

WHAT DOES A **BAMS** GRADUATE DO?



Information to Students, Parents and Citizens

Many people want to know what BAMS course is about and what can one do after having the degree.

It is an official course that aims to provide the graduate basic knowledge and skill related to Ayurveda medicine and allied health care sciences.

**Talk about Strengthening and using BAMS graduates for
Better Health Care Delivery System**

NOTICE ? BEWARE

- This slide contains figures of minor injuries and minor surgery which might upset unaccustomed or vulnerable persons or children.

? Adult Issue



SUMMARY

- Many people want to know what BAMS course is about and what can one do after having the degree.
- It is an official course that aims to provide the graduate with basic knowledge and skill related to Ayurveda medicine.
- In addition to this, a graduate will have working knowledge and skill of modern medical science and they will also practice this for the management of general health conditions like emergency or acute conditions.
- A BAMS graduate also has the knowledge and skill related to yoga and naturopathy.
- The demand of competent BAMS graduate is increasing in the recent time- in health care (medical) practices, in teaching, in research, and in health care management.



DO YOU KNOW?

- Ayurveda medical tradition
- History of Ayurveda (Past)
- Its Present Scenario
- Its Future
- Its – Uniqueness, Strength, weakness, options/opportunities, threats



.....

- Know That:
 - The demand of Ayurveda and Allied health care sciences has been increasing in the decade. There is demand of integrative medicine.
 - The demand for its rigorous scientific testing is obvious.



MANY PEOPLE WANT TO KNOW ABOUT BAMS

- Requirement in candidate
- Aim of the course
- Course duration and syllabus
- Internship
- After Graduation
- Further studies
- Some prime duties of Medical Officers Primary care centers
- And others



PRIMARY CARE PHYSICIAN प्राथमिक चिकित्सक

- BAMS, MBBS ... आदि प्राथमिक चिकित्सक हुन् जसले आधारभूत स्वास्थ्य सेवा दिने गर्छन् । आवस्कता हेरी बिरामीलाई सम्बन्धित विशेषज्ञ चिकित्सक वा सुबिधा सम्पन्न केन्द्रमा प्रेषण गर्छन् ।
- विश्वका विभिन्न देशमा यस्ता खाले फरक फरक पाठ्यक्रम बनाइएका छन् । यस्ता चिकित्सकले आधुनिक वा परम्परागत वा दुवै मिस्रित औषधि, विधि तथा प्रविधिको प्रयोग गर्छन् । कुनै पनि औषधि र चिकित्साको प्रयोग युक्ति पूर्वक र जान्नेको निगरानीमा नभएको खण्डमा फाइदा को अलावा बेफाइदा पनि हुन सक्छ । यस्ता चिकित्सकहरु सामान्य जनजीवनका स्वास्थ्य समस्याहरु बुझ्ने र तिनको सहि उपचार वा प्रेषण गर्ने तवरले सक्षम बनाइएका हुन्छन् ।
- यस्ता चिकित्सक सरकारको निगरानी वा मान्यता प्राप्त संस्था वा शिक्षालयले उत्पादन गर्छन् र नियमनकारी निकायले नियमन गर्छन् । यस्ता चिकित्सकहरु आवश्यकता अनुसार विभिन्न तालिम वा पुनर्ताजगी तालिम लिई अझै परिमार्जित हुदै जान्छन् ।
- यस्ता चिकित्सकहरु विशेषज्ञको निगरानीमा काम गर्छन् । यिनीहरुको निगरानीमा सहयोगी स्वास्थ्यकर्मीहरु हुने गर्छन् ।
- समय अनुसार यिनीहरुको पाठ्यक्रम, तालिम, निगरानी गर्ने कामहरु परिमार्जित हुदै जानु पर्छ । पढाउने शिक्षालय र अस्पतालहरु गुणस्तरीय र सुबिधासम्पन्न हुदै जानु पर्छ । र विज्ञहरुको उपलब्धता बढाईनु पर्छ ।
- यिनै प्राथमिक चिकित्सकहरु उच्च तहको अध्ययन वा तालिम लिई विशेषज्ञ बन्छन् ।

REQUIREMENT IN CANDIDATE: ELIGIBILITY TO BAMS

- I.Sc. (Biology)/+2 Science/GCE A level Science (Biology, Chemistry, Physics)
- Or, Intermediate Ayurveda Health Assistant
- Or, equivalent



