from the back, we would like to bring him in. Your name again, Sir?

Dr. Jalsa: Nigel Jalsa, Sir. Good day, Chair and members. When we speak about non-traditional medicine, it is often with the narrative that it is to a certain extent folkloric, and that tends to inform what we prescribed it for, or what the anecdote follows, but something that is missing is that almost historically all the medicines that are produced by pharmaceutical companies, virtually all of them have their origin in non-traditional medicine. So if I were to give an example, the willow bark or the bark of the willow tree for many centuries was known for analgesic properties, so pain-reducing, fever-reducing properties. By extracting the willow bark, the component of the willow bark, hydrolyzing it and then acetylating it, it gave a product that I am certain everybody is familiar with, that is aspirin.

So the non-traditional medicine actually has traditionally informed all the major companies, Eli Lilly, Pfizer Novartis, et cetera. It is within the recent decade that they have focused less on natural products and more on something call diversity oriented synthesis to generate a large library of compounds, and the reason they have done this—Dr. Maharaj alluded to it—is that the issue with natural products, the problem is that you have limited space, you have limited quantities. For example, one of the most powerful anticancer drugs on the market, which is Taxol or paclitaxel, to get a single dose would require harvesting of the entire tree of the Pacific yew.

So that is why then, the synthesis part or the chemistry part of it becomes important because we need to look at non-traditional medicine. So we have an idea that this plant extract, or this concoction has a particular effect. What the pharmaceutical companies do, is that they now analyse and isolate the components of that mixture and then perform derivatizations on that compound for two effects, to improve efficacy as well as to reduce toxicity. So, to separate the non-traditional medicine, the bush-based medicine, to use local parlance, from the pharmaceutical endeavours in my opinion is not a wise endeavour. I will give an example from within my own research.

Many of you here may be familiar with ackee as in terms of the Jamaican national dish of ackee and salt fish. The issue with ackee is that when you eat ackee that is unripe there is an active

component in there, something call a non-proteinogenic amino acid that is toxic. It has a lot of toxicity associated with it and that is what causes the adverse effects if you eat the unripe fruit. One of the things that we are looking at in my lab is to take that hypoglycin and to perform structure function reactions on it to reduce its toxicity but see what biological activity it has.

So I would suggest that our focal point should not only be on the non-traditional or plant-based medicine. Certainly that is the starting point because that is the starting point of every pharmaceutical company throughout the world. But in addition to which to, where we add value, because where we increase the value and make it to the point where we could make a drug, which, of course, is a distant pipeline, is that we identify the active compounds and then we serve to make those compounds increase activity and lower toxicity.

Mr. Chairman: Thank you very much, and we will be following up on that, but we do have MP Antoine and we do have MP Glenda Jennings-Smith, and I will come back to my colleague, Vice-Chairman on this round. So, MP Antoine?

Brig. Gen. Antoine: My question is to the Ministry of Health. Which types of complementary and alternate forms of treatment is the Ministry willing to endorse on the one hand, and what types of complementary alternate medicines is the Ministry unwilling to endorse? So, is the Ministry willing to draw a line between what types of medicine they would approve and not approve for use among the population?

Mr. Khan: At present, if it is we looked at the Food and Drugs Act and regulations, it gives a definition of what a drug is, and it clearly indicates in terms of what a "drug" is and what the "component of a drug" is, and within the regulation also you have the Drug Advisory Committee that has the responsibility to advise the Minister regarding drugs and recommend to the Minister any drug to be registered for sale in Trinidad and Tobago. So currently, in terms of the definition, it would cover most of what we consider to be traditional and non-traditional, also based on the broad spectrum and the broad definition of a "drug". So based on that definition and the work of the Drug Advisory Committee to advise the Minister regarding the registration or the approval of a drug to enter into the market and to be sold and distributed within the market, and that gives us the remit and the scope to register those drugs that falls under the definition as per the regulation. I am not sure whether I have answered or—

Mr. Chairman: All right. Basically I think the question was a straight one. Is it that the Ministry of Health has endorsed certain products and is it that it has not endorsed others, and that it has

endorsed certain products because of the reports maybe received by medical doctors that they tend to help with patient care?

Mr. Khan: Okay, so yes within the Drug Advisory Committee, we would have recommended certain herbal supplements to the Minister to be approved for sale in Trinidad and Tobago.

Mr. Chairman: Okay. And, MP Antoine a follow-up, yes.

Brig. Gen. Antoine: And because I realize you have a member of the herbal sub-committee, what is the role of the herbal sub-committee from the Ministry of Health?

Mr. Khan: If you permit, me I would pass it on to Dr. Le Blanc to answer that.

Mr. Chairman: Very well. Dr. Le Blanc, the role of the herbal sub-committee. I was not aware that there was an herbal sub-committee, so we are learning a great deal from the hearing. What does the herbal sub-committee do?

Ms. Charles-Le Blanc: Good morning, Chairman and Members. The herbal sub-committee is looking to give guidance to the Drug Advisory Board in terms of how we look at the regulation of the herbal supplements that are in the country, both local and international. We are trying to produce a policy, which will allow for better regulation because as everybody agrees we do have tradition. We have our tradition and we know our bush medicine, and we also have traditional Chinese medicine which has been around for many years and this has a lot of scientific base.

But we have to find a policy to regulate the entrance of these products into Trinidad and Tobago, to safeguard and protect the population to the best of our ability. So the herbal sub-committee will then have assessors, we will assess the herbal products that are being brought into the country to advise if they are safe based on our herbal knowledge, our medical knowledge, to the best of our herbal and medical knowledge and clinical in evidence-based medicine.

Mr. Chairman: Very well. Okay. There is a follow-up—before you continue with your follow-up, MP—because you are raising an important point. You are saying that registered medical practitioners are in receipt of information which will assist them to recommend traditional as well as non-traditional medications. Take, for example, two items: black cohosh, CoQ10 and orange peel tea. These can be considered to be non-traditional. How would the medical practitioner come to gain the information that CoQ10 should be recommended under certain conditions, black cohosh and orange peel tea? And I know for a fact that one medical doctor, to my knowledge—I shall not mention, eminent specialist—who has recommended these three. So how did he come to that knowledge that all of them appeared to have worked? How did he get—

is it from your department?

Ms. Charles-Le Blanc: The herbal sub-committee is new but it would be from our department, but we must understand the difference between a supplement and an herbal plant, or an herbal medicine, because CoQ10 is a supplement, orange peel tea and black cohosh are herbs, medicinal plants. For example, I studied medicine in Cuba, and in our curriculum it was introduced. Our natural and traditional medicine was introduced in our curriculum. There are schools of traditional plant medicine and traditional medicine in terms of herbal medicine. So we look at that and doctors can learn that, and we can be complementary medical practitioners.

Then you have CoQ10 and Omega 3-6-9, Omega XL, all these are supplements and what they are really is that we have seen in the medical profession and in medical science, we have seen that—for example, Omega 3, which is your big one, is anti-inflammatory and helps with our different cholesterol issues and our arterial inflammatory issues and, therefore, they extracted that, but those are supplements. So that is why the doctor that you know can recommend that, and where black cohosh is concerned and—sorry to cut you—and orange peel tea, again, it is tradition, but also phytochemistry has shown that black cohosh, for example, has the phytoestrogens and it has been used traditionally for what it has been used to do.

Mr. Chairman: Okay. So my question is, is it the specialist medical practitioner who recommended CoQ10 because of the pains associated with a statin drug for cholesterol was using folk medication—and the thing is it worked. Without the CoQ10, the statin drug was terrible. Now, where did he get this information? Or is it that he is just thinking that maybe other patients have recommended it? I would like to know where are—because established medical practitioners are recommending the things when there are side effects of the chemicals which are used for main ailments. As Mr. Rahaman said, there are main interventions which will cure, but they do have side effects, and the medical practitioner who is interested in the welfare of his patient looks at these other areas. I simply would like to know: is there a body of knowledge that he or she can draw upon, or is he just using folk medicines to help him to cure his patients or make his patient better? Where does he get the info?

Prof. Seemungal: Chair, there is a large body of information now, relatively, on CoQ10. Most medical practitioners get the latest information on a publicly available website, it is called pubmed.gov. So, you can look up CoQ10 there and you will see all the recent—

Mr. Chairman: We have two colleagues—and there is a follow-up from MP Antoine, but with

respect to the [*Inaudible*] all of these supplements, they are not sold under prescription, is it that the pharmacist is expected to have knowledge of the potential effects of all of these supplements so he can advise an over-the-counter buyer on what the potential effect of these might be? Is it part of your training, or is it that in your profession you come together and you say, "Well, this particular type of tea will put you to sleep"?

Mr. Rahaman: There is a sub-component of a course at the University of the West Indies School of Pharmacy. So there is a course on complementary medicine, but that said, in the practice we do not that much recommend. We do get a lot of enquiries and we use the opportunity to educate persons on the fact that you must still go for your diagnostic information, and once you are diagnosed there end it usually the usefulness of the medication. But we do get significant resistance from people who—we have to remember that we have to look at the benefits of the medication outweighing the side effects. So there are times that you might have a side effect of a cough of a particular medication, but the side effect of not using it is a stroke. It is the entire loss of use of your left side.

So, you have to weigh up to a—I think the side effects have been touted as a reason not to use the items which will be proven to help, and which and in many cases are on the literature. The literature might state 50 side effects and a person might experience none or one, and the one might be so minor when compared with not using it and getting a stroke, or a heart attack, and so on.

Mr. Chairman: A direct question. A woman comes in to you in your pharmacy and she says her friend uses black cohosh and it works for her, "can you advise me on what the effects of this would be for what I am experiencing at this time"? Do you have the expertise, or are you expected to have the expertise to advise that buyer that black cohosh can have these possible effects if you use it?

Mr. Rahaman: Well again, the information is available, but we lean on the side of pure science in that regard, and if the trials are not—I mean there may be pharmacists who may dabble a lot or somewhat in the practice of that type of medicine. But on average, we deal with the scientific part and the scientific part has not been as forthcoming because of the issues with funding, and human testing, and so on.

Mr. Chairman: So basically Mr. Rahaman, of the dozens and dozens of supplements I see out there, you are saying that the pharmacist—if I were to ask the pharmacist what is this product,

lutein, I think called, that is used for, he would be reluctant to tell me?

Mr. Rahaman: No, he would give the information that is available.

Mr. Chairman: Right. Very well. Thank you very much. And we have one burning intervention from the doctor in the back before we get back to a follow-up from Ancil Antoine, MP, and then MP Jennings-Smith who has to come in after MP Antoine.

Dr. Maharaj: Chair, I have to place this position because it is the School of Pharmacy and we put out students there. They are definitely trained in a three credit course in alternative and complementary medicine and we should know that herbal medicine has actually evolved over time, and there is a pharmacopoeia for herbal medicine which tells you the dose, the active ingredient, the indication, the side effect profile and how it should be taken. So that is there and they are made aware of that. There is a whole book that they are all made familiar with, the pharmacopoeia which is recognized by the US FDA. So it is not that it is magic, no longer. The orange peel tea I may not know, but the other areas it is not magic, they are very much well-documented.

So anecdotally, I might be able to help you there, but otherwise—but just to let you know that, yes, it is definitely well-documented. There is a body of literature someone can turn to that gives—very much like a normal medication—all of the information that is required and the students are very much made aware of it.

Mr. Chairman: So that the pharmacists now are trained to really administer the kind of information for the products that are sold over the counter?

Dr. Maharaj: And they are trained to know where to get that information.

Mr. Chairman: Very well, and for information, orange peel tea was prescribed after childbirth to get rid of gas by one of the leading obstetrician/gynaecologists in Trinidad and Tobago. He did not use Gas-X. He recommended orange peel tea and he is one of your established peers. And I was told by the Deputy Speaker it works very well. MP Antoine.

Brig. Gen. Antoine: It is a follow-up because I cannot let go of the herbal issues at present, and I go back to zebapique. I have a zebapique soaking in vermouth for the last few years and I swear by it. In terms of the herbalist and so, and it goes back to the question about the Ministry of Health, what you endorse and what you do not endorse, what kind of research is going into local remedies, orange peel tea, zebapique as the case may be, in terms of being used among the population, and is the Ministry of Health endorsing or not endorsing in some of these herbal

medicines?

Dr. Armour: Thank you very much, member Antoine. In terms of to lead the discussion—and I would ask either Mr. Khan to follow through—the process of registering all drugs as Mr. Khan described, you have the traditional drugs yes, but then you also have what you call conventional type drugs which are those drugs that do not meet the scientific rigour to reach like on the level of the formulary or pharmacopeia that we used in traditional medicine that is normally in our public sector.

So these are what we call for the lay term "pharmacology drugs". Beyond those you have these other types of drugs as defined in the Food and Drugs Act, but as supplements. But Chemistry, Food and Drug, through their drug advisory committee and as I said through the recently formed herbal sub-committee, they reviewed these drugs, and in terms of what the Ministry of Health tends to endorse from the evidence is that those drugs that are manufactured abroad and they are imported, some of those drugs we do recognize that according to Dr. Le-Blanc they are safe for use.

Now, those drugs do not enter our public sector. They more enter into the pharmacies, the private pharmacies and over-the-counter medication. So therefore, Chemistry, Food and Drug will endorse some of those products that are safe according to review by the assessors, and then they enter generally, not into the public sector, but into the private pharmacies as supplements, and with that I will ask Mr. Khan to expand along those lines as a point of clarification.

Mr. Khan: Thank you, Chair. So in accordance with the Chief Medical Officer, it is exactly that what he has mentioned in terms of the work of the sub-committee in terms of evaluating the particular, let us say, herbal drugs, to determine the efficacy as well as the safety of the particular drug. And the work of the sub-committee and the expert members of the committee will evaluate based on data that is submitted from the manufacturer or the importer, as the case may be, to determine whether this drug is safe for human consumption, also the efficacy of it, whether it is going to do what it says it is going to do.

11.45 a.m.

In terms of the labelling requirement also there is a requirement that the drug or the supplement does not state that it is a cure or prevent or mitigate. If you look at the US FDA they would put a disclaimer on most of those products indicating that the product has not been evaluated by the US FDA. So it removes an implicit implication that this drug can prevent, cure or mitigate.

Likewise the work of the subcommittee also follows those same sort of principles in determining whether to recommend the drug or not recommend the drug as the case may be.

And from our database we will see that there are approximately, within this year we would have done probably eight to 10 herbal supplements that are earmarked for recommendation to the Minister via the Drug Advisory Committee.

Brig. Gen. Antoine: How is the population educated about these drugs that will be approved by the Minister? How would we know that, you know, these drugs are approved for use and these drugs are not approved?

