



ओम् श्री धन्वन्तरये नमः

नमो भगवते वासुदेवाय धन्वन्तरये, अमृत कलश हस्ताय ।
सर्वामय विनाशाय त्रैलोक्य नाथाय महा विष्णवेः स्वाहा ॥

हृदयेश त्रिपाठी

मन्त्री

स्वास्थ्य तथा जनसङ्ख्या मन्त्रालय
रामशाहपथ, काठमाडौं



Hridayesh Tripathi

Minister

Ministry of Health and Population
path, Kathmandu, Nepal

Message

I am glad to know that National Ayurveda Research and Training Center (NARTC), Kirtipur is going to publish Annual Report for the year 2019-2020. I like to congratulate all the team and Executive Director of the center for the successful completion in this fiscal year.

Establishment of NARTC is an important action in the history of Ayurveda in Nepal. Ministry of Health and Population is optimistic about this national Institution established with the support of people's Republic of China. It has been entrusted with the task of research, training and health care service of Ayurveda medicine. I believe that the strategies and planning carried out by this institution will contribute in the development of Ayurveda health care system in the country.

It is both a challenge and opportunity to establish a new institution successfully. The center must consider this for future courses of proper strategies and actions towards its aim to develop the "center for excellence." Partnership at all levels, good planning: research and documentation can be the essential steps for the success of any institution.

At last, I like to thank National Ayurveda Research and Training Center team for the achievement of all its objectives significantly in the coming future.

Thank You

Hridayesh Tripathi

Minister

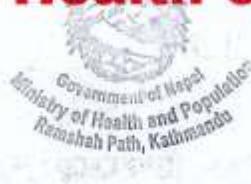
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Date :



I am pleased to know that National Ayurveda Research and Training Center (NARTC), kirtipur is going to publish Annual Report for the year 2019-20.

Ministry of Health and population of Nepal has always been optimistic and supportive in its task of research, training and health care service of NARTC since its establishment. Undoubtedly, NARTC has contributed various research and training activities in the development of Ayurveda health care system in Nepal.

I believe NARTC will conduct more innovative research and training activities for contributing towards the globalization of Ayurveda health services to people in its near future.

At last, I would like to congratulate whole team of NARTC for its achievement in this fiscal year.

Thank You

Laxman Aryal

Secretary

Executive Summary

National Ayurveda Research and Training Center (NARTC) is a pioneer institution for advancing research, conducting training and providing health care services in Nepal. NARTC is mainly focused as a national level apex body for effective development and promotion of Ayurveda since its establishment. For such, it has been conducting various types of research activities in Ayurveda so that we can generate scientific evidences in regards to Ayurveda treatment modality in the present era.

In fiscal year 2019-2020, we have conducted several researches with respect to evaluate anti-microbial properties of various Ayurvedic plants/herbs. This definitely has make a new paradigm shift in developing anti-microbial agents by using such herbs. NARTC is very hopeful to develop anti-microbial agents using Ayurvedic formulation in the near future.

NARTC has also conducted an epidemiological research in finding out the prevalence of ano-rectal disorders in Kirtipur Municipality for the first time in Nepal. Through this research, we are able to spread awareness, prevention, cure and future consequences of the diseases in the general population.

NARTC has always been responsible towards the society and the country. During the COVID-19 pandemic, NARTC proudly welcomed and fulfilled its responsibility for the society admitting suspected cases of TUTH probably being exposed to Nepal's first COVID-19 case. Since then, NARTC has been providing effective services to COVID-19 patients. There is ongoing research to evaluate symptoms in COVID-19 patients and to find out the effectiveness of Ayurvedic herbo-mineral preparation in COVID-19 patients at NARTC.

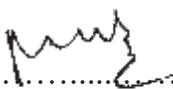
In this fiscal year, we established Plant Tissue Culture (PTC) lab to grow distinct plants as well as plants with high medicinal value. With establishment of PTC, we aim to distribute these valuable plants for the farmer helping them to improve their socio-economic status.

In regards to training, NARTC has conducted different training programs for skill enhancement of Ayurvedic doctors, health workers and paramedics in this fiscal year. Training programmes included training of Kshar-sutra, Yoga, Panchkarma, Stress Management and MarmaChikitsa. In fiscal year 2019-2020, NARTC has begun training and workshop in MarmaChikitsa to propagate the hidden knowledge of Ayurveda for the first time in Nepal.