COURSE DURATION:

- Duration: total 5 and ½ years
- Three academic phases of 18 months each
- + 1 year rotating internship: in different departments of hospital



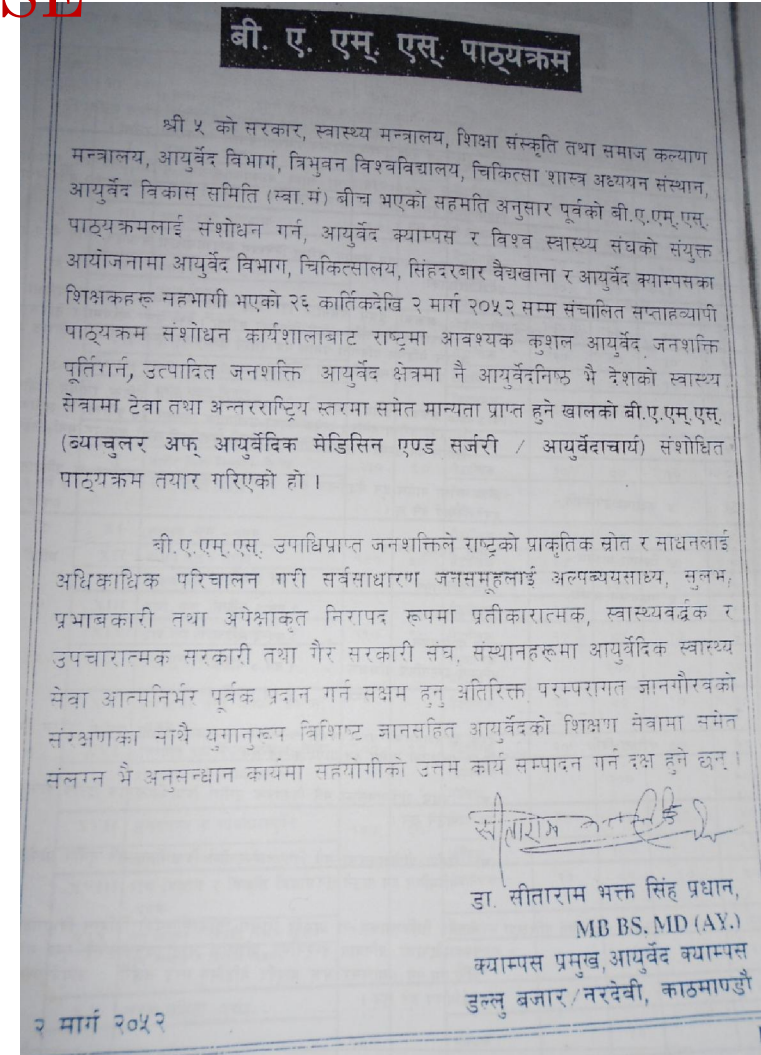
AIM OF THE BAMS COURSE

- Aims of BAMS course may be understood via the preface of the syllabus

BAMS PREFACE SAYS

Preface of the Syllabus in Nepal >>

See translation in English in next slide.



BAMS PREFACE SAYS

Literal Meaning of the Preface of BAMS Curriculum (Unofficial translation)

Following the agreement made by government of Nepal, Ministry of Health (MoH), Ministry of Education, Culture and Social Welfare, Department of Ayurveda, Tribhuvan University- Institute of Medicine (TU, IOM), Ayurveda Development Committee (MoH); on BS 2051 Kartik 26- Marg 2, in a week-long workshop to update curriculum, jointly organized by Ayurveda Campus and World Health Organization (WHO); the updated international standard BAMS (Bachelor of Ayurvedic Medicine and Surgery/Ayurvedacharya) curriculum has been prepared:- to meet the national need of efficient human resource for Ayurveda, and thus to serve national health services with dedication.

Thus produced BAMS graduates will serve common people providing affordable, accessible, effective, acceptable and harmless health care services by optimum utilization of nation's natural resources.

Thus BAMS graduates will be able to conduct preventive, health-promotive and curative services from government and non-government organizations and institutions. In addition to being able to provide Ayurveda health service confidently the graduates, equipped with modern specific knowledge, skill and technology of this time, will conserve the glory of traditional knowledge, skill and technology, and will be able to involve in Ayurveda teaching, and work their best as the assistant in researches.

2 Marg 2052 BS

Dr Sitaram Bhakta Singh Pradhan

MBBS, MD (Ayu.)