Mr. Khan: Okay. Once a drug is recommended by The Drug Advisory Committee it goes to the Minister of Health. Once the Minister of Health endorses the recommendation it goes to CPC, and at CPC it will be published through the *Gazette* notice, and also a notice of approval will be issued to the importer for that particular drug indicating that he or she can sell the particular drug on the local market.

We are in the process of creating a database, an electronic database that would contain all of the information regarding the particular drug. At present it is internal, but the vision is at some point in time it becomes a public document where the public can actually access this database, but that this present time it is not accessible to the general public.

Mr. Chairman: Thank you very much. MP Jennings-Smith.

Mrs. Jennings-Smith: I am concerned with regard to the protection of the public when we speak about herbalists and the continuous sale of herbal medication. And to that I want to ask you: How feasible it is to implement a legal framework to regulate the sale and the use of all forms of alternative medication in Trinidad and Tobago?

Mr. Khan: Okay. Thank you, member. We require the regulatory framework to be able to monitor and survey these particular drugs on the market. So the regulatory framework based on the draft amendment to Food and Drug Act regulation is going to give us the greater power and authority to be able to monitor and do proper pharma-surveillance on what happens on the market. It requires a substantial degree of human resource because of the volume that we are speaking about. All right? To be able to really monitor what is going on in the external market and at the pharmacies and elsewhere. So, you need the human resource, as well as you need regulating framework to give you that ability to monitor, and take action that is beneficial to the public at large.

Mrs. Jennings-Smith: What is the status? Do you have a draft regulations for herbal medicine?

Mr. Khan: Yes. So since 1999 there was external consultation on herbal medicines, and from that committee regulations were drafted in 2001, and presently as the PS had mentioned earlier, we have a draft 2004 at the CPC, and we have indicated that we are going to revive that particular draft document to have further consultation because that was done in 2001/2004.

Mrs. Jennings-Smith: I asked you all of that, I am looking at the fact, I am looking section 4 of the Dangerous Drugs Act of 1991, in particular reference to cultivation of different herbal products. What type of licence have you issued so far with regard to that particular regulation?

Mr. Khan: Okay. I probably could pass on that particular question to the drug inspectorate since they would have the legal remit under that piece of legislation as opposed to Chemistry, Food and Drugs.

Mrs. Jennings-Smith: Okay.

Ms. Rodriguez: I would add that no licence has been issued. From 2015 and 2016 to date no licence has been issued.

Mrs. Jennings-Smith: Can you say if anyone applied?

Ms. Rodriguez: No one has applied.

Mrs. Jennings-Smith: Okay. Thank you.

Mr. Chairman: Thank you very much. We will come to our second round of questioning now, I know you want to raise a question, Professor, and I am coming to the professors in the panel who are doing research. Are any of you familiar with a drug call Epidiolex produced GW Pharmaceuticals. Any pharmacists familiar with it? I know that there are thousands of drugs which are produced; produced by GW Pharmaceuticals given FDA approval in April of this year. But what is interesting about Epidiolex is that it is a drug that is used for child epilepsy, and that particular drug which has been approved by the FDA is based upon the chemicals derived from the cannabis plant; so it is Epidiolex. It is now accepted.

The question that I want to ask any medical practitioner here and including the herbal subcommittee member is: If there is a child in Trinidad and Tobago who suffers from the type of seizures, epileptic seizures which this drug caters to, will you be able to prescribe this particular medication? And then I will ask Mr. Rahaman, will you be able to store it? I raise this in the following context.

I know pharmacies always have a vault or a lock box where they keep controlled

substances. I was advised that cocaine was used a while back by dentists to mitigate the effects of pain; of course, that is a banned substance, so I do not know if that is still administered. But I am looking now at the health status of Trinidad and Tobago and the range of pharmaceuticals which are now being produced which will help—certainly now the FDA has accepted this produced by GW Pharmaceuticals from the United Kingdom to be administered in the United States of America.

I would like to get the views first of the researchers. Suppose you have researchers who would like to research variance of the various chemicals that went into Epidiolex to create different medicines? Can you conduct that type of research within Trinidad and Tobago?—I am talking about purely academic research at the university?

Dr. Jalsa: Thank you, Chair. The Epidiolex—the issue with medical marijuana or the issue that is facing marijuana is that the component in marijuana that is responsible for the adverse psychoactive effects is THC, but THC is only one of 600-plus compounds that are present in it. So, we speak about THC as having the psychoactive effect, but there are a category of compounds called cannabidiols, right, CBD being one of them, and then the terpenes that are also present, these are the ones that have medicinal benefit. These are the ones that have potential medicinal benefits, I should say.

With regard to your specific question on how we do or can we do that research in Trinidad?—most certainly we can do that research. That type of research. What it will involve is, first, having the plant, having components of the plant, whether the male plant, the female plant, extracting the component of the plant, analysing what is present. So this will include both a structural elucidation, right, and in addition to which too, small bench-top bio acids.

When we perform that extraction and isolation the key is to separate all those compounds, and marijuana from that perspective is very poorly studied. It is taking up a lot of steam within the last year in doing that type of research throughout the world, and it can also be described as low-hanging fruit.

Mr. Chairman: Yes. Can you do—suppose you take a bottle of Epidiolex, administered by doctors in the United States freely and/or any medication administered in Canada since the year 2000; so they are 18 years ahead of us. Can you conduct the type of research that is necessary to produce a marketable product similar to the type of research you are doing on the product that was mentioned earlier for healing wounds?

Dr. Jalsa: Absolutely. Yes, we can do that research. We have the techniques to isolate it and we have the techniques to characterize it.

Mr. Chairman: Prof. Clement. Yes.

Prof. Clement: Chair, I think we also have to remember that for FDA approval they have to have the clinical evidence. They must have studied in humans, different phases, phase one, phase two, phase three and that takes a period. For FDA to approve a drug or any treatment they must have the evidence. Even though we could isolate a compound and say what the compound is, we have to carry it through that process. And I am afraid to say that at present we do not have the capacity to do that in Trinidad and Tobago now because of the cost, because of the resources that we will need, the human resources and the infrastructure that we will need to do something like that. We will be able to do up to the point of having a compound, but after that there is a possibility of not—

Mr. Chairman: All right. So are you saying that we have already lost the opportunity to other countries which have been able to market the pharmaceuticals arising from the cannabis plant? Or is it that there are opportunities in Trinidad that if you were to start now using our—and I want to bring in Ms. Comeau with respect to whatever varieties that we have. Dr. Comeau, do you have the various types of cannabis, at least, in some plant form at the herbarium that is grown in Trinidad and Tobago? No. Because it is a plant. Can you have it?

Mrs. Baksh-Comeau: Mr. Chairman, I have specimens of cannabis in the herbarium which we collected from plots grown outside of, you know, illegally. Where we came into contact with it in the forest, we did make a sample and put a collection.

Mr. Chairman: It is not illegal for researchers in Trinidad and Tobago to collect samples as they are doing with "shining" bush and so on and to conduct the research?

Mrs. Baksh-Comeau: That was one of the issues or concerns that I had with respect to the collection of the legal collection of it, because remember when we pinched it from that site it was illegally grown. It was a farmer illegally growing it in the middle of forest, so therefore, legally, we cannot.

I have been approached by, and I would not say who, certain Governments to actually assist them with collecting marijuana plants from different parts of Trinidad so that they can test the various components of the plant to see what environmental impact had on it, but I did not accept that because the plant is illegal in Trinidad. But as a reference national collection we have

specimens.

Any kind of research that must be done with plants in Trinidad and Tobago, its scientific rigour requires that you must deposit a voucher specimen in the national collection. And Prof. Clement and I when we did the work together on the survey of the 50 rural communities, I was involved with that research which we published, all those specimens collected from those communities we have them deposited in the collection. Right?

Mr. Chairman: Thank you. Prof. Seemungal, from your research and given your expertise, do you think there is promise here for Trinidad and Tobago as a expands as Prof. Clement indicated that maybe we should be looking at the herbs in Trinidad and Tobago as the launching pad for any pharma-industry we may develop? Do you think there is potential in Trinidad and Tobago given the type of cannabis here for us to conduct the necessary research first before we go to clinical trials? To conduct the research at the University of the West Indies so that we can identify the types of compounds that Prof. Jayaraman has identified? Do you think that there is potential, and do you think as policy we ought to be able to allow the researchers at the University of the West Indies and other research institutions to undertake this research so that we may be able to get some kind of competitive advantage in the pharma-industry?

Prof. Seemungal: From my viewpoint the answer to your question is a resounding yes. The basic part or the scientific work there is capable of being done in the pharmacy school and the department of chemistry at the university. And I have to say that the idea of doing clinical herbal research is not a strange one at all because you may remember that he and I were on a committee when John Hopkins was here about 10 years ago that was looking at herbal research; we were looking at a drug, a herb that could be used to treat hypertension. I think that funding was cut as some stage later on, so the research never got off the ground, but it is certainly possible for us to design such a trial here and test the substance when it reaches that stage.

Mr. Chairman: Professor, I raised the issue, when I look at the Hebrew University of Israel, I have found and I have looked at some of the research that they have done there. They have been able to generate a lot of marketable products based upon the cannabis research. Now, what prevents you as the dean of the Faculty of Medical Sciences from encouraging some of your bright researchers from pursuing this research? So that promising as it is, what prevents you, is it legal? Is it money? It is the overarching state apparatus we have? Is it that you do not think that you have the researchers capable of doing it? What prevents us from taking advantage of the

competitive environment that we have in growing cannabis to market it and would could be done at the level of the State to overcome the constraints that you face at the university?

Prof. Seemungal: Well nothing prevents us right now, it just requires interest and funding opportunities that is all.

Mr. Chairman: Okay. What about—

Prof. Seemungal: And with regard to legality, we would not undertake such research unless we have permission of the ethics committee. So the matter, the research project needs to be submitted to the Ministry of Health Ethics Committee. From a research point of view, I do not see a legal issue there, if you want to try it out then—

Mr. Chairman: Professor, are you saying, if you were to prepare a research proposal and you send it to the Permanent Secretary Mr. Madray for sight of his ethics committee that will be able to conduct the necessary research and you will be able to obtain the types, the specimens and so on to conduct the research so that the outcomes will be scientifically acceptable?

Prof. Seemungal: Yes. We have that capability.

Mr. Chairman: Okay. Yes, Mrs. Comeau, you want to come in?

Mrs. Baksh-Comeau: Yes. I was a member of that same committee that Prof. Seemungal is talking about, and one of the problems that we had identified was the availability of the raw material, and I know that Waterloo started a programme to start growing some of these herbal plants so that they can actually have a source of the raw, because what they call wild crafted, that is to get the raw material from various parts of the country, it is unreliable. There is a lot of variety in it, and that is the first step to the standardization is the availability of the raw material.

Mr. Chairman: Okay. Mrs. Comeau, just one follow-up question and that is: Of the range of plants, say growing in Trinidad, wild and cultivated, do you think that you have a full sample of the genetic material in the herbarium?

Mrs. Baksh-Comeau: Well I recently published a complete checklist of the vascular flora of Trinidad and we have over 3,600 species of vascular plants in Trinidad and Tobago of which in our survey with Prof. Clement we found 900 species that were actually being use for medicinal, so to be exact in the survey that—

Mr. Chairman: And with respect to cannabis in particular, do you have, in your opinion, the range? That we have the genetic range?

Mrs. Baksh-Comeau: That will have to be the research base to work on. We will have to—

Mr. Chairman: Okay. So, you will have to compile it.

Mrs. Baksh-Comeau: We will have to legal—

Mr. Chairman: But you are saying that the companies that are interested in the genetic stock that we have?

Mrs. Baksh-Comeau: There was one government that was interested.

Mr. Chairman: Okay. Do not mention the government.

Mrs. Baksh-Comeau: No. I would not.

Mr. Chairman: I can imagine which government that is.

Mrs. Baksh-Comeau: I will not.

Mr. Forde: I think that I missed my turn.

Mr. Chairman: Yes. We have Prof. Jayaraman.

Prof. Jayaraman: Thank you, Chair. Yes. We have certainly the capability to do this kind of research and we are late. My worry is we should not be too late. Okay? Cannabis does not belong to North America. It is all went from down. Okay? They have established plenty, okay?—and we are already too late. So, but this the right time that we have to open up. So the biggest stumbling block in doing this is the legality.

So, I am really suspicious if we are allowed to this type of research. If you say it is possible, what we need is some money, some funding. Some funding is enough just to either characterize whatever is found in the particular type of medication or we just prepare our own and then try. But I am not talking towards the clinical trials. That might be trivial, but that should not stop the research because the research we have to gather evidence and knowledge, you know, that we can do.

Mr. Chairman: You are recommending then that as per Mrs. Comeau's submission, we try to collect the full range of samples in Trinidad and Tobago, we could engage in research and in propagating them and we should get the legal permission for your department to undertake the necessary research so that we can see where, if any, opportunity can arise for Trinidad and Tobago in producing drugs like Epidiolex.

Prof. Jayaraman: Exactly.

Mr. Chairman: Because there is not only Epidiolex, there is Cesamet and all that kind of thing that is coming.

Prof. Jayaraman: We do not need to copy, Sir, we can make, even try something else.

Mr. Chairman: Right.

Prof. Jayaraman: We have the product. We have the material here.

Mr. Chairman: Okay. And before I go to MP Jennings-Smith, I need to get the pharmacy board. Suppose a medical doctor presents a patient with a prescription for Epidiolex, will you in the board be able to stock that now since it is cannabis based?

Mr. Rahaman: Well we continue to stock what the Act refers to as dangerous drugs, better known as narcotics. So we do—pharmacies do obtain a licence from the drug inspectorate because it is through the drug inspectorate from the narcotic committee. So we have, yes, these double-locked cupboards; we do not have much cocaine again, we do have morphine and high strengths of codeine which are clarified as narcotic. So the pharmacist, I think, is one of the only bodies that is legally authorized to store narcotics. So as long as the drug ends up being registered through the Drug Advisory Committee, upon recommendation from the Drug Advisory Committee by the Minister of Health and it is legally available in Trinidad, it may well be classified as a narcotic. We have licence to store it, under secured conditions we do presently store them and we will dispense.

Mr. Chairman: Okay.

Mr. Rahaman: I just want to mention that under the same section 4 of the Dangerous Drugs Act, there is no legal impediment because the Minister of Health can grant licences for cultivation, gathering, importation, export, storage and so on. So there is no legal bar at this point to even cultivating.

Mr. Chairman: Right. Ministry of Health, I need to get clarity on this position. The clarity is this. Someone is coming in Trinidad and Tobago and that person has an epileptic child and the person is coming in with Epidiolex—I am sure that you can google it right now—will that person be allowed to bring that medication prescribed by his doctor in Canada, the United States, in Trinidad and Tobago? What is the position of the Ministry of Health on that? I need clarity on that. Yes. The herbal subcommittee's representative.