In health care services, we have been providing state of the art services in the field of Ayurveda in NARTC's hospital. We serviced and treated several patients at OPD and 25 bed IPD. This institution is also emerging as a center for excellence in the management of ano-rectal disease by Kshar-sutra treatment and other metabolic diseases by Panchakarma therapy. There were four health camps conducted to provide health care facility as well as to research on principle and management in Ayurveda. In addition to this, NARTC has started "Stress Management Programme" for government officers, medical professionals, politicians and social workers.

We are always aware about opportunities and challenges of the institution. NARTC is very much committed to tackle all the challenges and contribute to development of Ayurveda.

At last, I would like to thank all the doctors, research officers, administrative staffs and all the family of NARTC for their support and cooperation to recognize this institution globally.



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Dr. Ram Adhar Yadav

Executive Director

National Ayurveda Research and Training Center

Kirtipur, Kathmandu, Nepal

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1. OVERVIEW

Historical Background

National Ayurveda Research and Training Center (NARTC) is an autonomous body under the Ministry of Health and Population, Government of Nepal. NARTC was established as a national level apex body for effective development and promotion of Ayurveda as a model institute for advancing research, training and patient care by Ayurveda system of medicine.

The NARTC project began since the month of November 2003 when the Government of Nepal proposed to the Government of the People's Republic of China for the unequivocal necessity of NARTC project in Nepal. Under the joint efforts and friendly cooperation between the nations, both the nations officially agreed to implement NARTC project on August 16, 2004. The Government of the People's Republic of China and the Ministry of Health and Population of the Government of Nepal authorized China Jiangxi Cooperation for International and Technical Cooperation to build the project of NARTC on September 21, 2008.

The project was commenced on February 20, 2009 and the Government of the People's Republic of China handed NARTC over to Government of Nepal on April 3, 2011. For further enhancement of NARTC, the Government of the People's Republic of China aided medical and training equipment with the value of RMB Yuan 15,400,000/- (RMB Yuan Fifteen Million and Four Hundred Thousands Only) in accordance with the provision of the letters exchanged on August 18 and August 24, 2014 between the nations.

The Government of the People's Republic of China officially handed over the equipment to the Government of Nepal on May 11, 2016. In addition to this, Chinese technical team also supported installment of equipment at NARTC. Under Development Committee Act, NARTC was in operation from February 12, 2012 till July 16, 2019.

Location

NARTC is located on the premises of Tribhuvan University, Kirtipur with an area of 19482.4 m² (30 Ropanies). The organization has three large buildings nominated as hospital, research and training buildings, respectively. Another four small buildings are designated as animal house, generator and water equipment house, waste management and cafeteria buildings. Building construction occupied 34563 m² (17.7%) area of the territory of NARTC.



Vision

- The major vision envisaged for the NARTC is to promote research and training activities for contributing towards the globalization of Ayurveda system of Medicine and for providing evidence based quality Ayurveda health services to people.

Mission

- Support and conduct ethical research in Ayurveda.
- Train and provide skilled manpower in field of Ayurveda.
- Implement evidence based research in treatment to the patient care activities to validate Ayurvedic treatment.
- Advocate and disseminate knowledge of Ayurveda research for the welfare of mankind.

Objectives

- To protect, preserve, develop and commercially utilize medicinal and aromatic plants (MAPs) and natural resources to meet the WTO (World Trade Organization), TRIP S (Trade-Related Aspects of Intellectual Property Rights) and IPRs (Intellectual Property Rights).
- To build linkages with different institutions and entrepreneurs inside and outside the country.
- To develop appropriate technology and transfer of technology and skill up to the grass root level for the conservation, cultivation and capitalization of medicinal plants.
- To develop inventive and innovative steps for development of drugs and clinical practices.
- To initiate and promote research and good practices applied in production, manufacture and supply of Ayurveda and herbal drugs.
- To provide necessary training for the employees of government and non-government of Ayurveda institution and its related human resources.
- To identify measures for enhancing the capacity of developing programs in farming and processing of Medicinal and Aromatic plants.
- To conduct national and international meetings/seminars/conferences.

Strategies

- To perform institutional roles and undertake necessary activities following strategies have been visualized:

I: Research

1. Delivering research services.
2. Delivering information about research, training and health care service.

II: Training

1. Delivering and improving training services.
2. Developing researches, trainers and experts.
3. Developing capacity building and strengthening professional related governmental and non-government organizations.