Campus Chief, Ayurveda Campus

Dallu Bazar/Naradevi, Kathmandu, Nepal



THREE PHASES IN SHORT

| First/ | Second | Third |
|---|---|--|
| Foundation, Basic Science and Pre-Clinical | | Clinical |
| Sanskrit (Sanskrit Language and Grammar) | Swasthvrit / Preventive and Social Medicine, Epidemiology/Yoga, Naturopathy | Kaya Chikitsa / Internal Medicine, Panchakarma |
| Itihas / History of Ayurveda and Medicine | Dravya Guna/ Pharmacognosy, Materia Medica, Pharmacology | Shalya Tantra / Surgery, Orthopedics |
| Sharir Rachana / Human Anatomy, Embryology, Histology | Rasa Shastra tatha Bhaishajya Kalpana/Pharmacy, Ayurvedic Alchemy | Shalakyas / Otorhinolaryngology (ENT), Ophthalmology(Eye), Oro-dentistry |
| Kriya Sharir / Human Physiology, Biochemistry | Agad Tantra tatha Vyabhar Ayurveda/Forensic Medicine, Toxicology | Kaumarbhritya or Bal Rog / Pediatrics |
| Padartha Vigyan / Basic Principles. Foundation | Rog tatha Vikrit Vigyan / Pathology, Diagnostics, Microbiology | Prasuti, Stri / Obs, Gyne |
| Astanga Sangraha (or Astanga Hridaya) | Charak Samhita Purwardha | Charak Samhita Uttarardhwa |

WHAT SHOULD THEY LEARN ?

- In every subjects- students have to understand both Ayurveda aspect and modern scientific aspect of knowledge and skills related to basics of human health, basic science, pathology, medicine/drug, disease, investigation, patient care, investigation, treatment etc- along with basics of communication, legal aspects, humanitarian aspects of health and well being.
- (see the translation of the subjects in the table given in previous slides)



ROTATING INTERNSHIP

- Kaya Chikitsa- General Medicine, Emergency, Psychiatry, Panchakarma + Yoga and Naturopathy
- Bal Rog- Pediatric
- Shalya- Surgery, Orthopedics, Surgical Emergencies, Anesthesia
- Prasuti/Stri- Obs/Gyne, Family Planning
- Shalakyā: ENT/Ophthalmo/Oro-dentistry
- Etc.



STUDENTS OF AYURVEDA CAMPUS IN TU/IOM KIRTIPUR/KATHMANDU HAVE TO USE THE FOLLOWING HOSPITALS.

- TU Ayurveda Teaching Hospital (IOM, TUATH), Kirtipur
- Central Ayurveda Hospital, Nardevi
- TU Teaching Hospital (IOM, TUTH), Maharajgunj
- Shukraraj Infectious and Tropical Disease Hospital, (Teku Hospital)
- Yoga and Naturopathy Hospital, Katyayani, Old Baneswor

.....

Theoretical Classes take place in Ayurveda Campus. Some of the theoretical classes take place in Maharajgunj Medical Campus, while others take places in respective hospitals and field. Students appear in field (jungle or herbal gardens, pharmaceuticals, and community) for their learning and other works of respective objectives of the related subjects.



AFTER GRADUATION- FIELD OF WORK

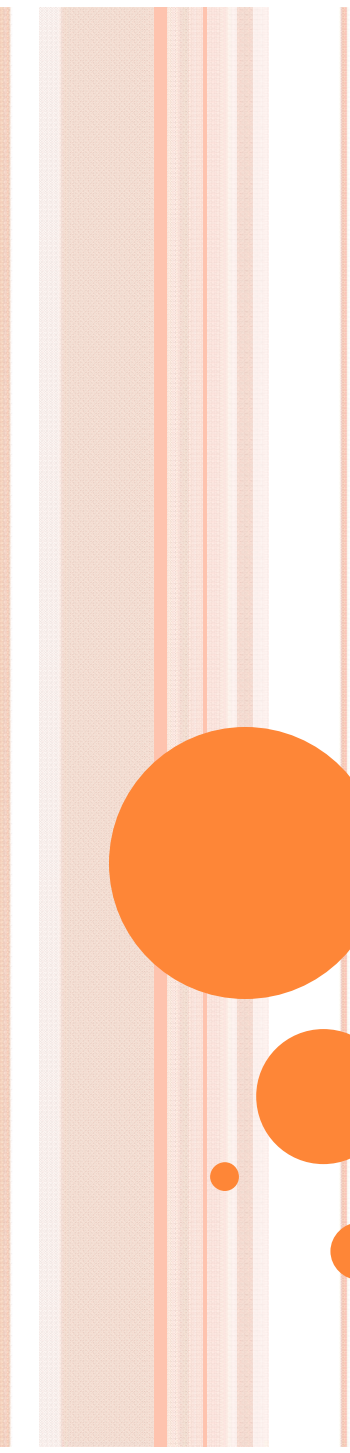
- General Medical Practice – Medical Officer in government or non-government Hospitals or Clinics
- Technical officer in Pharmaceuticals, Government Offices, National and International Organizations
- Instructor- work as assistant to the professors or lecturers in University
- Researcher- Research assistant or researcher
- Miscellaneous -