Ms. Charles-Le Blanc: We have to look at the fact that, the administering of marijuana is the full cannabis plant, they are genetically modifying it with the THC and the CBD component. So when I personally spoke to a narcotics officer because I wanted to find out the same thing, he said that once they were assured that it was used for medicinal purposes and it was more CBD than THC then they would not classify that as an illegal drug because that is what we have to

look at. It is not just doing a research on what we have growing and our genus and our different species of marijuana, but the fact is that this is research that is going on where they are genetically modifying these plants and going with the THC/CBD component and that is what these clinics are doing to treat different illnesses.

Mr. Chairman: Accepted. But what I need clarify in the public interest is this. In Canada and in the United States, particularly in Canada, these items are prescribed. Many Canadians hold dual citizenship with Trinidad and Tobago. They may be ill. They are traveling. There is border control, they are coming in with one of these medications that may have some question marks on it because marijuana is still illegal in Trinidad and Tobago. Mr. Rahaman said that there is nothing preventing his members on the pharmacy board from stocking the items because they do stock the certain things which are there for therapeutic purposes. What I would like to know is that, if someone is coming with a prescription from a bona fide registered medical doctor abroad and he is coming to Trinidad and Tobago and must cross the border, is he going to find himself in legal problems after looking at his health? Mr. Madray, you are the PS and I need a clear answer on that.

Mr. Madray: All right. The issue of registration is separate from the issue that you are currently describing, and we will have to research this and respond. We do not know the answer offhand.

Mr. Chairman: Please. We would need, and this is only the beginning of the hearing. We need clarity because, Mr. Madray, we are looking at the health status of the population and you see, my concern is, it cannot be that someone is not going to get better or be administered his treatment because the law says that this is illegal. I think the medical doctor, the medical practitioner must have the sole and final say with respect to, because the patient is under his care. If he says the patient needs this, who am I as a legislator to say, "You cannot give your patient that". So, I would like to get the policy position of the Ministry of Health particularly with respect to these medications which are approved abroad, but which may have some question marks in Trinidad and Tobago.

I know we got the position from the herbal subcommittee that the thing may have less of the, more CBD and less THC?—less THC. So there is no narcotic effect, there is more palliative, more care giving. But who is to inform the customs officer, you see? Could we then request the policy position in writing so that we can follow up subsequent? I am sure that you will get the input of the immigration department. You will get the input of the ethics committee, the input of

the medical board, the input of the researchers at the university, the input of the herbarium, so that—ultimately the Ministry of Health is concerned about health, and anything that interferes with health, Mr. Madray, it is your concern. So we do need to get a policy position on this, hopefully could we get that within a week? And afterwards, MP Jennings-Smith will come in. Mr. Madray, could we get that?—this is important.

Mr. Madray: Well you are right in indicating that a number of agencies and a number of pieces of legislation may be involved here, inclusive of legislation that are not directly under our remit, for example the Customs Act.

Mr. Chairman: Very well. Thank you.

Mr. Madray: We will ask for a bit more time than that and let us try to commit to two weeks.

Mr. Chairman: You see, member Jennings-Smith has to come in, but really what the herbal subcommittee representative has indicated is that there is one item called the cannabis plant, but out of it there are many derivatives, and the derivative which is the CBD is one that seems to be benign, and therefore, if that is the basis of medication, it may really—we would look to get recommendations with respect to legislative changes so that we improve the health status or protect the health status of the population. As a legislator it would be irresponsible of me if I did not look at the laws in Trinidad and Tobago which are undermining the health status of the people of my republic. Mrs. Jennings-Smith.

Mrs. Jennings-Smith: Is there sufficient law there to protect, and I brought it up earlier under section 4, Mr. Andrew, you explained it quite clearly. What I want to know, because I asked the question specifically to know, with respect to the CBD and the cannabis, I asked the question specifically to know how do you all go about collecting your item to do further enquiries. And the answer I got was that, no approval has been made and nobody ever applied. So, I want to ask a question: Tell me, how do you get, because you said that you all have a licence to store, where do you get it from? And what licence covers the importation and control and regulation?

Mr. Rahaman: Well there are separate licences. So, we have a licence to store and distribute which is a licence that we get from Ministry of Health signed by Minister of Health. In relation to securing items for research, there is no bar for applying for this licence, but it will be a licence to cultivate or a licence to import, and that is the route by which researchers can use to obtain the samples to test. So our licence at this point—all pharmacies have a licence to store and distribute, and indeed stores and distributes a variety of narcotics in the pharmacies from a licence issued by

the Minister of Health.

Mrs. Jennings-Smith: Is there a monitoring officer who checks and sees who it is dispensed to from time to time?

Mr. Rahaman: Yes. The drug inspectorate is the body charged with that from the Ministry of Health.

Mrs. Jennings-Smith: Okay.

Mr. Chairman: Sen. West has a follow-up.

Ms. West: It is not a follow-up actually. It is completely different question.

Mr. Chairman: Completely different, Sen. West.

Ms. West: Two questions in fact. The first one is that I would like to get a sense from the individual who is lecturing on avian medicine, how his discipline fits into our discussion?—because I am completely at sea on that score.

And secondly, having met fairly frequently within the last three or four months with the university grants committee, I get a sense that the university does not have a business focus. So, you do your research and you have a lot of good information and material, but there is nothing that takes it beyond that step. So, am I wrong in that confusion? And if I am not wrong, how do we, what do you need to move to the next stage? Those are the two questions.

Mr. Chairman: Take the second one and we will come into the first.

Prof. Seemungal: You are quite right in what you said, that the university has not traditionally had a business focus because of how we were developed. We were developed to respond to the needs of the Caribbean people through public issues and to educate people out of poverty, and it was a Caribbean focus funded by the governments. So there was not the motivation to sort of—however, we are changing that and our new strategic plan for the next five years has focused on entrepreneurship and innovation, and we are looking to patent our research, so we are moving in that direction, and we now have a business development office on each of the campuses. So, we are moving that way, and it was a question of focus and we are doing that. So, I think I have answered that one. The other one is very important.

Mr. Chairman: Thank you very much. Professor, are you aware of whether any patents were ever issued to the medical faculty for any of its research thus far?

Prof. Seemungal: There are no, as far as I know, no. There have been no patents for—

Mr. Chairman: So that is the challenge now for the medical faculties. Given the fact that Pro.

Clement and Prof. Jayaraman have indicated that we are in an area of low-hanging fruit with respect to plant medication. So, I think that will be the challenge of the researchers now at our institutes. But avian medicine?

Dr. Brown: How does avian medicine fit in here? We may all be a little bit confused. I am actually here as a replacement for a colleague of mine who was supposed to here, but had to be away, so I was asked to replace her. So, I am here representing the School of Veterinary Medicine, was invited by the dean, so my discipline is avian medicine, but that is not what got me here. [*Laughter*]

Mr. Chairman: But representative, from what, I know you are avian medicine and it is the first time that I am hearing of the field, and I am grateful that you are here, welcome. But from the deliberations, is there anything that you would like to add that would edify us with respect to non-traditional medicines from your perspective of avian medicine?

Dr. Brown: Well first of all, I am a veterinarian who just specializes in avian medicine, and perhaps I should point out that alternative medications are also used in veterinarian medicine. And the risk associated with the use of these medications in humans also apply to the use in animals. So therefore, any sort of regulatory controls that are being considered for human medications should also be considered for veterinary medication because the same risks apply. We have drugs being imported without some of the kind of controls some of us think should be applied and the risks are also there.

Prof. Seemungal: Importantly for our perspective these herbs or whatever you use in animals enters the food chain. They come up to the human beings and therefore, it is very, very important that if we regulate for humans that we regulate for the animals in our environment because it is one health.

Mr. Chairman: Thank you very much. Just a follow-up now since we are dealing with vet medicine, and I know that the Vice-Chairman wants to come in, but has anyone ever done any research on neem leaves because it is agriculture. I understand neem leaves can provide the basis for organic pesticides, and I also understand that there are companies abroad which have been looking at Trinidad and Tobago neem with some interest. Did anyone do any research on the medicinal aspects of neem. I know it has some benefits with respect to the nontoxic pesticides? And that is, again, is a possibility of commercialization. Any research, any information on neem. No? Okay.

Dr. Brown: Chair—

Mr. Chairman: All right. There seems to be some research on neem.

Dr. Brown: Over the years the staff at the Veterinary School of Medicine, we have attempted to document what local herbal preparations are used for treating animals, what are they, what species and for what purpose if they are used. Neem was among those we have discovered to have been used, and it has been used for controlling ectoparasites in various species of livestock. We have also shown, based on examined literature, that neem does have compounds that can scientifically support its use to provide control of ectoparasites in chickens, et cetera.

Mr. Chairman: Thank you very much avian specialist, your presence here is very much appreciated. [*Laughter*] And I so would ask Vice-Chairman to come in, he has a burning question.

Mr. Forde: No. I just want to follow back up on the cannabis issue. Now, again, we need to be careful in that we are not only speaking to ourselves, right? We are speaking to the public. Cannabis versus marijuana. Cannabis is termed what? That is the scientific term?

Prof. Clement: Yes. It is the scientific name.

Mr. Forde: And marijuana is the?

Prof. Clement: The common name.

Mr. Forde: Common name. Right? So we are talking about marijuana also. Right? In your document submitted to us, Prof. Clement, you identified on page 3, you identified that cancer is the major disease worldwide, and you went on to identify some herbal remedies, soursop, you talked about, you know I mean, the percentage 80.7 per cent using the leaves, the bag, the fruit, you went on to talk about aloe vera, beetroot, papaya, carrots and so on. The cannabis talk came up and as we say, cannabis is illegal in Trinidad and Tobago, all right? But cannabis or marijuana whichever word you want to use, probably I should use marijuana because I think that is the term that I am accustomed to in terms of Trinidad. All right?

We want to identify to say, listen, in your report you have said that these herbal remedies, nowhere in your report, I think, I have seen cannabis mentioned, nowhere. All right? But in terms of going forward, the importance of marijuana to be used as an alternative health source versus the other herbal remedies: paw paw, carrot, beetroot, soursop and so on. All right? So we are saying that we want to look at in terms of the emphasis. Why the emphasis? Marijuana cures what?

Prof. Clement: Well to answer, member—

Mr. Forde: Well assist in curing what?

Prof. Clement: Well what I mentioned here in the report is the major herbs that we use, major herbs and foods that were used. But we did find that a couple people did use marijuana, and we are not sure whether people did not indicate that they used it because of the place that it was, maybe they were in the hospital setting and they did not want to indicate, but there is a very small amount of people who actually indicated in the hospital that they use cannabis or marijuana to treat cancer pain, but it was not included because it was a very small number.

Mr. Forde: From your research would you say that marijuana, in terms of what we need to do, we need to get the framework in place from the Ministry of Health, we need to get the framework from whether national security and so on, in order to determine—to get the various strains of plants that they would need in order to do their sensitizing and so on. In terms of going forward, the logistics to get there, you see it as being feasible versus looking at other sorts of remedies herbal based?

Prof. Clement: Well I believe it is feasible because there is evidence from elsewhere that indicates that cannabis or marijuana is useful in people with certain conditions, cancer is one of them, so in the pain of cancer, people use it in other parts of the world to treat cancer pain.

Mr. Forde: Okay. One other question away from that topic, away from that topic.

Mr. Chairman: We are at 12.24 p.m. and I do have to truncate, we want to finish at 12.30 p.m. so we will hold it for the second round of questioning we have.

Mr. Forde: Well let me get this one now, Mr. Chairman?

Mr. Chairman: It has to be so short.

Mr. Forde: Yes. It has to be short, it will be short.

Mr. Chairman: And a short response is requested also.

Mr. Forde: And again, in terms of Dr. Jalsa? Right. Dr. Jalsa, is there a deliberate attempt by the powers that be for us to remain synthetic-based in our medication going forward versus herbal-based?

Dr. Jalsa: Deputy Chairman, right now there is not a deliberate attempt at that. I would say that. It happens so that what we start with from the plant we could improve its efficacy and lower its toxicity. So it is not a deliberate attempt to stay synthetic, it happens that how the synthetic variance has shown to be better and more controlled than that mixture isolated from the natural

products.

Mr. Chairman: We will have to bring closure at this point. Before I do so, let me give a rundown of what I have learned this morning that I did not know before, and I can say that I would imagine other members of the Committee.

It was made very clear that non-traditional medications have traditionally been the basis of traditional treatments. We started non-traditional, and we moved into mainstream, and we are seeing that across the board. It was advanced that Trinidad and Tobago may very well have the competitive advantage given, the resource constraints that we face with respect to plant-based medications as low-hanging fruit, as opposed to the chemical based and the gene-based medication as produced by the larger farmers abroad.

It was drawn home that we do have intellectual property in Trinidad and Tobago embodied in the research that we do and embodied in the stock of assets held at the herbarium in Trinidad and Tobago that international commercial enterprises, seeing huge opportunities in international pharma would like to obtain, and we need to protect our intellectual property. The reason for that is very simple; when we need their intellectual property we have to pay for it, so that we need to protect our own intellectual property, our own research and we need to, of course, strive to market our intellectual property, that is, commercializing that property.

So on that point there is a position advanced that we need to collect and store before we lose the items, the range of all plants that we have. I did not ask anyone about the datura plant, I know it commonly as datura, but I understand that it does give someone a hallucinogenic effect, so it may have something in there. But in particular we want to collect all plants that have the potential as Prof. Clement and Prof. Seemungal indicated to generate the opportunities for us in the field of pharmacology. So, we would hopefully have the collection of all the species which are available, in particular the range of cannabis species that we have.

The reason why I say this is simple. We produce the best cocoa in the world, but not the best coffee for whatever reason, but the best cocoa based upon the peculiar conditions in Trinidad and Tobago. It may very well be that we have existing, given the climate of Trinidad and Tobago, a particular type of marijuana plant or cannabis plant that could be produced in commercial quantities and exported to some of the countries abroad who were asking Mrs. Comeau for samples. So let us not let that opportunity slip.

We need to regulate the non-traditional forms of treatment as the pharmacist Mr. Rahaman

indicated, that there are many supplements which are supposed to be that, supplements, and cooperating treatment. They coexist together with mainline treatments. So that someone can be taking metformin, glucophage for diabetes, but he may also be taking some herbal supplements for it. There is one I know that works; I shall not mention what it is; it is called caraili. Crushed caraili works for me, [*Laughter*] raw crushed caraili does not taste good, but it lowers the blood sugar in addition to the metformin. And therefore, research could be done on that. It is called bitter melon abroad, but we need to do the research. Metformin alone may not do it, but I cannot function without the metformin, but metformin and caraili I could eat chicken and chips all the time.[*Laughter*]

12.30 p.m.