III: Health Care Services

1. Contributing in evidence based health care services.

IV: Internal Capacity Development

1. Developing internal organizational and management capacity

V: Policy Input and Information Services

1. Promoting linkages and collaborating with other institutions.

Organization structure

The apex body of NARTC is the governing body presided over by Hon'ble Minister of Health & Population, Government of Nepal, to control and manage the activities of the organization. The organizational structure of NARTC has been set up under Development Board Act of Government of Nepal. Development Committee of the center delivers policy, approves programs and reviews progress. The Executive Director of NARTC is responsible for overall management of the organization. The heads of the NARTC divisions are responsible for the day to day functioning of their respective divisions. The organization set up of NARTC is depicted under three divisions:

- Research Division
- Research Hospital Division
- Plan, Training and Administration Division.

Organogram



Ethics committee

Ethics committee of NARTC reviews proposed studies to ensure that it follows internationally and locally accepted ethical guidelines. They monitor studies once they have begun and, where relevant, take part in follow-up action and surveillance after the end of the research. The committee has the authority to approve, reject or stop study or require modification to research protocols.

Objective:

- To promote high ethical standards in research for health.

Functions

- To set policies or offer opinions on ongoing ethical issues in research
- To review international ethical standards governing research involving human participants, as well as by local law in many jurisdictions
- To review required laws of the country in which the research is being sponsored, even if it is not required by the host country's own laws
- To review to publish the results of their investigation, as most medical journals will not publish the results of research that has

not received the approval of a research ethics committee

- To protect potential participants in the research
- To take into account potential risks and benefits for the community in which the research will be carried out

Sub-committees

NARTC has set up its experts committee for research, training and health care services. Highly experienced academic professionals are the members of sub-committee. The sub-committee members provide guidance and valuable suggestion in executing and implementing activities or programs in respective services. The three sub-committees at NARTC are:

- Research sub-committee
- Training sub-committee
- Hospital management sub-committee

Research sub-committee

Research sub-committee is organized to review intramural as well as collaborative research projects of NARTC. The committee critically reviews the research projects and recommends the research proposal for grant. The committee also plays vital role in disseminating information of the research result.

Objective

- To prioritize research area, evaluate research proposals and recommend for grant.

Function

- To prioritize research area
- To select topics for research
- To review technical proposal
- To evaluate proposal
- To recommend for grant
- To disseminate the research

- To finalize the research report
- To recommend publication of the research report

Training sub-committee

This sub-committee overviews all the training activities/programs conducted by NARTC. It prioritizes training subjects, develops curriculum and recommends for conduction of training.

Objective

- To prioritize training area, develops training curriculum and recommends implementing training.

Function

- To prioritize training area
- To select topics for training
- To develop training curriculum
- To recommend conducting training
- To advise for further improvement

Hospital management sub-committee

This sub-committee generates advice for managing hospital smoothly. It prioritizes health care services and fixes fee. It also suggests recruiting required human resources installing of instruments, monitoring and evaluation of health care services.

Objective

- To manage health care services, fixes fee and recommends further projects for health care services

Function

- To manage health care services
- To fix fee of the services
- To contribute in clinical research
- To recommend health care projects

- To advise for further improvement

Program and Services

I. Research Hospital

Research based health services in OPD/IPDs are:

- Kaya Chikitsa (Internal Medicine)
- Shalya (Surgery)
- Shalakya (ENT)
- Stri-Prasuti (Gynaecological and Obstetrics)
- Arbuda (Oncology)
- Dental

Special Services:

- Panchakarma Therapy
- Ksharsutra
- Acupuncture
- Therapeutic Yoga
- Physiotherapy

Other services are:

- Clinical Pathology
- Ultrasonography
- X-ray
- CT scan
- EEG/ECG
- Endoscopy/colonoscopy
- Pharmacy

Current services in the laboratory

Biochemistry	Serology	Hematology	Others
Glucose	ASO Titre	CBC	Stool R/M
Uric acid	CRP	ESR	Urine R/M
RFT	RA Factor	CT/BT	Sputum for AFB
LFT	Blood Grouping	Reticulocyte count	Semen Analysis
Lipid Profile	Widal Test	Kala azar	Occult Blood
Calcium	HIV 1& 2	Malaria	
Phosphorus	HbsAg		
Total Protein	HCV		
Serum albumin	VDRL		
	H. Pylori		
	TPHA		