FURTHER STUDIES

- MD- Kaya chikitsa (Medicine), Bal Rog / Kaumarvrittya (Pediatrics), Dravya Guna, Rasashastra, Bhaishajya Kalpana, etc.
- MS- Shalya (Surgery), Prasuti/Stri (Obs/Gyne), Shalakyas (ENT/Oph/Oro-dentistry)
- MPH/M.Sc/M.Phil.- Public Health, Epidemiology, Biostatistics, etc.
- M.Sc.- Basic Sciences like Anatomy, Physiology, etc.
- MA- Psychology, Sociology and others.
- MBA ... - Management, Hospital management, etc.
- Others- PhD, etc.





**A BAMS GRADUATE
AS A PRIMARY CARE PHYSICIAN
IN RURAL OR SUB-URBAN OR URBAN AREA
OR IN YOUR LOCALITY**

BAMS doctor: - A friend in need is a friend indeed.

Yutkivyaparya, Sattavaa-vajaya, Daiva-vyapasraya

**Best use of available resources at their best to provide
best possible care.**

MEDICAL PRACTICE – I:

GENERAL CHECK UP AND CARE OR REFERRAL

- Do you or your friend or relative- anyone- feeling OK or having some sort of physical or mental discomfort?
- Does the condition look ok?
- Did the person have important medical/surgical/psychological history?
- Are the food, habits, life style or working condition affecting your health?
- What is the prakriti (natural constitution), vikriti (pathology) of the person? What is the possible shodhan (purificatory) or shaman (pacificatory) chikitsa (treatment) ?
- Are vitals (Blood pressure, Pulse, Temperature, Respiratory rate etc.) ok?
- Are the basic characters of body systems ok?
- Does anyone seem to have threatening sign?
- Does anyone need simple treatment care or needs specialized care in higher center after immediate basic life support or first aid management?



MEDICAL PRACTICE – II

Food, Yoga, Herb, Work: Which, How, When ?

Health System
Health Promotion
Prevention
Intervention
Research and
Development

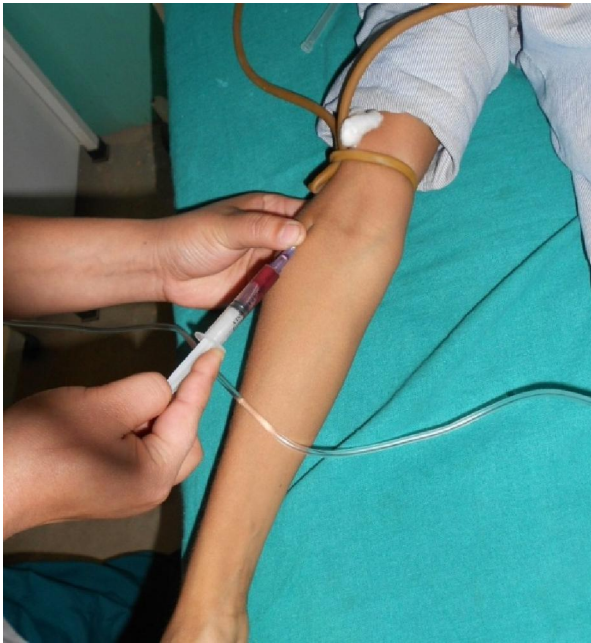


**Health means living well and better.
It's a meaningful living and management of life.**

**Sustainable, Eco-friendly, Acceptable, Affordable, Accessible,
Effective, Harmless, Optimum utilization of natural resources.**



MEDICAL PRACTICE - III



Immediate basic investigation and management: Sometimes problems can be managed by appropriate common IV fluids, common medicines, and common techniques.