And therefore, you see, we are looking at the health status of the population, something that I like, that I could have only once a month, but really without the caraili I cannot have it even once a month. There is a position that given the opportunities available for Trinidad and given the intellectual expertise as per the research papers that you have produced, which I have found very impressive as an academic myself. I am very impressed with the range of research that you have done and the type of output that you are doing, but I think that we need to be looking, as Minister West said, with joint ventures, with farmers companies, so that we can bring to market your basic research that is done on the lab while protecting our intellectual property.

There are many models around and I am hoping that the university will have a business office that will work closely with the researchers so the moment you present a paper to rave reviews, that that particular paper will be made available to the international pharma-companies, big, small and medium size so that you can work in conjunction, using their resources, your technical expertise and a revenue-sharing formula, diversifying the economy of Trinidad and Tobago.

I was very glad to hear that our herbal subcommittee specialist was trained in Cuba. Cuba has a very, very, well-developed pharma-section, so there may be a role for the Cuban expertise to work with the Trinidad expertise in developing and bringing to market the research that you are doing.

We were advised that the pharmacists are all trained to advise on over-the-counter medication based upon the modules that are offered at the medical school at the university. So therefore, the pharmacist should be able to advise now anyone who sees over-the-counter

medication what in general they can be used to assist in, not as a cure in, but to assist in. And I think Mr. Rahaman made a very valuable point. These over-the-counters are meant to assist; a second-line treatment, not as a first-line treatment.

We were told that there was an ethics committee in the Ministry. I was not aware of that at all. There is an ethics committee that will have to work closely when we are pursuing cannabis research. We were advised from the herbal subcommittee specialist that we are making a clear division between the CBD and the THC and we want to see to what extent legislation can be amended so that the medicinal effects can in fact be identified.

Plants which are concentrated with the CBD can, in fact, be grown in Trinidad, maybe exported abroad, and I know it is the muscovado bias where we simply export the plants for processing abroad. But at least it will add to our foreign exchange if we are able to find a particular species high in CBD using Trinidad soil. So you may have to work with the Ministry of Agriculture, Land and Fisheries, together with the health specialist, to identify and together with the herbarium to identify what is the opportunity lying there.

We do need to have, and the Ministry of Health said they need two weeks. I thought they would have had a week already since I very boldly came out in the public domain a while back, they should know that I am coming to the Committee with this. What is the policy on cannabis-based medication especially since it is established abroad? People abroad suffer the same ailments like people here. We want to protect our citizens, no different from them. We would like to know what is the policy and what are the legal impediments which ought to be navigated so that you can implement the policy to protect the health status? Mr. Madray, I know you are a familiar face in the Committee, hat is going to be a responsibility of the people in the Ministry of Health to investigate.

And we were also told that pharmacists in this country are given licences to store items which are controlled and therefore if pharmacists already have that licence we know that as we move forward in Trinidad and Tobago we can take advantage of the opportunities abroad with respect to medicines produced abroad to assist cancer. We are going to have an oncology unit. I would hate to think that when we have an oncology centre that the oncologists there are constrained in prescribing medication because of laws. If the oncologist says I would like to prescribe cannabis-based medication for my patients I would like the oncologist to have the final say and not the legislatures.

So that this is what I have come away with this morning. This has been one of the more productive hearings. In fact, our Committee always has very interesting investigations. After all it is our Committee and we are boldly looking at how to protect the status and the welfare of the people of the Republic of Trinidad and Tobago. At this point I would like to obtain closing remarks from the representatives and I would start with Mr. Madray of the Ministry of Health.

Mr. Madray: Thank you, Chairman and members. The discussions have been enlightening and we shall certainly make use of the information that we have learnt. As I have indicated we will provide you with a response on the Epidiolex drug within two weeks and if we can do so much earlier we shall certainly do so. Finally, as a non-doctor please take my advice and stop eating so much chicken and chips.

Mr. Chairman: Thank you very much. But Mr. Madray, I try to have it once a month. So you are saying once every three months. Mr. Seemungal.

Mr. Seemungal: Yes, Chair. Thank you and thank you to the Committee for inviting us to make our views known to you. I thought it was a very stimulating morning and I do say the questions were challenging and thank you, all of you for your interest.

Mr. Chairman: Thank you very much Prof. Seemungal. Prof. Jayaraman.

Prof. Jayaraman: Thank you, Chairman. I am very happy to be here and also to listen to the diverse views and as a scientist I must say, we do not need to reinvent the wheel all the time because there is abundant literature available. We have free access to all of them. So we need to have, even I suggest that there is a subcommittee or some kind of forum which can just review all the literature and then give a scientific output, a kind of recommendation on these things.

Another thing is, we have enough capacity to do the research at our place and the culture of research has to be supported and I do want to talk more about it. There are countries which are investing a certain percentage of their GDP to do research and the same way we know they think about emphasizing the research and that has to happen in our institutions instead of borrowing things from outside. This is one way how we substitute the importation. Thank you very much.

Mr. Chairman: Thank you very much Prof. Jayaraman. And Mr. Rahaman, finally your closing remarks.

Mr. Rahaman: Yes, well I did appreciate the opportunity to give information on the use of herbs. I am hopeful that it is more widely disseminated, because we need to get people's ailments treated properly.

Mr. Chairman: Thank you very much representatives all. It is 12.37 p.m., seven minutes past the scheduled time, but this morning's session has been a very, very, informative one. And I am indeed very grateful on behalf of the Committee for the participation, the open discussions, the investigations of the issues and for assisting in charting a way forward. This is not the end of the matter. This is the beginning of the discourse as we try to diversify the economy of Trinidad and Tobago, as we attempt to take advantage of our natural resources as we exploit the low-hanging fruit as indicated by the researchers and as we look after the health status of our population.

As members of the Committee our job is to take in the evidence and also to examine whatever laws exist in Trinidad and Tobago which may need to be amended so that the health status, the welfare and the development of Trinidad and Tobago can proceed without legal impediment and without the impediment, so making use of all the expertise we have in the country. I bring this session to a close this morning and I thank you all for your participation. Have a good afternoon.

12.38 p.m.: *Meeting adjourned.*

Appendix V

VERBATIM NOTES OF THE TWENTY-SEVENTH MEETING OF THE JOINT SELECT COMMITTEE ON SOCIAL SERVICES AND PUBLIC ADMINISTRATION, HELD IN THE ANR ROBINSON MEETING ROOM (EAST), LEVEL 9 (IN PUBLIC), OFFICE OF THE PARLIAMENT, TOWER D, THE PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, #1A WRIGHTSON ROAD, PORT OF SPAIN, ON WEDNESDAY, DECEMBER 7, 2018 AT 10.48 A.M.

10.48 a.m.: *Meeting resumed.*

NON-TRADITIONAL MEDICATION IN THE TREATMENT OF NON-COMMUNICABLE DISEASES IN TRINIDAD AND TOBAGO

Dr. Lionel Gaskin Mayers	Soul Mind Body Renewal Institute (Acupuncturist)
Dr. Asante Indira Van West-Charles-LeBlanc	Victoria Clinic (Acupuncturist) /Member of Ministryof Health Herbal Sub- Committee
Mr. Marcus Ramkissoon	Caribbean Cannabis Institute
Mr. Phillip Franco	Natural Balance – The Natural
Medicine	Centre/Natural & Alternative
Medicine	Association of Trinidad and Tobago
Dr. Ernest Hazelwood	Vibrant Health Limited

Mr. Chairman: Good morning everyone and welcome to the Twenty-Seventh Meeting of the Joint Select Committee on Social Services and Public Administration. The purpose of today's hearing is to seek feedback from local practitioners of Complementary and Alternative Medicine—abbreviated CAM—on the potential benefits of traditional medicine to the treatment of non-communicable diseases in Trinidad and Tobago, and also to explore the issues associated with the regulation of these types of medicine. This meeting is not being broadcast. The witnesses for today's hearing were selected in consultation with the Ministry of Health and from the Committee members' own research. At the time, I would like to introduce the local

practitioners or allow you to introduce yourselves, and after that we will allow the members of this Committee to introduce themselves. So if we could start with Mr. Ramkissoon.

[*Introductions made*]

Mr. Chairman: Thank you very much. I now allow members of the Committee to introduce themselves.

[*Introductions made*]

Mr. Chairman: We remind that for procedural sake and for the maintenance of order, members and guests are visited to direct their concerns through the Chair. Members would pose questions and you are free to, of course, elucidate as you see fit. We would also ask members to activate your microphones so that we can record it properly when you are acknowledged by the Chair and turn it off when you have concluded your contribution and those who are before us today, but we have also sought the expertise of many other stakeholders through written contributions and documentations. So we tried to be as wide-reaching as possible. We got quite a healthy response from alternative medication or CAM practitioners in Trinidad and Tobago which I guess augers well for the progress of the industry. All right? At this point I am going to now invite our guests to each make a two-minute opening comment and for anything you would like to start with, starting with Mr. Ramkissoon.

Mr. Ramkissoon: Let me apologize about that first start.

Mr. Chairman: That is quite all right.

Mr. Ramkissoon: So within my qualifications, as I was just continuing, I possess CME qualifications and 30 industry certifications. I am regarded as one of the highest qualified on paper persons in the world in cannabis, and I have actually just been hired by the Antiguan Government as their sole adviser and consultant. I have just finished drafting with their legal drafter, of course, because I do not know legislative drafting style, their Act—Cannabis Act, 2018— and the 180 page Statutory Instruments that would follow it. I am not a complimentary alternative medicine practitioner. I do not treat patients at all in that regard. I am strictly in this level a consultant and an adviser amidst other things within the cannabis industry, but nothing to do with treating. Thanks.

Mr. Franco: Well I am very happy to be here and to be able to contribute to this Committee in looking at whether or not natural products need to be regulated, and looking at the existing regulations that make no mention of these products within the archaic regulations on Food and

Drug Act of 1960. Something needs to be done because it is very difficult for persons trying to import these products to import them. While you can go online and buy them, but if you want to legitimately bring them in, we are posed with much difficulty at the Food and Drug Department of the Ministry of Health. So something needs to be done. I have suffered over the 20 years that I have been in practice in Trinidad because of this, and many others as well. Some people have given up and gone out of business. So something needs to be done and, hopefully, this is the time where we can do something about it.

Mr. Chairman: Thank you. Dr. Hazelwood.

Dr. Hazelwood: My journey started at Howard U in Washington, then I went to the School of Natural Medicine in Utah, and then, of course, at the Bastar University. I became very much interested in alternative or holistic medicine as result of my, I would say, my spiritual interest, and I realized that the body cannot heal itself without the mind. So I journeyed to India and studied Ayurvedic medicine for a while and that is where I got my exposure into body-mind medicine, and that is what we practice at the Vibrant Health Centre in Trinidad, Barataria. Of course, if I tell you how long I started maybe you would think I am joking, but I started this about 30 years ago in Trinidad and we are still going very strong and educating people in the field of natural medicine, mind medicine and, of course, there is also spirit medicine. So we do have a full house going in Barataria.

Mr. Chairman: Thank you. Dr. Gaskin Mayers.

Dr. Mayers: Well I am originally a physicist, electronic engineer. Did engineering for about 30 years and then decided to switch to medicine, and the fact that I have been in electronics for so long affects my practice because I use instruments that normally are not even heard about, which I think probably people will get around to 15/20 years from now in Trinidad. I would relate it if you would bear with me. Last year I was at a seminar by Dr. Shallenberger on the use of ozone, and we were talking and he says to me, he says, "The only thing that I have not been able to beat is Parkinson's" and I laughed. He says, "What are you laughing at?" I say, "Well I have been able to beat Parkinson's." He says, "What do you do?" I say, "Well I use the ozone and I also use a rife machine." I said, "Do you know what is a rife machine?" And he looks at me and he says, "Don't insult me. Of course I know what is a rife machine." He say, "But I do not know which one to use. There are so many on the market." And I laughed at him and he says, "What are you laughing at?" I say, "Well as an electronic engineer I do not have that problem. I could

go into the meat and find out what is the best."

So we had a long talk about which ones were the best, and which one is not. The point I am making is that we have an idea about complementary medicine that is very, very limited, very limited in what people think we can do and what we cannot do. I hear people say, "Oh, acupuncture is for pain". I have had people with hormonal problems and I can take any hormone, any one of the glands and carry it up or down with acupuncture needles. I can raise the red blood cell count in two or three days with acupuncture needles. I can raise the white blood cells count with acupuncture needles. So when you look at that and you realize that in western medicine they cannot do that, then you begin to understand that the very idea of what we are doing is limited, it does not infiltrate into the society, and I always think that that is a pity that we cannot do that. People come to me with lupus, I cured the lupus. I have done it many times. I have people come to me with lupus for 11 years.

Mr. Chairman: If I could ask you, we are going to get into all of that in a little while.

Dr. Mayers: No, but I am just pointing out.

Mr. Chairman: We kind of trying to go through a particular procedure. So if you would hold your comments for a while, while we get the full introductions and then we will go into the details of your—

Dr. Mayers: I will tell you why I just did that intro. I did that intro to point out that the complementary medicine is way wider than is meeting the eye, and I think that some consideration should be given as to some of the types of treatment that they use. It is not just herbs, and even in herbs you have different categories. You have homeopathics and you have different levels of homeopathics.

Mr. Chairman: Dr. Gaskin Mayers, I am not trying to be rude at all. I am just trying to go through a particular process, but we appreciate your comments.

Dr. Mayers: I am just saying I am just pointing out something. You know when I looked at this I said, "Hey, this is a very limited document".

Mr. Chairman: That is why you are here. Thank you. Dr. West-Charles-LeBlanc, if I can shorten your name a bit?

Dr. Van West-Charles-LeBlanc: You could just call me Dr. LeBlanc. My husband would be happy, my father would not. [*Laughter*] I am a general practitioner. I graduated from Cuba as a medical doctor and that is where I started with my interest in integrative medicine using herbs

and acupuncture. I am also a member now of the Herbal Sub-Committee with Ministry of Health. Truly believing that we can create policy where it is concerned, I am excited about this process and that is why I am here really. I do work in both aspects, east and west, and I do believe that they can be integrated. It does not have to be either/or.

Mr. Chairman: Thank you all. Just to give an overview, that is exactly why we invited you. You had initiated this process because we realized that this can be of benefit to Trinidad and Tobago, but there are many steps before we take it to the next level if we are to be diligent because we are talking about people's health and lives. So we have to be diligent as a Parliament. I will just ask a general opening question. This is a very diverse, as Dr. Gaskin Mayers says, and from the comment he made earlier, looking at document, it may be limited but we are quite open to all the information possible so that we can move forward from an empirical approach upon which policy can be built and hopefully we have some sort of consensus moving forward.

But just as an opening question and feel free to jump in individually because you are all representing different entities today, because of the number of players that have emerged over the last couple decades in Trinidad and Tobago, and because of the variety of backgrounds from which they come, what are your views on the level of oversight and regulation of the industry or of the sector as it presently exists; and what are the advantages and disadvantages to that? I do not know who wants to go first. The question is really an oversight.