Expandable lab investigations

Microbiology	Biochemistry	Histocytology	CLIA machine test	ELISA	Molecular level (PCR) Test
Urine culture	Troponin	Biopsy	TFT	HIV	Hepatitis B & C
Blood culture	CPK-MB	Pap Smear	Vitamin D	Hepatitis B	TB PCR
Pus culture	FDP		Vitamin B12	HCV	Alpha Thalassemia PCR
Stool culture	Fibrinogen	CLIA Machine test	Iron Profile	HEV	Sickle cell anemia
	Pt/APTT	Tumor marker	Folic acid	IGM	Hemochromatosis
	HbA1C	AFP	TORCH profile	CD4 count	CMV/HPV/HSV
	Microalbumin	Beta HCG	Anti thyroid antibody		
	ADA	CA 125	Prolactin		
	Anti Ds DNA	CA 19.9	Growth hormone		
	Dengue	CA 15.3	FSH		
		CEA	LH		
		PSA			

II. Research section

- Clinical Research
- Drug Research
 - Drug Standardization
 - Pre-clinical Research / Pharmacological Research
 - Medicinal Plant Research (Medico-Ethno Botanical Research, Pharmacognosy),
- Literary Research & Documentation

The current running major research units of NARTC and its functions are:

Microbiology laboratory

- Evaluation of antibacterial/antifungal assays
- Isolation of enzyme from bacterial culture
- Preservation of bacterial strains
 - Tests for specified micro-organisms i.e. Escherichia coli, Staphylococcus aureus, Bacillus subtilis, Klebsiella pneumoniae
- Finding role of Ayurveda drugs in the treatment of various diseases

Molecular biology laboratory

- Isolation of plant DNA for digital library
- Isolation and characterization of bacterial DNA
- Molecular diagnosis of diseases

Immunology laboratory

- Quantification and analysis of toxic substances
- Disease diagnosis using ELISA/CLIA
- In-vitro assay for toxicity of various compounds

Instrumental analysis laboratory

- Qualitative and quantitative analysis of heavy metals in plant and plant products
- Separation of plant product on the basis of polarity
- Standardization of Ayurveda medicines
- Dissolution, hardness, total ash, alcohol, soluble extractive, water soluble extractive, moisture content etc.

Animal/Clinical trials

- Development of animal breeding facility in NARTC
- Development and evaluation of a novel drug delivery system of medicinal plant in Nepal
- Development of clinical trials of related diseases

Physical tests

- Refractive index
- Specific gravity
- Determination of pH values, melting range and boiling range
- Disintegration test, viscosity, saponification, iodine and acid values
- Determination of peroxide value and alcohol content

Plant tissue culture

This fiscal year plant tissue culture has been set up for

- Propagation of many medicinal plants of the same genetic background
- Growing endangered medicinal plants of Nepal in a controlled environment
- Production of medicinal plants for commercial benefits as well as for research

III. Training section

- Training on skilled development
- Strengthen and capacity building of respective professionals
- Improving capabilities of individual working at different levels of Ayurveda

IV. Other facilities

- Library

The library is an air-conditioned room with wi-fi internet connection. The library has books and photocopy references on ayurveda, allopathy, sanskrit, science etc. Rare and reference books are also kept separately. The library has started to collect research thesis by NARTC. Automation of library work is in progress and in near future it will digitalize.

- Herbal Garden

Herbal garden was developed in NARTC for demonstration and teaching purposes for visitors, students and scholars in training activities. Around 150 plants and herbs have been planted in the garden.

- Training Hall

NARTC has an air-conditioned training hall with a capacity of 50, built with all facilities for conducting training activities. Training hall of NARTC is in good amenity. This is being used for training activities and seminars.

Collaboration and linkage

NARTC is mainly research and training based institution. It has linked up with national and international research and training organizations.