Wonder Drug- ORS (oral rehydration Solution- Jeevan Jal).



MEDICAL PRACTICE - IV



Management of Common Simple Fractures can be done in a primary care center by primary care physicians



MEDICAL PRACTICE - V

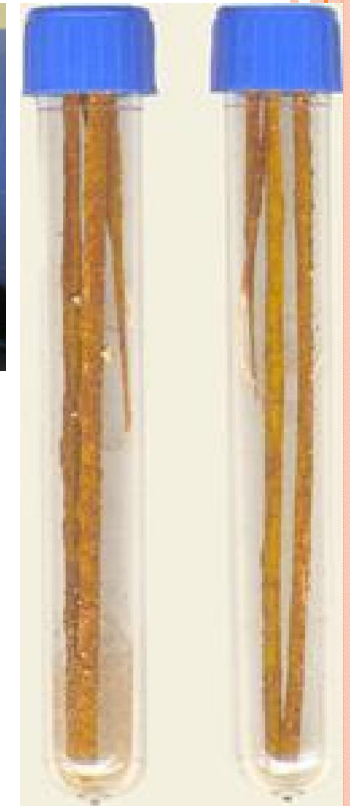
A stitch in time saves nine.



Cut Injury on Head- being stitched under local anesthesia after aseptically washing and removing of foreign particles.



MEDICAL PRACTICE - VI



**Incision and Drainage;
Removable of minor
foreign material, under
local anesthesia**

**Kshar Sutra for Fistula in ano,
Hemorrhoids etc**



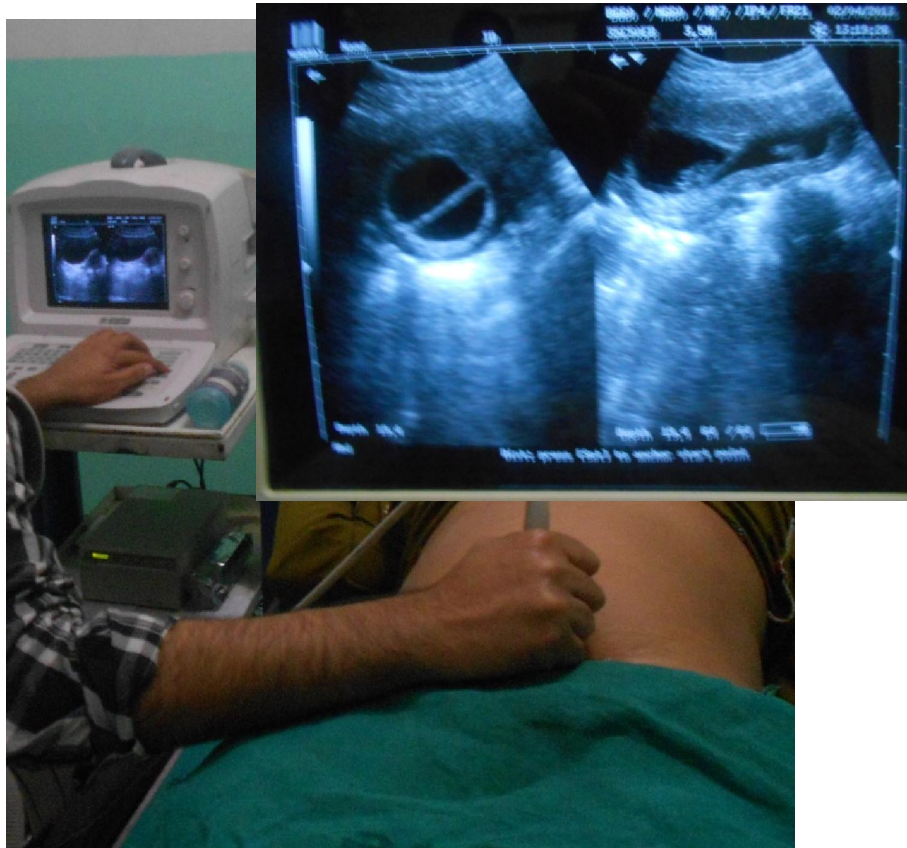
MEDICAL PRACTICE - VII



Burn Injury



MEDICAL PRACTICE - VIII



Delivery and Care of Pregnant, Mothers, and New Borns

Is the baby inside ok? Is it twin? Its position? Any other problem?
**Does it look Ok or needs minor treatment or needs Specialized
care in higher centers?**



MEDICAL PRACTICE - IX



**Not Pregnancy. Urinary Retention, an Emergency condition.
Patient gets relieved after careful and immediate-catheterization.**



MEDICAL PRACTICE - X



**Care of Special Case :-
Elderly, Childhood,
Pregnant, Mother,
Emergencies, Chronic
Problems, etc.**



**Health Promotion,
Prevention and Treatment of Disease**



BAMS-- A friend in need is a friend indeed.