Dr. Van West-Charles-LeBlanc: As a medical practitioner, I must say that I do not think we have enough regulation when it comes to the alternative complementary medical world in Trinidad and Tobago. That being said, the medical fraternity, of which I am a very proud member of, because of lack understanding dare I say, they do not accept it either and it is just totally down played and disregarded and that causes further rebellion. So it is about communication, understanding and we have to regulate because these complementary health care practitioners not all are medical doctors and we have to find a way to regulate them because as—what we are dealing with, not because it is called herbal, not because it is called natural, it cannot be dangerous and that has to be understood and it is understood by most of us who are really and truly registered practitioners of this field. And so, we have to be—we are the stakeholders and we have to acknowledge that we have to have policy and it has to be regulated. It is a lot of groundwork that has to be laid. So there is no doubt that we have to regulate it, but to blatantly

shut it down, make it almost criminal is going to cause more problems because the world today is leaning towards that, and not just leaning, we are there. And so, you do not want to have problem where people have to hide or run and do this, and then there are problems. So we do need to be open about it and we do have to have regulation.

Brig. Gen. Antoine: Have any of you been consulted by the Ministry of Health regarding your possible legal framework for the regulation of traditional medicine or complementary alternative medicine? Have anyone of you been contacted by—

Dr. Van West-Charles-LeBlanc: I am a member of the Herbal Sub-Committee right now where we are trying to draft the policy which was initially being drafted by the previous herbal sub-committee. And so, we are now trying to draft the policy regarding the legal aspects of using non-traditional medication for want of a better word.

Brig. Gen. Antoine: Is there any timeline for the completion of that?

Dr. Van West-Charles-LeBlanc: We have not been be given a timeline, but we are in the process, because once—we have put forward our recommendations to the Food and Drugs Committee and they have to now tell us if they accept our recommendation, our proposal, for us to further continue the work to formulate the policy.

Mrs. Newallo-Hosein: Thank you. I was listening to both Dr. Gaskin Mayers and Dr. LeBlanc and I wanted to ask really and truly, Dr. Mayers spoke about the complementary medicine as well as yourself and I want to ask really and truly, what is natural medicine? Because you saying that there are aspects of it that can be dangerous, so what can be so dangerous about natural medicine that will allow the medical fraternity to fight against the usage of natural medicine?

Dr. Mayers: First, I would like to say that herbal medicine is not as dangerous as western medicine. Very rare you would find anybody getting poisoned or having any serious side effects or anything like that. But you can give a person the wrong formula or something like that especially when you begin to deal with intricate herbal formulas and things like that. So you want to be sure that when you—just like how they do in the States, you know you go and you sit your board examine and you get things, and then you go and you sit your state examine in order for them to know that you have a certain level of competence and you are not going to go out there and do nonsense.

I would like to make one comment, it is a little bit outside. I, having spent years in science and my last job was calibration engineer to Noven Pharmaceuticals in Miami for 10

years, that one of the things that appals me about the whole of medicine in this town is that we do not have any labs checking anything. Let me take a little time and give you one little story. A guy came to me, he had a high PSA—no cancer or anything like that—and he says, "Well"—it is all kind of talk. I say, "I have the ability to bring it down. Give me about three months." His PSA was about 90. So I said to him, "I expect it to come down at the end of the first month by half". So we did that and it came down to about 40. I said the next one is going to reach about 30 or 28, and it came down to that.

The next month I said to him, "All right, I expect it to down to about 13". At the end of the thing, I wrote out a thing and I said, "Go to the labs and check it". He comes back and he comes back with a reading at 96 and I say, "That is impossible. You have not been breaking the diet or anything?" He says, "No, no, no, I followed everything". So I said, "Alright". So I sent him to two other labs and I said, "I am paying for it". One lab came in at 13.9 and the other one came in at 13.8 which it within the tolerances, and I said "How many labs do you have in Trinidad where the readings are wrong consistently?" Without those readings, without those calibrations, what you are doing in medical science is really a waste of time because you are using facts that are not facts. I will tell you from my experience in the States, every year you had to sit in front of the FDA.

Mrs. Newallo-Hosein: Mr. Mayers, I appreciate your concerns, but I am really asking about the natural medicine and I think that—

Dr. Mayers: I answered you, you know. I said it has to do with the competence of the person, and that a person could give a patient a wrong formula based on the fact that they are incompetent to diagnose it.

Mrs. Newallo-Hosein: I want to hear Mr. Franco, but there is a particular vitamin that is required by all human beings, and this is the B12, and I am reading now where it is even in natural medicine there is the mixture of cyanide, which is a little bit. It is a little bit, but still there is an issue and yet they are saying it is natural and that is not really natural.

Dr. Mayers: It is not quite right. You have two main types of vitamin B12. You have methylcobalamin and cyanocobalamin. Methylcobalamin can be processed by the body providing that the stomach has a thing in it called "intrinsic factor" which most people do not have. That is why when you are doing B12, and you want to give it to a patient, and you want them to absorb it, you make it sublingual. Cyanocobalamin is a synthetic one. The molecules

have a left-hand spin instead of a right-hand spin if you have to get into that. It is not easily digested by the body. Most things that you have on the market, they have cyanocobalamin. So technically speaking they are useless. So you could pick up almost any set of vitamins that you have and just look at the list and if you know what you are looking for you will know whether that vitamin is useful. Most of the vitamins that you buy in the shop, they are useless.

Mr. Chairman: In the interest of managing time, I would like the other members to comment on the oversight and regulation industry please, starting with anyone who wants to take—

Mr. Hazelwood: Yes. Now the oversight is—when we look at the ancients of granny days, if you recall, she went to the bushes and got herbs and these herbs, they really worked, and I found out after, some time in my investigation, that there is a spiritual aspect. In other words, the mind, the spirit, the energy in the body was transferred. It was a language that was communicated between the herb and the individual. I remembered, if I may just put this one in, I had a bone that was stuck in my throat and I was supposed to have surgery, and I went to granny and she just stroked the throat three times and she said swallow. I do not know where the bone went up to now and, of course, with childhood diseases she was the doctor more or less in the district.

So you find that a lot of these things, a lot of herbs like the—when I ask the older people what these herbs represent, how do you know they are medicinal and they told me, "Look at how the herb is shaped, smell the herb and everything". So there is a connection that we are really missing, and in Ayurvedic medicine they said, which is about over 5,000/10,000 years old, that every leaf in the face of this earth has a medicinal purpose. And when you look at the human body, like today people cannot sleep and they are taking melatonin and other drugs to make them sleep, to make them happy, to give them that happy mode, you find that the pineal gland, which is neglected a lot, that produces its own melatonin you see. So all we had to do is try to develop the pineal gland and we do have natural ways in medicines to do that, and we have herbs that would actually activate the—

Mr. Chairman: Dr. Hazelwood, can I interrupt you?

Dr. Hazelwood : Yes, Sir.

Mr. Chairman: I know everyone sitting there has particular areas of expertise and experiences in their practice, but we really want to follow a particular format to get information upon which we can build a framework. Because if everyone tells us about their practice itself, I do not think we are going to get very far and I am not being rude in anyway. We just have to manage it in a

particular way to get information which we can use, and it is unfair to you quite frankly because the time is too limited for all your vast expertise. But if everyone goes through medical and CAM processes, we are not going to get as productive a session. So we want to know what your thoughts are on regulation and oversight. Should this be a self-regulated sector like the medical board or the law Association, should it be a state, should there be state oversight? I want to get the information away on regulation at this point. Alright? And I hope I am not being rude by what I just said.

Dr. Hazelwood: No, no, that is quite alright.

Mr. Chairman: Thank you.

Dr. Hazelwood: I appreciate very much. Well I think it should be legalized because we have too many fly-by-night and "wash yuh foot, come again" without the necessary qualifications. I think it should be legalized. People should produce proper documentation, certification, and, of course, we need more training.

Mr. Franco: There are many difficulties in trying to have oversight on—we will start with the practitioners because we have practitioners and we have products. So it is two different areas. So in the field of practitioners, it is difficult because we have a wide range or diverse range of practitioners doing various things.

11.15 a.m.

So we might have 10 herbalists in Trinidad, two might be qualified, different qualifications, others might be self-made, taught at home.

Mr. Chairman: Who decides on what qualifications should be accepted? That is what we want to get at obviously. Because everyone is going to say I trained myself, I have trained x and y—this is a very extremely varied field and what we are talking about is regulation and oversight and standardization of, as Dr. Gaskin Mayers says, testing equipment, research, because that is another large part of it. How do we standardize such a complex and varied industry?

Mr. Franco: So there is a problem with the practitioners being so varied and diverse.

[*Member West enters room*]

Mr. Chairman: I want to welcome member West. Thank you for joining us. Member Antoine.

Brig. Gen. Antoine: The Medical Board Act, Chapter 29:50, if a person claims to be a medical doctor and is not registered with the Medical Board, the doctor can be prosecuted by law. However, if a person does not claim to be a medical doctor but instead claims to sell products

that cure, prevent diseases, then the Medical Board has no jurisdiction over such an individual. The question: Do you believe that practitioners and merchants involved in traditional medicine should be regulated via voluntary regulation, that is self-regulatory system, or should the system be regulated by law? And do you believe that regulations or laws are needed to promote proper practices within a natural medicine industry and to safeguard members of the public from unscrupulous practitioners?

Mr. Chairman: Let us start with Mr. Ramkissoon.

Mr. Ramkissoon: Thank you. Regulation is a heavy topic and something that, of course, governments—this is why we are in the process that we are in, select committees towards governments. A country, through its government, cannot do anything it wants. There are international guidelines, there are international regulations that guide, for lack of better words, nearly everything and whatever is not regulated yet in terms of products, food stuffs, whatever it is, regulations are coming. Those in the Government can attest to that.

When it comes to herbal medicines, first of all, to answer one of your questions, yes, there needs to be regulation otherwise we are not looking at the public health of our citizens. You cannot have someone, which we have seen on TV, I know I cannot call names, but we have even seen on TV some practitioners offering you to "iron out your hair" to fix things. And having discussed this case, in particular, with our drug inspectorate and certain members of our Ministry of Health, they explained to me that they could not, because of the regulations and the laws that exist presently, go after persons like this just because of what you just said, because they are not claiming to be medical doctors so they are not breaking the law. So yes, to answer your question, we do need laws in place.

And to answer a second question simultaneously, it needs to be Government regulated, right? It needs to take advice of committees, of associations of complementary medicine practitioners, heavily, eh, needs to take all the advice from those stakeholders heavily. But in the end, the Government, just like what we are doing, as I say with my little experience now with the cannabis Bills in Antigua, we are taking in stakeholders. I have led joint select committee hearings across there and we are taking the advice of them and then changing the Bills and changing the regulations that the experts and the drafters work towards drafting.

It is very important that we take into consideration the international guidelines. I have just actually seen that there are World Health Organization guidelines for alternative medical

medicines, alternative herbal supplements, there are guidelines for the production of herbal supplements and all these things and we need, especially as a Third World country, to adhere to and keep in line with international regulations so that we would not be able to be blacklisted and then sanctioned in any way. For those who do not understand—but the Government understands—but "sanctions" means the United Nations could put towards us things like they could stop our trade in foods and they could stop our tourism and such and such and small islands depend heavily on those things. You know Carnival is a big input for resources.

So we try to stay away from that by keeping in compliance with international regulations and those things are clearly laid out in different sectors: WHO sectors, INCB sectors, International Narcotics Control Board, and so forth. So once we are putting together policy, yes, just to summarize, it needs to be under the advice of the complementary medical personnel and associations and the Government needs to set up their legal drafters to start drawing framework towards it in line with international regulations. Thank you.

Brig. Gen. Antoine: Your health is a scary thing and given the reality of social media where anybody could put a video on social media as the case may be and where people are fearful as to how, you know, they recover from illnesses, what would you all advise in terms of getting a self-regulatory system for people who have access to social media, people who have access to people who deal with people's fear in terms of becoming healthy in the absence of a system regulated by the Government, regulated by law.

Mr. Chairman: Let me just add one corollary to that question. How much is the unregulated paradigm of this hurting your practices? Because there are what are described as legitimate people, qualified, and then there are the others, and the others, as member Antoine has said, are well versed in putting up videos on social media and promoting themselves as legitimate and very often, the entire sector is engulfed in that doubt by the public. Please, go ahead.

Dr. Mayers: I just want to make a short comment. The drug companies, having worked for a drug company for a long time, they travel the world. They go to Africa, they go to all of the shamans and them and they take up the substances they use, they carry it back and they process it. I am really making a plea, like Dr. Hazelwood was saying, that you have people who have the ability, for want of a better word, to see inside of the plant and tell you what the plant is good for. And one of the things that I do not think we should do is that we should regulate the thing in such a way and not leave a space for those people because I have a healthy respect for quite a

few of them and I spent years learning the technical aspect. You know, the Chinese medicine is extremely advanced and extremely technical, you get everything from the molecular shape of the herb and everything. So all I am saying is that inside this, you have to find a way to help the traditional—

Mr. Chairman: Research and development.

Dr. Mayers: Yes, to pull them in and take that talent and use it. One little short story, I was reading a book on cosmic thing and the guy was—

Mr. Chairman: Another short story. [*Laughter*]

Dr. Mayers: Yes, I am a storyteller. He went down to Ecuador and he was working with the shaman and they are going through the forest and he says "Pick some ah that, pick some ah that, pick some ah that," and the guy says to him—he was out of Caltech. He says, "You must have a phenomenal knowledge of plants to be able to do that." And he looked at him; he says, "I do not have any knowledge of plants". He says, "Well, how do you do that?" He says "I talk to the plants and they talk back to me." And he says, "And I make the formula and it works". So he says, "Well how do you talk to the plants?" He says, "I talk to the snakes". He says, "The snakes?" So he says, "The guy going mad".

So it is a week later, the guy puts out some rugs and on the rugs, he has a double helix, so he says to the guy, "You have the DNA there, the DNA". He says, "DNA?" He says, "That is the snakes in the plants. I talk to that". So he is left with trying to figure out how this guy has the ability to communicate with the DNA in the plant and he knows from the drawing, he says that that is the DNA. He could also draw the actual thing. So we have a tendency in the Third World to throw out all the things that we know that worked because we think that we are going modern. In actual fact, what the modern people do is they come to the people who have that ability, tap them, and then go and make a drug.

Mr. Chairman: Do not throw out research and development. Dr. LeBlanc, state-regulated or self-regulating entity and how do we standardize and are you advocates of some sort of licensing regime?