Some of the national and international organizations are:

- Nepal Health Research Council, Ramshah Path, Kathmandu
- Ayurveda Campus & Teaching Hospital, Kirtipur, Kathmandu
- B.P.Koirala Cancer Hospital, Bharatpur, Chitwan
- China Academy of Chinese Medical Sciences, Beijing, China
- Hebei Research Institute, Hebei, China

2. HEALTH CARE ACTIVITIES



Research Hospital

NARTC has a research hospital with 25 beds capacity for indoor patient department (IPD) and provides outdoor patient department (OPD) services. The main objective of the hospital is to provide evidence based medical care through ayurvedicsystem of medicine to the patients. It prioritizes clinical research along with patient care through its OPD, IPD, panchakarma therapy, ksharsutra, acupuncture, therapeutic yoga, physiotherapy, clinical pathology, ultrasonography, X-ray, CT scan, EEG/ECG, endoscopy/colonoscopy and pharmacy. Special treatment facilities are available for anorectal disorders, cancers, rheumatology and endocrinology. Registration is free in the hospital for senior citizens and patients who participate in intramural clinical research. Most of the medicines dispensed for intramural clinical research are manufactured in the pharmacy of NARTC and are provided for the patients free of cost. Health care services are 50 percent discount for the residents of Kirtipur Municipality and senior citizens.



Outpatient Department(OPD)

OPD patient records are computerized. The OPD attached to the hospitals are managed by all the units of NARTC. During the year, the total number of patients attended the OPD was 5,986 out of which 3,702 were newly registered. Medicines for 1788 patients were dispensed free of cost who participated in the intramural research of anorectal disorders.

The range of patients' age was from 11 years to 83 years old and the mean age was 45 years old (Tab 1). When stratified by sex, 2757 (46.1%) were male and 3229 (53.9%) were female who visited OPD of research hospital (Fig 1). The number of patients who visited at acupuncture, kaya, shalya, stri-prasuti, dental, physiotherapy and arbood department of OPDs are 1556, 1344, 959, 765, 690, 665 and 7, respectively (Fig 2). The frequency of patients who visited OPDs at each department by sex is shown in Fig 3 and Fig 4.



Of the 5986 patients who visited NARTC hospital, 20.2% were seen for rheumatology, 14.6% for gastroenterology, 8.3% for endocrinology, 7.8% for gynaecology and obstetrics, 7.0% for neurology, 6.7% for ear, nose and throat (ENT), 4.4% for respiratory, 4.1% for dermatology, 3.9% for cardiology and 10.8% for other disorders, such as psychiatry, ophthalmology, nephrology, urology and haematology (Fig 5). Except

for nephrology, psychiatry and cardiology disease categories, female patients were tentatively higher than male for other disease categories (Fig 6).