HOW CAN WE USE SIMPLE HERBS OR STUFF IN HOME TO SOLVE MINOR HEALTH CARE PROBLEM?



तुलसी
Ocimum



अडेर
Castor



हृदपत्री
Digitalis

बेसार
Turmeric



यासागुम्बा
Cordyceps



Water पानी
Lemon कागती
Honey मह
Milk दुध
Ghee घ्यू
Indian? Berry अमला
Vegetables
Fruits
.....

AYURVEDA AND HERBS: OFTEN SYNONYMOUS

HOW DOES A GRADUATE SUPPORT YOU IN YOUR HEALTH CONCERN

- First Aid, Management of acute conditions and emergency
- Treatment of common problems, Management of common health care conditions
- Appropriate referral for the specialist consultation for appropriate diagnosis and treatment or Advanced care support or Specialized surgical Support
- Common health care learning, discussion
- Preventive programs: Immunizations
- Health promotional programs: Food, Life style, environment, exercises/yoga



EXCLUSIVENESS, SEGREGATION, OR INTEGRATION

- Some of the health care problems can be managed by using only Ayurvedic medicine and the result obtained is better than any other medications.
- (Ayurvedic medicines are herbal or herbo-mineral which must be prepared as per the classical texts and must be acceptable to the Ayurvedic scholars.)
- While in some of the problems aid of modern technology and medicine is indispensable.
- Health care is not just using machines or medicines, it may also be just use of proper food, proper activity, and good thoughts and good conducts.



POINTS THAT NEED TO BE CONSIDERED/STRENGTHEN/ADDRESSED

- Rigorous Entrance Exam
- Updated curriculum
- Rigorous and regular classes, interval tests
- Strict and standardized tests/exams
- Infrastructure and faculty
- Impact of National politics
- Strict and rotating junior internship
- Strict and rotating internship
- Strict and rigorous exam by Council
- Development of national and community infrastructures: Hospitals, Dispensaries, Herbal Gardens, Pharmaceuticals, higher studies, referrals, dialogue and sharing with different medical systems, etc.
- Trainings, CME//Periodic trainings and CME, Researches
- Public perception and attitude, National and international relations, Publications/Journals/Essential book/booklets etc.
- Appropriate Remuneration and encouragement
- Rationality , safety and efficacy of the therapy- in terms of scientific/classical views-



LINK: REFERENCES

- Affiliation Requirement of College willing to run BAMS course, NAMC: http://www.namc.org.np/medicalinfo/view_affiliations.html [Cited 1st June 2013]
- BAMS syllabus, CCIM: http://www.ccimindia.org/ug_syllbus_2009.htm [Cited 1st June 2013]
- Other Sites
 - BAMS Syllabus PDF <http://ipu.ac.in/UnivSyllabus/syllabusmedical/syllbams221012.pdf> [Cited 1st June 2013]
 - New Draft Syllabus http://www.ccimindia.org/draft_syllabus-at.html [Cited 1st June 2013]
- Code of Ethics, NAMC http://www.namc.org.np/ethicalcode/view_ethiccodes.html [Cited 1st June 2013]
- Dhanwantari Oath, NAMC http://www.namc.org.np/ethicalcode/view_oaths.html [Cited 1st June 2013]
- Go to the websites, and find if they have latest updates.
- <http://ayurinfo.files.wordpress.com/2011/09/ug-syllabus-2010-ccim.pdf>
- <http://ayurinfo.files.wordpress.com/2011/09/syllabus-of-bams.pdf>
- Wikipedia: BAMS : http://en.wikipedia.org/wiki/Bachelor_of_Ayurvedic_Medicine_and_Surgery

THANK YOU!

- Follow healthy habits
- Always consult those who know about any health care problems or medicines before making decision otherwise it may give adverse result.
- It's a greater good to all of us if we know that the practitioner is qualified, registered, professionally competent, and upgrades his/her knowledge and skills via regular CMEs or workshops and trainings.