Dr. Van West-Charles-LeBlanc: I was actually thinking about it and I am really of the view that it needs to be both, whereas in my view, we have self-regulation in terms of knowing the certified schools that the alternative practitioners have come from and so you have a board of natural medicine or a board of alternative medicine, for want of a better—I mean that is just a

thought. But because I am a medical doctor, I think that there should be a medical liaison with the Medical Board of Trinidad and Tobago.

Member Newallo, you asked us about the complementary medicine and I do not think you were answered. So complementary medicine is a very broad term and the reason I am saying this is because we have traditional medicine, so we have what our ancestors have, and WHO has recognized that, and then we have the alternative or the complementary aspect of it which includes herbal medicine which is not necessarily only traditional because it includes Chinese medicine, Ayurvedic medicine, western herbal medicine, and then you have the non-herbal alternative world which is acupuncture, acupressure, cupping, moxibustion, ozone, vibrational and I could go on; homeopathic medicine as well.

And so we have to have state regulation and we have to have self-regulation about that where this is concerned but you will never be able to fully regulate traditional herbal medicine, so that is your granny going into the backyard, you will not regulate that, but somebody saying my grandmother taught me this and therefore I am going to set up shop and do this, that has to be regulated.

Mr. Chairman: Well I am glad you said that because to me one of the most pressing issues is that the Food and Drug Act is not applicable to herbal products.

Dr. Van West-Charles-LeBlanc: Correct.

Mr. Chairman: And would you endorse then because—and it is pressing issue in Trinidad and Tobago because people are advertising health benefits.

Dr. Van West-Charles-LeBlanc: Correct.

Mr. Chairman: And people are neglecting what may be interventions that can save their lives. In some instances, people have died because they went to the side of these advertisements and say, "Well, forget this and I am taking on this" and there is no accountability or repercussion for the persons who have advertised and sold them these products. So with that said, would you endorse having herbal products that local manufacturers are proffering to promote particular benefits be assessed by the Ministry of Health?

Dr. Van West-Charles-LeBlanc: Correct.

Mr. Chairman: Because of the implications for life and death in these circumstances before they are sold to customers at some level, and anyone can answer that because these are life and death situations now and are eminent issues.

Dr. Van West-Charles-LeBlanc: This is why the Food and Drug Committee has created the Herbal Sub-Committee because there is a need for regulation of these products but these products cannot be determined to be pharmaceutical or drugs. So the word—so the minute somebody says this will heal or this will cure, you have entered the pharmaceutical world and you will have to follow the Food and Drug Act because you are now claiming to be a pharmaceutical. If you say "support" then you are not a drug because the herbal world does not go through the phase four trials for drugs, but we still have a way to regulate you. Because we know—for example, cinnamon, we know what is in it, we know the pharmacology of cinnamon and what needs to be done. It needs to be regulated, we need to test for heavy metals, we need to test for the pathogens such as microbiological pathogens so as to prevent a public health hazard. When somebody says "I am going to cure, I am going to treat, forget medicine and do that", they have now crossed the border. They have gone into the border, in my humble opinion, of pharmaceuticals.

So the Herbal Sub-Committee is there and I am present on it where we are now looking at the herbal products that come in and based on the information and what they contain and what they claim to be doing, the actions, because of our knowledge and our research, because we would have to do research, then that can be regulated as if it is deemed safe or not for use by the public and who can prescribe it. So is it over the counter or by a registered or certified natural health practitioner or a medical doctor?

Mr. Chairman: Mr. Franco and then Dr. Hazelwood, please.

Mr. Franco: You made a comment just a little while ago about people negating to go towards the orthodox modern medicine and to use natural traditional medicine and, you know, they succumb to the illness. But that happens when people take pharmaceutical medicines. Right. Over 100,000 people die in the United States every day from their pharmaceutical medicines, not while taking them and succumb to the illness but directly because of their pharmaceutical medicines. That is an average of 290 persons die every day from pharmaceutical drugs. There is a less than a handful of deaths in the United States per year from natural medicines. Right. So they are very, very safe. So over regulation is not necessary.

Mr. Chairman: But when you say "they are very, very safe", do we not need to qualify that?

Mr. Franco: Natural medicines have been shown to be very, very safe from the historical data.

Mr. Chairman: From your perspective and there are different practitioners in Trinidad and

Tobago. So for you to make a blanket statement that "they are very safe", it suggests that all purveyors of natural medicine are holding to the standards that you may hold yourself to and that may not necessarily be the case, so that is not a statement that I think we should just take lightly.

Mr. Franco: So that is a good point, and in Trinidad, we do have a problem, right, and you asked a question earlier and how does it affect us because of the non-regulation of these practitioners and what they can and cannot say and broadcast on the media, and certainly it has a negative impact on our whole industry. Right. And it would be nice if our industry could be seen by the wider public as legitimate and beneficial, right, and also if we could have Government support, if we could have integration within the modern medical system and we can have insurance companies helping their clients to pay for these types of treatments as well. This is happening in many developed countries: United States, Canada, Australia, New Zealand, in Europe. So it would be nice to have some regulation. But in Trinidad, we have issues in getting there and we have to work that out. It is going to take some work.

Dr. Hazelwood: Yes, I agree with Mr. Franco up to a point because, you know, we are using herbal medicine every day—turmeric in the curry, all the different, the herbs and the "shadow beni" and all this kind of thing. We using it on a daily basis but the insurance—what I think we need here is education. We need to organize ourselves as a body and have proper education and know where we are going from here because right now, everything seems to be disjointed, you know, in parts, this one saying this, that one saying that, the insurance company and everything else. So we have to organize ourselves.

And then, of course, educate people, educate the doctors, educate the insurance companies. Let them know the value and what they are actually missing and how they can help people. Because, as a graduate of Bastar University, I can go in 30-something states in the United States and practice and insurance companies will pay. So what we need to do is to have—like you have books, educate people.

Mr. Chairman: That is because you are certified. You are certified by a credible institution.

Dr. Hazelwood: Yes, yes, we have to be and then of course, I think this is where the legislation and whatnot, the Government can help.

Mr. Chairman: Member West has an intervention.

Ms. West: Again, apologies for being late and I hope that I am not repeating a question that was asked before. But that leads me to a question that I have in mind. What, if any, action is being

taken by the traditional sector to align themselves with the more recognized medical sector so that we can get to a place where the two groups are working together to provide the best treatment for whatever ailment so that there is mutual respect? One will say that perhaps my approach is not going to work so we should try something alternative and vice versa. Is that happening at all?

Mr. Chairman: Complement each other.

Dr. Mayers: In a few cases. I have doctors who work with me, they would ring me up and say "Hey, you know, I have somebody here with gallstones and I cannot operate on them, can you do something?" "Sure, send them, I will melt it."

Ms. West: So what can we do to make that a more significant part of how we operate?

Dr. Mayers: That is communication; that has to do with communication.

Mr. Chairman: Not just communication, is it establishing a kind of framework for it to operate more effectively? Because communication is just depending on the will and fancy of people and their will but we have a framework, which is part of why we are here today, coming to some consensus on a framework and a policy document moving forward that we can develop and evolve the collaborative—which is what I am thinking member West is thinking—in a formalized way so that all can contribute to the well-being of the country at large.

Dr. Van West-Charles-LeBlanc: Sorry, we have to get—for example, you asked how organized we are. So Mr. Franco has an organization that he has formed a couple years back but as he said, not many of us are part of that organization. So we have to establish as members of the complementary world—

Mr. Chairman: Can I ask why you are not part of it?

Dr. Van West-Charles-LeBlanc: Because I did not get his memo. [*Laughter*] And you know, it has to be that we have recognized institutions from which you graduate from for certification and also the medical board and the medical fraternity, it is going to take a while for them to—despite education and communication, the ideal will be that they will be happy to communicate and understand that it is not either/or and we can help, but it is going to take a while for them to accept that communication. I am doctor and I could tell you it took a while for my colleagues to accept me as what I do in terms of bringing the two together. So the framework has to be the certified institutions and universities for natural medicine and then once we have that and we know who we are registering, also liaise with the medical board and say we are not going to be

doctors but we can help and how can we communicate? So that it is about the health of Trinidad and Tobago and the Medical Board can communicate with, dare I say, the board of natural medicine.

In the States, for example, there is the American Herbal Society or American Herbal Guild. So if you were a certified herbalist, you have to put your papers forward and you have to be approved and then you are recognized. There is the acupuncturist guild. So, you know, these things exist in the First World and so we can create that framework and we do need to create that framework. It is not going to happen overnight.

And the medical fraternity does also have to—they are trying to come on board— and what doctors think they are doing—I mean I love my colleagues dearly—is by just prescribing black cohosh or prescribing evening primrose or prescribing whatever they hear is the latest fad as being holistic and there is more to holistic medicine and complementary medicine than that, and that is what we have to communicate and explain to them. So I do not just sit down and say "Oh you have this, lemme just give you that". That is not how it works. So we have to educate them, dare I say, educate them and communicate and be willing to hear from them and understand that both sides have side effects. Both sides, but yes, we have less side effects in the complementary world and we can do that framework, communicate and truly, if we care about the health of Trinidad and Tobago, we can make that happen.

Mr. Chairman: Member Hosein.

Mrs. Newallo-Hosein: Thank you, Mr. Chair. You know, doctor, you are saying that—you have answered straight into my question here. You know that there is this feeling that there is a natural distrust between the fraternities that you are speaking about and it extends now to the population because you feel as though when you go to a medical doctor—and I am not stating this as fact, okay; it is in fact a question. You feel that the symptoms are being treated as opposed to the problem and therefore when you go to a herbalist, when you go to source holistic treatment, whether it is cupping, acupuncture or what other means that there are available, that the problem is going to be addressed because the herbalist, the natural medicine practitioner is looking to enhance your well-being of life and to extend your life whereas on the other end, it is a matter of, well, you know, you have to pay for my education. [*Laughter*] And you hear it on the ground, eh. I am being very real here. So, you know, is it because of this natural distrust that hinders the working together because I believe that the complementary technique going forward

is necessary for the population but I cannot say, you have to say as the medical doctor and probably the practitioners that are present here.

Dr. Van West-Charles-LeBlanc: I mean I am a doctor, I studied in Cuba. My medical training was completely different to some of the training that I have heard about. As a physician in Cuba, the first thing you learnt was what was the definition of health, which was the balance of body, mind and soul. Some practitioners may not practice that in the western world. I do not think it is due to their lack of training of it but I do hear that, you know, you have to pay for my degree.

There is distrust of western medicine. The doctors have a distrust of the herbal world because it is so extensive, they do not know about it, and so they would rather say—and I have had doctors who say, "this will kill yuh, that will kill yuh". They do not understand the dosing, they do not understand that there is a science behind it. So there has to be a lot of talking, a lot of education but we can start the process. And as stakeholders, they have the right to come and say, you know, "I do not want this because" and then we as the certified ones can also say "But look at how this works", so that we have to communicate. We cannot communicate between the patients anymore. Because I have patients who will go to the specialists and they say, for example, "I have this and my herbalist gave me that", "I want to hear nothing about the herbs, the herbs will kill you", whereas it does not have to be like that and the individual now is in a quandary and they have to now make a decision over their health when we are both professionals who are supposed to guide this patient along that road to optimal health.

Mr. Chairman: But you have to also have a repository or a list of alternative and complementary practitioners that you trust and you have faith in that is above board. I want to bring Mr. Ramkissoon in on this because very often we think of cannabis in one light and cannabis has quite varied applications from my cursory interrogation of it and that does not mean smoking. [*Laughter*]

Mr. Ramkissoon: Just before I touch on the cannabis issue, just a few points that were brought up if I can. Again, regulation is necessary and taken in with consultation from alternative medicine practitioners. As we have heard, these persons already have a board, an association in place. One of the biggest points that was brought up just now was making sure that the persons that are able to practice in the future with legislation would have come from accredited institutions and therefore their certifications and such would be accredited because there is a lot of—complementary medicine is very wide. There are things ranging from masseuses go right

up. And when it comes to the actual supplements, that is the bigger part.

In my opinion, regulating our complementary medicinal practitioners is the easy part. Setting up an alternative board, not self-regulated, they will have to report to Cabinet and so forth and all these things and abide by certain rules. It is more the products as Mr. Franco correctly pointed out. A number of products are allowed in our pharmacies as herbal supplements, as I was discussing this morning also with our herbalist and there are a number of products that are not. One of the reasons that a lot of products are not allowed is because they are not able to be standardized. Right. They are compounded mixtures, some are even single plant products but because of the lack of the ability to standardize and therefore not illicit proper dosing mechanisms, these products would not end up in pharmacies.

Bringing that back to the cannabis issue, cannabis as a plant itself which is not prescribed in most places, it is recommended by physicians. The reason for such, as we have discovered, is just as I said, you cannot really standardize a plant until you put it in capsules and all that if you can. But in the format that cannabis is normally dispensed under, it is not usually in the format of capsules and so forth. There is, but it is usually flowers, it is not one cannabis or one marijuana. It is thousands of strains that exist and you find that each one with a different cannabinoid profile, meaning the varied ratio of the THCs, CBDs and all these things within it produce different therapeutic effects.

And because it has been illegal for so long, the lack of the availability to study it properly—there are a lot of studies. I have put forward a written submission to you guys, I hope everyone here had gotten it, but I had followed that especially with some four main classes of non-communicable diseases, how cannabis would work in treatment and in support of and I followed it with more pages of references than the actual write up, and this was because one of the biggest questions posed to me by the medical fraternity, by persons within your positions, is: Is there the research to support this?

One of the things I would like you to look at if you access that document, hopefully through you guys, is that most of the research that I produced was stuff that was done between ’99 until present. It was not taken into account a lot of the older research because this is why persons do research. We learn more and more every day. We learn that different things can affect persons in different ways.

11.45 a.m.

Mr. Ramkissoon: And we still do not know half of the stuff that happens within our own bodies. So we are constantly learning.

In saying so, we could not, just for example, in Antigua, allow—and it was one of the main questions raised by the pharmaceutical board and the medical fraternity—we could not put cannabis into the pharmacies in its raw form. So we have decided that we have labelled and we have created the description of prescribable and non-prescribable cannabis, and prescribable cannabis would end up being—and I think this can apply to all the herbal supplements and the herbal medications that we are talking about now that are presently not allowed for various reasons. Prescribable, meaning that it can be put into a standardized format and therefore prescribed by the medical practitioners, as are allowed in the Pharmacy Act, in the Medical Practitioners Act and everything we have in Trinidad to go along with those things.

Outside of this, the complementary medicine persons in this regard for herbal medicine, when they form their association, they should be able to recommend. Again, internationally, complementary medicine practitioners are not allowed to prescribe traditional medicines. So they can recommend their herbal supplements to which their—again, as they have all produced for you that has much value. But some persons will be better than others. Just as the case with medical doctors. And there needs to be some level of oversight and a penalty system in place to ensure responsible dispensing. You do not want to go to a practitioner who says, "Okay, I am qualified. I am signed up by the board and I have a certain formulation", and then that formulation damages the person. That person needs to be held accountable. So those things and those measures need to be taken into account when you are drafting the regulations towards complementary medicine on the whole.