Table 1: Descriptive statistics of age in patients visiting OPD

	N	Minimum	Maximum	Mean	Std. Deviation
Age	5986	11	83	44.8	16.5

Fig 1: Percentage distribution of OPD's patients by sex

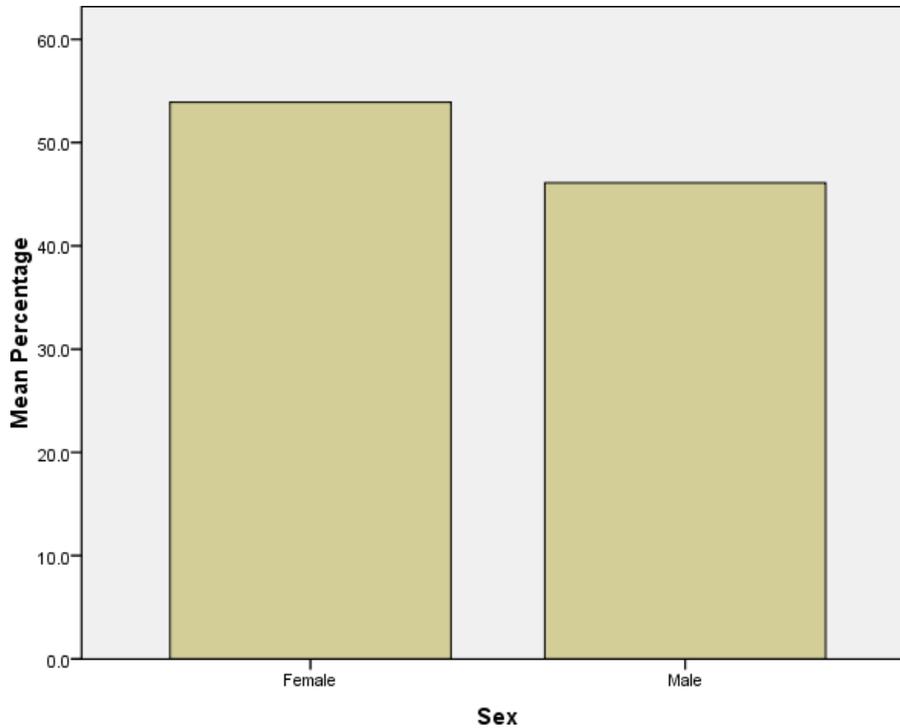


Fig 2: Frequency of patients by department of OPD

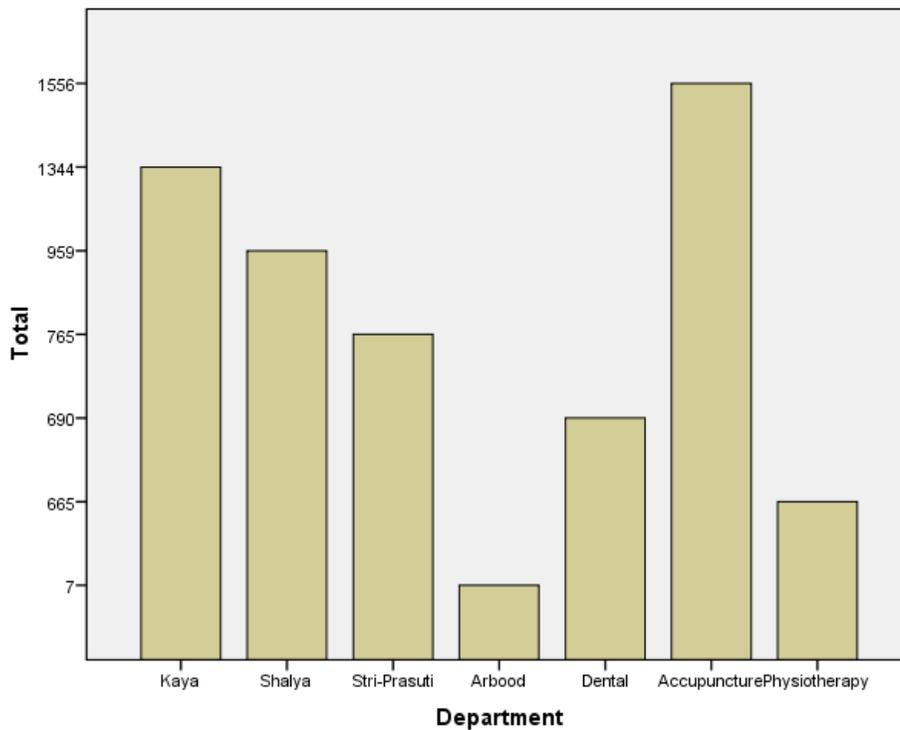