AS A PARENT YOU NEED TO LOOK FOR

- When your child is interested to learn Ayurveda Medical Science/care practices as designed by the university - See if the college has all the requirements
 - Physical infrastructure:
 - Faculty: Departments: (Are they competent, professional, well-equipped?)
 - Extra activities; and level of politics in medical field
 - Hospital: Departments, Facility, Patient-flow
 - Formal Relationship with other pharmaceuticals and hospitals
 - Discipline, Rule of Law, Teaching and Learning,
 - Quality of entrance; quality and quantity of theoretical and practical classes, quality internal exams, Results
 - Perception of previous students
 - General People's attitude and perception
 - Future prospectus...



AS A CITIZEN YOU NEED TO BE CAREFUL

- 1) Are there sufficient laws for the regulation of medical education and health care practices?
- 2) Do the laws address all the difficulties of developing, upgrading, and standardizing health care sectors?
- 3) Are there sufficient hospitals, technical staffs, essential medicines in your country?
- 4) Do the pharmaceutical and health care product meet the desired quality?
- 5) Are they sufficiently tested before you use them?
- 6) Are the medicine real or fake? Are you informed about the basics of the medical sciences?
- 7) Are government support and non-government support to the people's health sufficient and praiseworthy?
- 8) Do we need more responsible government and bureaucracy for the better health care policy and actions?
- 9) Are concerned bodies prepared for possible disaster?
- 10) Are you prepared for the desired change for new step of development?
- 11) Do people need to change their attitudes on health care issues and health care behaviors?
- 12) Are the laws and practices fair enough to rule you?

DO YOU KNOW?

- What level of modern methods and medicines does a BAMS graduate need to have to help better coverage of essential health care services to the people ?
- What level of Ayurveda and traditional methods and medicines does a non-BAMS graduate need to have to help better coverage of essential health care services to the people ?
- Why BAMS doctors use modern medicines and non-BAMS doctors use Ayurvedic medicines?
- How can balanced practices of different medical sciences be made in daily life?
- How health care systems need to be regulated, monitored, and upgraded? And why ?



SOME MODERN DRUGS OF BOTANICAL ORIGIN

| Modern Medicinal Compound | Plant origin (botanical name) | Action |
|---------------------------|-------------------------------|--|
| Atropine | <i>Atropa bellodena</i> | Anticholinergic |
| Codeine | <i>Papaver somniferum</i> | Analgesic, antitussive, antidiarrheal |
| Colchine | <i>Colchium autumnale</i> | Antitumor agent, antigout |
| Digoxin | <i>Digitalis purpurea</i> | Cardiotonic |
| Ephedrine | <i>Ephedra distachy</i> | Sympathomimetic, antihistamine |
| Reserpine | <i>Rauwolfia serpentina</i> | Antihypertensive, tranquilizer |
| Salicylic acid | <i>Salix spp</i> | Anti-inflammatory |
| Taxol/Paclitaxel | <i>Taxus brevifolia</i> | Antitumor agent |
| L-Dopa | <i>Mucuna pruriens</i> | Aniparkinsonism |
| Quinine | <i>Cinchona ledgeriana</i> | Antimalarial, anti-inflammatory, analgesic |



BENEFITS OF HERBS TO NEPALESE (HERBS = MEDICINAL PLANTS)

1. **Health:** Anyone can use herbs in primary care. WHO has already produced manual for South Asia. Evidence based medication is possible.
2. **Economy:** Cultivation and conservation of plants has provided a lot of support. It has made possible to send many **children to school**, and provided money for food, clothing, health service etc. Many people get **employed**. Nation collects revenue in millions.
It helps to achieve Millennium development goals.
Nepal can also serve people and earn through tourism:
religious, geographic, recreational, adventure, and Medical tourism.
3. **Environment Protection:** Plants are source of Oxygen, help to balance ecosystem, conservation of water resources.



WHO: TRADITIONAL MEDICINE

- In some Asian and African countries, 80% of the population depend on traditional medicine for primary health care.
- Herbal medicines are the most lucrative form of traditional medicine, generating billions of dollars in revenue.
- Traditional medicine can treat various infectious and chronic conditions: new antimalarial drugs were developed from the discovery and isolation of artemisinin from *Artemisia annua* L., a plant used in China for almost 2000 years.
- Counterfeit, poor quality, or adulterated herbal products in international markets are serious patient safety threats.
- More than 100 countries have regulations for herbal medicines.