Cannabis in its own form is a little bit different. So just to give you a quick example of what we have done in Antigua and what the system follows internationally so far, be it Canada, the US, and so forth, they have taken cannabis, well, not put cannabis into the pharmacies. They have allowed specific cannabis dispensaries because of the noxious smell, because of a number of factors, and again, mostly because it is non-prescribable.

The international community, the IMCD, recommends that you issue a recommendation, as opposed to a prescription. We have gone with that direction. And we are only allowing medical practitioners in Antigua to prescribe. And we are allowing medical practitioners, again, to recommend. Once they recommend, and it is cannabis that you are looking at, there would be

a special dispensary you would go to that would carry the products and there would be a certified special dispenser. Once that person is certified by an authority that is set up within the government—so again, it is all government-regulated; it is not self-regulated. Self-regulation should always be guided by the authority. The authority should always be a government body. Right, so that we do not allow things to go anyway out of line; to answer your question, Sir.

Mr. Chairman: All right. I want to push us a bit deeper into the abyss now, the official—[*Interruption*] please, if it can be quick.

Dr. Mayers: We use terms like "standardize", right. We use it loosely. I, having walked in both fields will just make a point. We were making a skin patch to carry estrogen into women who had menopause. The companies that we were using closed down. So we sent and we ordered four or five samples from four or five different companies, all standardized, and we put it into the patches and none worked, and what we had to do was to go through something like about 35 companies, until we found one that worked empirically, and we did not know why it worked over the others. So we use terms loosely, having been in trials, where you say you are putting trials into—you know, drugs on to the market and what are the trials that are done, and what are the mathematics and things like that. I could tell you that that is not as scientific as we think it is, and I spent 12 years in that business, right at the top.

I think that, as a Third World country we have to be very careful when somebody comes along and says "standardize" or thinks that it has a meaning because you are dealing with molecular theory and things like that, which is in its infancy. So whenever we use something, do not be too sure that you are saying something and that it means what it says. Because experience has proven that to me over and over and over.

The other thing about it is that you have, you say, "Well, why is it that more people are going to alternative medicine"? It is very simple, a lot of the drugs that they have on the market have a tremendous amount of side effects and so what they do is they come in—I have people all the time—they come in and they say, "Hey, I doh want to take all this stuff". "Do you have something that could replace it?"

And you also have another problem and the problem is sometimes that the practise that we are doing does not keep abreast with the discoveries that we have. I have somebody who would come to me and say, "Hey, I have a swollen heart and the doctor says there is nothing they could do about it". "They have given me some medicine." And I say, "Oh? But that is

very easy to get rid of". "If you use these supplements, it will take about two or three months and the heart will go back to its normal size and the valves that are faulty, 90 per cent of the time they start back working." That is in the western medicine, and you have doctors saying that it cannot be done. So you have a whole contraindication going on. And when you at look at it, one of the reasons why people come to—because they come to me all the time and they say, "Look, I eh taking dis and I eh have no energy and ah cyah do dis and ah cyah do dat", you know. And so you start treating them. You start treating them and they see results that they could not get from the western medicine and then, of course, they go and tell all their friends. And then you have all their friends coming in. I always make a claim, I have been doing that in my little TV show and radio show, that 90 per cent of the medicines that we dispense in this country are thrown down the drain.

Mr. Chairman: We have 25 minutes and I want to get through to objectives. The overarching objective is the use of CAMs in non-communicable diseases. And I would like your comments on that. And I also want to get to the role that tertiary institutions in Trinidad and Tobago should be playing in this process. Right? So let us start with anyone who wants to jump in in the non-communicable diseases, the diabetes, the cancers, et cetera. Because I think we have laid a pretty strong framework from everyone's perspective and where this should go, where it is now. So let us be a bit more pointed now, in terms of what exists now, from your research, knowledge or practice in the non-communicable disease sphere in Trinidad and Tobago.

Let me start with the lady with the most cosmopolitan name I have ever seen in my life, which just occurred to me, Asante Indira Van West-Charles-LeBlanc is quite cosmopolitan.

Dr. Van West-Charles-LeBlanc: African, Indian, Dutch and English.

Mr. Chairman: Everything.

Dr. Van West-Charles-LeBlanc: And French. Yes, I have. I do use CAM for non-communicable chronic diseases. I tend to do it more complementary. It does depend on the grade of the non-communicable disease. So hypertension, for example, it depends on which stage it is at, that you can see a difference doing the holistic alone, or both, bringing them complementary.

It should be noted that every single lifestyle disease starts off—step one of treatment is lifestyle modification, which is nutrition and exercise. And then you can implement the CAM with that. But I monitor my patients and I am able to monitor them because I am a medical

practitioner. This is where we need the communication to see, are you really benefiting from this lifestyle, or do we need to add and be more complementary and bring in pharmaceuticals.

Mr. Chairman: But it is interesting you say nutrition and lifestyle because from my research, lifestyle is CAM in a lot of ways.

Dr. Van West-Charles-LeBlanc: Exactly, exactly. So, I truly believe that we do use CAM for chronic non-communicable diseases and it works.

I am a member, I am the Vice-Chair of the Trinidad and Tobago Cancer Society. I do not advocate to patients not to follow their oncologist and to abandon traditional oncology for the hope of herbs, healing and curing the cancer. I do advocate for using both. And Chinese medicine, we have the branch where we do both. So we do the acupuncture and the herbs, along with the chemo and radiation and the patient will survive.

Tertiary institutions, they need to do more. They need to bring it into their medical curriculum. So that the medical practitioners are at least aware of the existence of this branch of medicine.

Mr. Chairman: My comment about tertiary education was more about along the line of research. Many of the stakeholders before us have spoken about their international experiences in certification and qualification and I do not get a lot of, for lack of a better term, noise in Trinidad and Tobago about research being done or championing of—

Dr. Van West-Charles-LeBlanc: Dr. Compton Seaforth is a major force with research and development. We need more noise. I do not know how we are going to get more noise because research and development needs funding. So, we do—

Mr. Chairman: He is a member of which institution?

Dr. Van West-Charles-LeBlanc: Dr. Seaforth used to be with UWI, but I do not think he is there anymore. I think he is actually retired now. But he was heavy into, dare I say, he was instrumental in bringing to the forefront the use of soursop for breast cancer. So he was doing a lot of research at that time. So we do need more research and development in Trinidad and Tobago. And I think small baby steps where that it is concerned will help because there are very simple things that can be done but we do need to implement this.

Mr. Chairman: Member Sinanan.

Mr. Sinanan: Welcome again to the panel. What percentage of your clients you would say would be visiting you at probably the end of a stage of an illness, meaning, your client as a last

resort? Because you hear a lot of people say, "Okay, I am going at the herbalist, visiting this practitioner". But it is as almost a last resort, because they went to the traditional doctors and they would then resort to you. What percentage of your clients?

Dr. Mayers: 70 per cent.

Mr. Sinanan: Seventy per cent. So, are you saying that as a population, we have not accepted the fact that herbal medicine is really the first option?

Dr. Mayers: For some people, yes, and for some people, no. Some people, they might be in an insurance and the insurance demands that they go to the western doctor. And they reach a point where they do not want to do that anymore and they go to the alternative doctor.

But I wanted to make a point. You mentioned diabetes. We know that diabetes, the big cause of that is the use of hydrogenated oil. Right? When you say that you have a thing, one of the things that surprises me is that nobody in any of the doctoring would get up and say, "Let us petition the Government not to bring in hydrogenated oil". "We could lick the diabetes problem in 10 years." You know, that is the main cause of it. So, you find that you have a disconnect between what is causing sickness and what we regard as health, you know.

There is a whole lot of stuff going on with glyphosate and there are countries that are banning it. I just read a report where Macron is saying in the next year and a half, they are going to do away with glyphosate because of the problems that it is causing We do not have those kinds of discussions here. It is like we just bumble along, you know. We have our chicken and the chicken is loaded with steroids and all kinds of things, because that is what everybody else is doing and nobody says, "Well, listen, let us stop that". We are a small country. It is very easy to stop that and bring back health. And if you have to raise the pound of the chicken by 10 or 15, 20 cents, do that and then we will have healthy chickens. And you could go through a whole lot of stuff. Right? You have sprays like 2,4-D, which alters the sexual orientation of anything that it touches, including men and women. We have all these things. I have my show and I am always talking about them but nobody takes me on.

I was pointing out the other day that National Flour Mills has a hydrogenator and I said, "Why would you hydrogenate the oil"? "Bring it in and use it." And I got a phone call from the plant saying, "We doh hydrogenate it anymore, because we had a fire". "So what we do now, is we bring it in from outside." It is interesting to note that President Trump, at the end of June, passed a law that any food that is manufactured in the United States to sell, must not contain

hydrogenated oil. There was a little, little piece mentioned in some of the more obscure things, but it was not out on the front page.

Mayor Bloomberg, when he took over New York, the first thing that he did, he said, "I cannot ban hydrogenated oil from everybody but I could ban it from the restaurants". So he went and he banned it. He had the clout and the money to do that. We are looking at health in a very narrow way. Most of the times, the problems that we are having start with what we eat, what we spray on the products.

Long ago, you had people used to go into the markets and patrol and check the amount of spray on the things. Nobody does that anymore. So I am saying, if we are looking at this thing and we are looking at alternatives, you have to look at alternatives in terms of, not sickness, but how do we keep the health of the country. That is really the point I am making. And we have a lot of things that we are doing which are making us sick.

Mr. Chairman: Member Jennings-Smith, go ahead please.

Mrs. Jennings-Smith: I listened to your stories because you have a lot of stories to tell. I like to listen to stories. In one of the stories you said that you paid to do a testing where the return was much lower.

Dr. Mayers: Higher.

Mrs. Jennings-Smith: Was much higher. But what I want to know is: What happened afterwards to that particular patient?

Dr. Mayers: We took the reading that was lower, which was what I expected, and we continued treating him. At the end of the next month, his PSA had gone down to one-point-something. But that is a regular thing. I am not talking about something that happens once in a while. It is a regular story. You would get one ultra sound and the ultra sound would say this person has cysts, and you go to another ultra sound and the ultra sound says nothing is wrong, because there is no—

Mrs. Jennings-Smith: I want to piggyback on my colleague's question because I am not satisfied with the answer. I think we want to get an understanding of the quantum of patients that you would have treated and the ultimate result, the survival rate, thank you.

Dr. Mayers: You cannot do that. You cannot come and say the survival rate. You are not dealing with a thing that you are going to break and you could measure it.

Mrs. Jennings-Smith: Well, maybe survival rate is not the correct word. But what I want to

know is the results of some of the patients, like how many patients you would have treated over a period of time—

Dr. Mayers: My office is always full.

Mrs. Jennings-Smith: —yes—using your approach.

Dr. Mayers: My office is always full and it is always full because people get results.

Mrs. Jennings-Smith: Thank you.

Dr. Mayers: All right?

Mr. Chairman: Dr. Hazelwood has not been contributing in a while about the issue of non-communicable diseases and your practice.

Dr. Hazelwood: Yes, Sir. I think again we go back to, if we do not get the right education, you know, I am just looking at a book here. We have two books that you can get information from, masterpieces. That is the one by Bastyr, and, of course, the Encyclopedia of—yeah, Natural Medicine and British Pharmacopeia. Now, researches were already done. All what we are doing here now is just beating around the bushes, really. All the herbs that you find in the market, in the world today—

Mr. Chairman: Well, I disagree that we are here beating around the bushes. Let me put that on the record.

Dr. Hazelwood: No, no, no, no, no.

Mr. Chairman: We are not here beating around the bushes.

Dr. Hazelwood: When I say beating around the bushes, I am sorry about that statement. But what I mean by that is we can go up and down until we get the facts, this is what I mean, you see, the scientific facts. And the scientific facts were already there. All we have to do is to get into understanding that many of these herbs or alternative medicine, they have proven themselves as good. And people have attested. Because, we have a lot, as I said, so much information out there; so many people who are totally satisfied, like Norman Cousins, I think is one that you should probably look up. Norman Cousins, he cured himself from incurable disease by laughter. You have meditation now—all these are medicines—you have relaxation, you have self-awareness.

Mr. Chairman: Dr. Hazelwood, if I can, we are not doubting the potential of this in any way, you know. So I understand that you are advocating on behalf of the CAMs. We are here because we know of the potential—

Dr. Hazelwood: Okay.

Mr. Chairman:—and the success rate. So there is no need to try to convince us about the power of this. What we are trying to do is ascertain what is the way forward in Trinidad and Tobago. We are not doubting this. Nobody should think that we are doubting this. We are here because we want to hear from you the stakeholders about one—and the anecdotes are great. But what is the way forward where this is concerned?

Dr. Hazelwood: Yeah, the way forward is education and to get the public, the people to understand, also the Government to understand too that the approach, the natural approach, the herbal approach, can save the country a lot of money. Once we educate people and we get people to testify, we can have an assessment island-wide, how many people are being—and then, of course, we can give a better record of progress. But just to say well, how many people have been getting results, I can say in my practice 90 per cent. But I do not see them all the time. You see, sometimes they probably go to other places. Dr. Mayers was just telling me that he has lot of my clients.

Mr. Chairman: Well, if they are getting better, you are not going to see them, eh.

Dr. Hazelwood: Eh?

Mr. Chairman: If they are getting better, you are not going to see them.

Mrs. Newalo-Hosein: Thank you, Chair. I just wanted to ask the question and come back to a statement that you made very early, Dr. Mayers.

First of all, during a public hearing convened on June13, 2018, a lecture in pharmacy, the University of the West Indies submitted that alternative medicine has an 83 per cent effective rate, while traditional medicine such as antibiotics has an 87 per cent effective rate in the treatment of non-communicable diseases. So the question really is: "How do you measure or gauge the effectiveness of your treatment as it concerns whether it is hypertension, diabetes, cancer, et cetera? How do you measure it? Because at the end of the day, for us to move forward, there must be credibility and that is what we are trying to establish. We are not trying to shoot down anyone. We are trying to establish how do we measure it so that there can be a convening of ideas to come about and say, "Look, we need to have both traditional and non-traditional medicine coming together to go forward. So this is what I am asking, really and truly. Thank you.

Dr. Mayers: I could answer that by saying if you take cancer and the cancer patients that come

to me, most of the time when cancer patients come to me, they are in stage 4. Right? So it means I have to try and pull them out of stage 4. A lot of the diseases that come, the more serious diseases, they come after they have been to the western practitioner. That is what happens. As I said, you know, people come to me with their big bag of pills and they say, "It is not making me better". "It is making me feel sick. What can we do?" I am then caught with having to say, "Well, okay, this is what we do". So that, it is very difficult to put a—

By and large I have a good success rate with treating my patients. I have that because I always get recommendations. People come into my place and they say, "Oh, this guy down the road here, he had a bad back". "He came up here. He could not walk and he went out." Because the way how we treat that kind of thing is totally different from western medicine.