Fig 3: Frequency of male patients by department of OPD

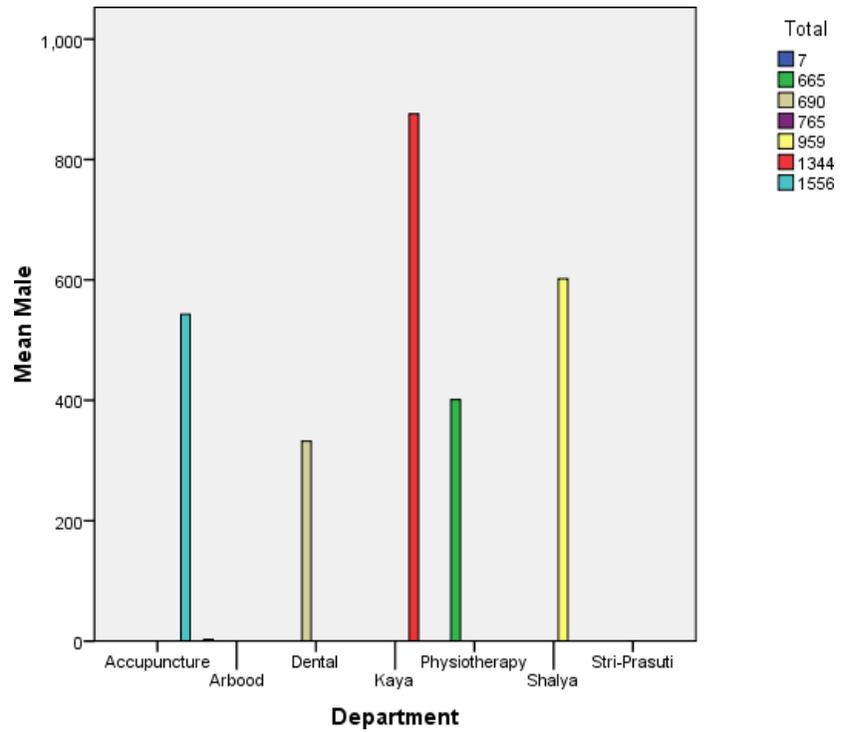


Fig 4: Frequency of female patients by department of OPD

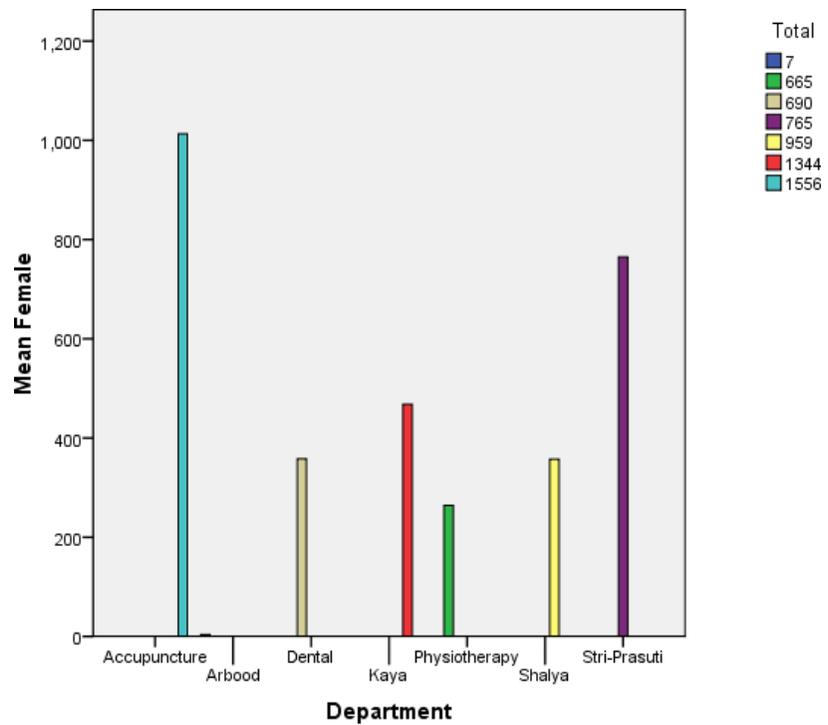


Fig 5: Percentage of disease categories among patients visiting OPD

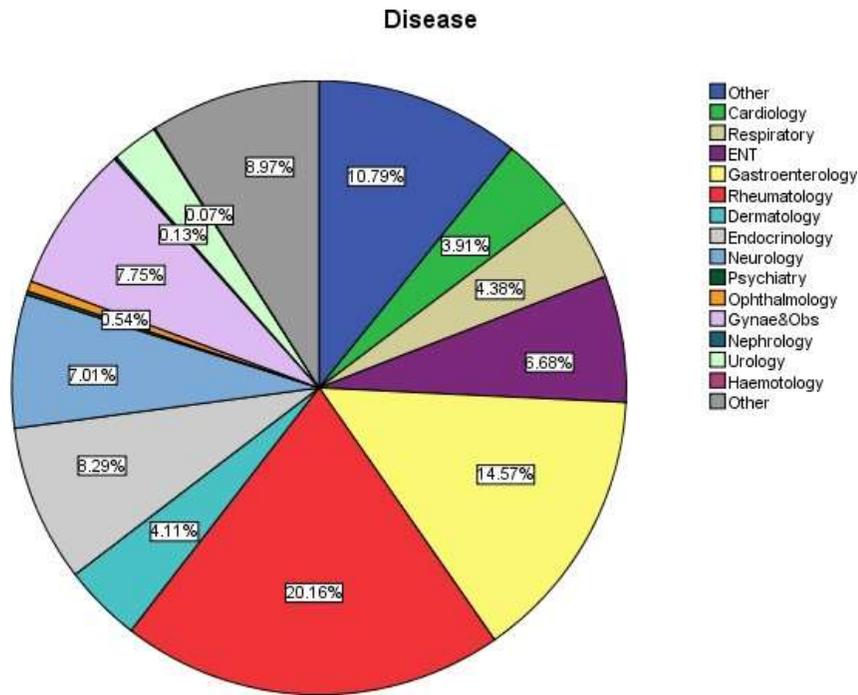