<http://www.who.int/mediacentre/factsheets/fs134/en/>



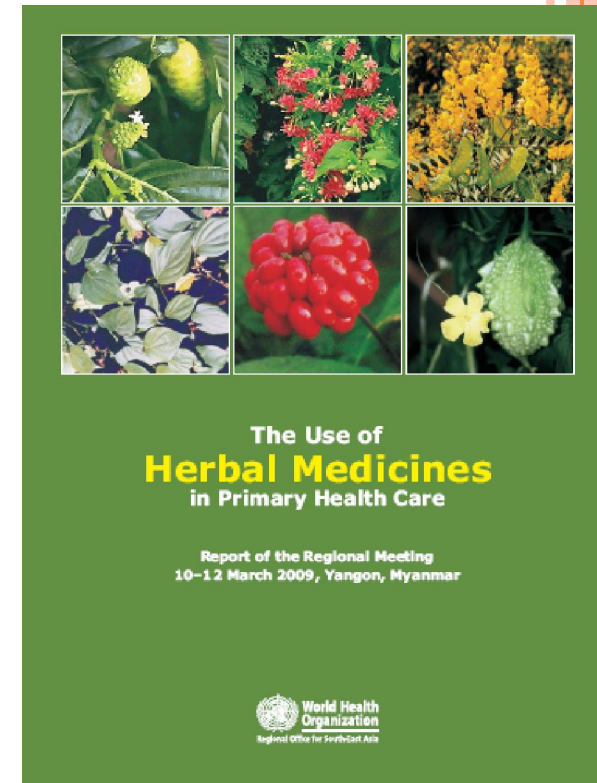
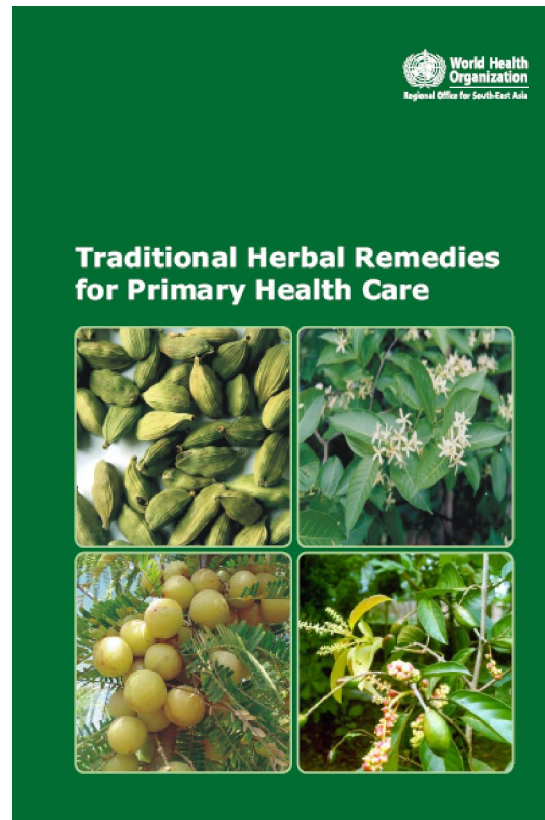
WHO SAYS

- WHO and its Member States cooperate to promote the use of traditional medicine for health care. The collaboration aims to:
 - ✓ support and integrate traditional medicine into national health systems in combination with national policy and regulation for products, practices and providers to ensure safety and quality;
 - ✓ ensure the use of safe, effective and quality products and practices, based on available evidence;
 - ✓ acknowledge traditional medicine as part of primary health care, to increase access to care and preserve knowledge and resources; and
 - ✓ ensure patient safety by upgrading the skills and knowledge of traditional medicine providers.
- <http://www.who.int/mediacentre/factsheets/fs134/en/>



PRIMARY HEALTH CARE CAN BE STRENGTHENED USING SOME SAFE HERBAL REMEDIES

- WHO has published guidelines for South Asia region
- Doctors of any specialty can also learn these things and use in practice.



How to manage simple problems at home using local resources?



THANK YOU !



Development is a continuous and may be a never ending process. Keep going. You need to know your weak points to strengthen you. And you need to know your strength which is your base.

Provide us suggestions, ayurinfo11@gmail.com