So I would say, on that basis, we have much more of a success than western medicine. We do hands-on treatment. That is different from, most doctors, unless they are probably—

Mr. Chairman: Without being insulting in any way, I think the member is asking how do you quantify that.

Dr. Mayers: Well, I am trying to explain how you get around there.

Mr. Chairman: Because you are saying good and one—maybe I am not understanding your methodology and that is what it is.

Dr. Mayers: Well, the methodology is that when you are dealing with people you are saying—you have to take into consideration what you are doing, the stage that it is in. If you say, "Well, what is the success with cancer"? I would say very bad, very bad, because I am always dealing with stage 4 patients and I am also dealing with a lot of non-compliant stage 4 patients. Right? So, I have to explain that to say why it is bad. If I had stage 2 or stage 3, I could do pretty good. I probably do better than chemotherapy and radiation. So that you are caught in a question that has so many open-ended differences.

Mr. Chairman: It is not as straightforward as that.

Dr. Mayers: Yes, you have to try and—

Mr. Chairman: Dr. LeBlanc and then Mr. Franco and Mr. Ramkissoon, please.

Dr. Van West-Charles-LeBlanc: I think what—this is where the communication between the medical practitioners and the complementary practitioners is needed. Because then, if you are treating hypertension, if you are treating diabetes then the proof in the pudding, the quantitative results are seen with the medical practitioner who you communicate with, doing the follow-up.

We have the blood sugar diaries. We have the HbA1c levels. We have the blood pressure diaries. We have the end organ disease, so we can do the lab test. We do have to use, and they are in the process of making sure the labs are standardized because we have to have labs that give proper results.

As a medical practitioner, I have seen labs giving me erroneous results. But you do have to quantify it. So if I have a stage 2 cancer, then after treatment, with both chemo, radiation and Dr. Mayers or Dr. Mayers alone, the oncologist has to follow-up. So there is the scanning and that will be your quantitative result on how the CAM is working hand in hand with the allopathic medicine.

Mr. Chairman: Well said. Mr. Franco.

Mr. Franco: Right. So there were a number of questions happening. So one is the distrust between the modern medicine practitioners and pharmaceutical companies and natural medicine practitioners, and so forth. I think, to bring them together, you really have to have political will at the top, and that has to guide. For instance, when we look at China, over 50 years ago when they found themselves in a bad health situation, Mao implemented training for doctors and Chinese herbalists to coalesce and work together and everybody was trained in modern medicine as well as in Chinese traditional medicine. So I think the political will has to be at the top to guide and facilitate this coming together. Right?

Self-regulation, I think for the practitioners, can work at this stage, but there will always be a problem. Right. I want to go to the massage therapy. Massage therapy has an Act passed to control massage therapists in Trinidad and Tobago. Right. I believe in the Act, they could stop somebody from massaging somebody, call the police and things like that. I do not know if it is like that in Australia. A herbalist who is not registered in Australia, he could practice, but he may not get the clientele because he is not registered and he does not have the health benefits for the insurance companies for his clients, and so forth. So I do not think you need to "lock anybody up if dey are cracking somebody back in de country somewhere and things like that." Right?

Mr. Chairman: But if "dey crack somebody back and dey die, they need to lock them up".

Mr. Franco: And if I want to give you some orange peel tea over the fence and give you some orange peel over the fence, "you cyah lock meh up fuh dat", or give you some soursop leaves.

Now, success rate, I get asked that question all the time: "What is your success rate"?

"You going to fix me? You going to help me? Wha is yuh success rate?" My answer is: "My success rate is about 99 per cent, with patients who do what they have to do and are persistent, because nothing is going to happen overnight", right?

I just want to touch on another thing that you asked, and that was the question where CAM for non-communicable diseases. Of course, CAM works or natural medicine works wonders in non-communicable chronic diseases, as well as acute diseases, right. And the thing with it, in these chronic diseases is because it gets to the core of the problem. We are looking for the causative factors of these chronic diseases, unlike what we do in this "sick care" system because it is not a health care system that we actually have. We have a sick care system that promotes sickness. Right?

We have CDAP. CDAP, I think, is one of the worst things they ever came up with. Because they are giving free medicines. Most of these medicines are thrown away. I see people get them, they say, "Well, dey give it tuh meh but I do not want tuh use it", and they take it and they dump it. And they still go and take more the next time when they give them. So CDAP, what CDAP does, it tells you, you have chronic disease. Your disease is incurable. But chronic disease does not mean that your disease is incurable. It means it is chronic, it is long-lasting, it is more than acute, it is over six weeks in period, right? But people get the idea that a chronic disease is incurable. And the reason is because modern medicine is very, very poor at treating it, because they are not going at the causative factors, right?

Then you give somebody these free medicines and say, "Here, you have hypertension or arthritis or diabetes". "Here is your medicine. Take that until you die. Just keep coming and getting it." Right? They do not give them any lifestyle changes, nutritional counseling, mostly generally in the public sick care system.

Mr. Chairman: All right, let me just make an intervention. It is 12.14 and there is a Sitting of the House at 1.30. So, we have to look to wrap up now. I will let Mr.—I am sorry for the abrupt interruption to your contribution, Mr. Franco. Mr. Ramkissoon, the communicable disease issue and then we are going to ask each of the stakeholders who have kindly consented to be with us today, to make some short winding-up comments and then we can wrap up after that. Thank you so much.

12.15 p.m.

Mr. Ramkissoon: Okay, thanks. So, now that we are at the end of the discussion, I will try to

bring at least—we have heard from all the complementary medicine people, I will try to bring it back a little bit to cannabis which is my area of expertise. Within communicable diseases, again, just to make it short, I hope that all of you have a copy of the thing I have put forward. So—which means you will be able to see from that that yes, within cancer, diabetes, hypertension, cardiovascular diseases, there can be used in a wide different—there are a number of different ways that cannabis, either from isolated compounds, from compounded compounds, from pure plant extracts, from the pure plant itself—and yes, even to tell you Mr. Chair—from smoking and from inhalation, which is also a valid method of medicinal treatment through cannabis. So that is to answer your question, yes, within all communicable diseases and non-communicable diseases there exists a wide array of treatments using cannabis.

Just drawing back quickly, if I take three minutes from your last meeting, can research be done on questions that were raised here? Can research be done into cannabis and other health supplements? Yes. Do we have the resources, the persons, the facilities? Yes. Everything, all of these things need to be guided by regulatory oversight from our Government. Whatever Acts or regulations that are put into place to guiding—coming forward and going forward—to guide the alternative medicine framework, again, just make sure there is accountability on the level of the individuals that are going to be recommending, not prescribing these medicines. So that, in case they prescribe or recommend something wrong, again as you said, you could lock them up because that is public health we are talking about, and persons.

Mr. Chairman: You could pass them through due process and then if they are found to be culpable, lock them up. This is going to be broadcasted, do let us be correct.

Mr. Ramkissoon: I am just trying to be quick here because I know you have to wind down.

The cannabis part or the medicinal cannabis part should not be placed under a complementary medicine Act or regulation. It should be a totally separate form of regulations and/or Act, if we want to go in that direction. Why? Because, it is still a scheduled substance, and as far as my best information shows, even after the special assembly next year on marijuana, THC will remain a scheduled substance. And because of this we have to look from now, foresight is very important, into doing regulations to see what we should do and draft from now and going ahead.

We can communicate in terms of cannabis, we can communicate easily with the International Narcotics Control Board and make sure that the regulations we are putting forward

are under and compliant with those international obligations that we have. This is what we have done in Antigua so far, and so far so good. I have not had an approval yet from them, I am waiting to get them approving our proposals that will be a better thing for the document going forward.

In cannabis itself, a lot of the countries were looking at making a lot of revenue from the medical industry. Again, heavy regulation is needed. We have seen Jamaica, Jamaica has set their law three years ago and they still have not exported, made a big hoorah the other day about their first export; it was only three grams. Right now, the ministers can tell you, we can export three grams, right, as a research sample. They were not able to export any large amount because they did not have—they did not meet HACCP protocols, hazards and control protocols and so forth, and/or GMP standards. So when they had their big set of products everybody was waiting, kilograms and tonnes, they tried to export it and the importing country said no, you are not meeting standards for a scheduled product.

So this is why, again, informing any regulation, any Act, you must take into place, which are there plain for us to view, the international guidelines and so forth.

Mr. Chairman: We are going to have to leave it there. Mr. Ramkissoon, if you could wrap up please.

Mr. Ramkissoon: Yes, in terms of the research in Trinidad, there is a Dr. Farid Youssef, you guys are welcome to look him up, and he has been doing research on marijuana, FARID YOUSSEF, he has been conducting research on cannabis in Trinidad legally, with the approval of the Government—you all need to check that—for the last 15 years. And he is working with School of Medicine, UWI, so therefore they should be aware of this. He is published. There is no GMO, genetically modified cannabis, I corrected that earlier with the herbalist.

And finally, you all asked on the last consultation for a policy position paper. I would like you all to enforce that you all get a policy position paper from the Ministry of Health on cannabis and especially CBD, because it is being sold right now in pharmacies and popular pharmacies in Trinidad. It is being brought in and distributed and I can confirm for you that the Drug Inspectorate has not inspected any of these products which means they should not be on the shelf. I have taken—I have bought the product, taken it with the receipt to third floor, Drug Inspectorate, the head of, and she has given me back the receipt.

Right, and I had to ask if I brought cannabis, if I would be—if you would call the police

or if you would give it back to me. So, something is happening, I went to the CMO, I was directed to the CMO, and the acting CMO said to me, they could not answer the question. I was invited to a public health consultation in the Ministry for cannabis about a month ago. [*Interruption*] Sorry—raised the question it was not answered. That is about the end of my contribution towards that. Thank you.

Mr. Chairman: But that is the way it has to be, sorry about that.

Dr. Van West-Charles-LeBlanc: Yes, we do need regulations and the framework has to be set in place. The herbal subcommittee with the Ministry of Health, should be supported in terms of helping with the regulation of the herbals coming in. And we have to have constant communication and education of the medical fraternity so that we can truly help the population of Trinidad and Tobago via using both sides and both branches of medicine.

Mr. Chairman: Thank you for your conciseness. Dr. Gaskin Mayers.

Dr. Mayers: I think what you all did here this morning was quite good. You know, it is the first time I have attended anything like this. Keep up the work. We have communication problems in that sometimes people ask me questions that I am fighting to answer it based on shared experience, and for somebody who does not have that experience—and that sometimes could be a bit problematic. So, all I would say is keep up the work. You want to invite me again, I would be willing to come and sit and meet again.

Mr. Chairman: We may certainly do that. Thank you so much. Dr. Hazelwood.

Dr. Hazelwood: Yes, I agree with Dr. Mayers here. In my opinion what goes around would come around. And I think that medical science is probably on its way out. Because based on my experiences with oncologists coming in to me, yes, practicing oncologists told me, "It is not working, but we cannot do anything about it". See, and many other practice—many things, I had colleagues abroad who told me they would have a welcome back party for me, they all died. And they died from the same disease they were treating others for.

So the thing is that, what is missing if we leave out laughter, meditation, awareness, certain exercises, Chi kung, Tai chi and all these things, and diet, we would be spending a lot of money bringing in things and not getting the results and a healthy society that we really want. So, this must go in, vibrational medicine, must play a very important part, it is like the man who says he went to the doctor and the doctor says you are 80 years now, what do you expect? His right leg was hurting and the Doctor said—

Mr. Chairman: Ten seconds, Dr. Hazelwood.

Dr. Hazelwood:—you are 80 years, what do you expect? He said, but the left leg is 80 years too, but it does not hurt.

Mr. Chairman: Thank you so much. [*Laughter*] Mr. Franco.

Mr. Franco: Yes, so thank you again for the opportunity. I have been submitting things to the Chemistry, Food and Drugs Division and the Ministry of Health for almost 20 years. So, I did another submission here for you all, a very quick one, because I only got the notice on Friday. And I submit that we should have some self-regulation in the industry for the practitioners. We need to have some regulations on advertising and what people could say on the various media, right. There are some practitioners that, I think the medical boards could take action. I do not know why they are not taking action. There are people who are using intravenous things, they are not doctors and they should not be using needles and things like that.

As far as products, I do not think we need to over-scrutinize products that are really coming from developed countries, that are being sold in those countries, that they have GMP, good manufacturing practice—stuff like that, when we do nothing about the local products that people are putting up, very unhygienic in some stores and that is a real issue. And I propose that the listing of products, so products coming in from abroad, we need to have a database on them. Right now there is no database on the products that are coming in. They look at your entry, they stamp, they deny, whatever they do, but there is no database. You cannot follow it up and if we are looking at safety—

Mr. Chairman: Fifteen seconds, Mr. Franco.

Mr. Franco: We need to have an adverse reaction hotline. People need to know if something happens to them with a product, a health product or pharmaceutical product, there is somewhere to call and register that complaint and record it and if there is a number of that happening then something is wrong with the product and—

Mr. Chairman: A good suggestion. But we are going to have to leave it. Mr. Franco, we have to leave it there.

Mr. Franco: —you can investigate it and they can find on the database who is the importer of the product and they can make their necessary calls and so forth. Thank you very much.

Mr. Chairman: Thank you so much. Mr. Ramkissoon.

Mr. Ramkissoon: Again, thank you. And again, once we are doing, once you guys are looking

at oversight regulation and Acts to guide the industry, please make sure there is accountability as I just said and as Mr. Franco said. And do realize that there is no need for foreign consultants if you have—in any industry, whether cannabis or not, if you have locally qualified persons that are as qualified or more qualified than the foreign experts. And please do, when you are forming the draft regulations and your Acts, please do consult with—again, in the complementary medicine seminar, with the complementary's people, and with cannabis, with someone like myself or someone that is qualified. And again, thank you guys for having me, do have a nice day and thanks.

And I think, I can speak for all of us saying that in a consultation of this size there must be a lot more questions that you must have. I do believe all of us would be available, if you want our contact information to contact us at a later time, on a personal level, so that you can have more questions answered if you want. Thank you.

Mr. Chairman: Absolutely. I want to take time to thank all of you for coming here today and sharing with us your experiences and your expertise. It was greatly enlightening to me and I am sure I am speaking on behalf of the entire Committee, we appreciate your presence here, and thank you so much. We also want to thank members in the public gallery and media and those of you viewing and/or watching when this is broadcast.

Thank you so much, this part of the meeting is now adjourned.

12.25 p.m.: *Meeting adjourned.*