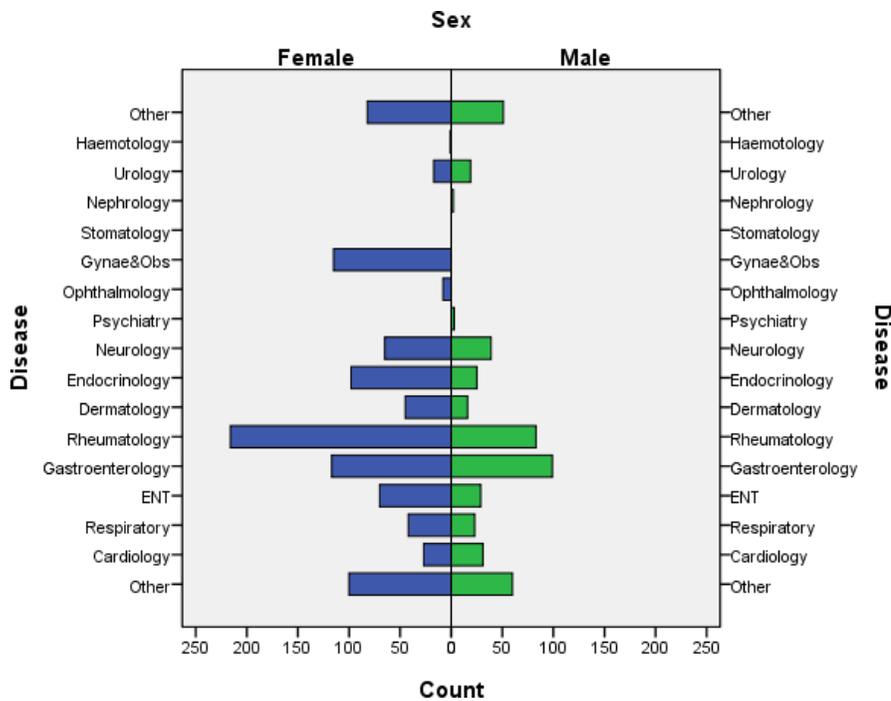


Fig 6: Comparison of disease categories by sex

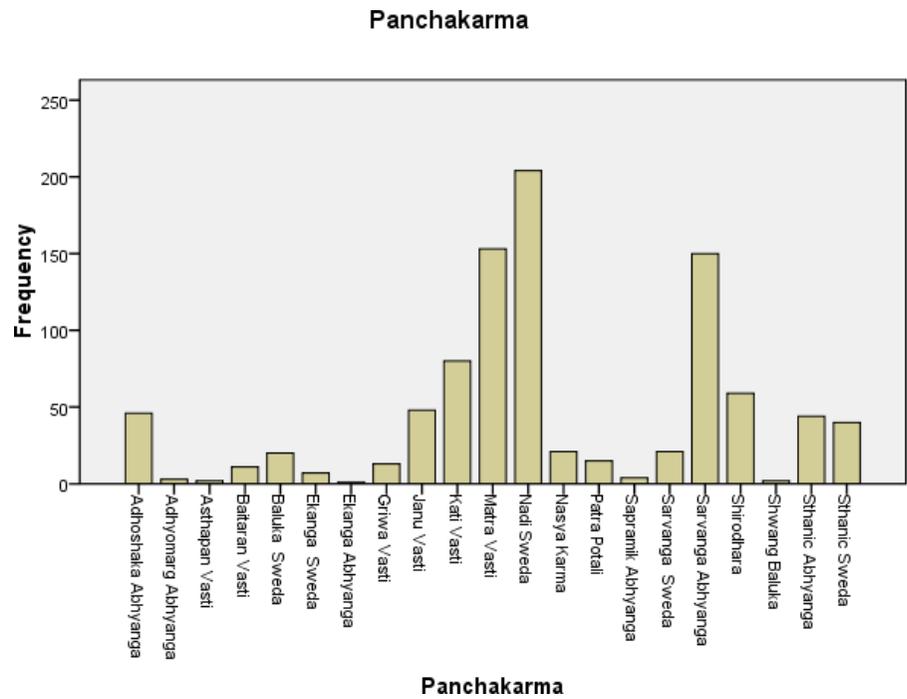




Panchakarma Unit

Out of 944 patients who took Panchakarma services, 53.8% and 46.2% were male and female, respectively. The services provided to the patients in this unit are tabulated as below:

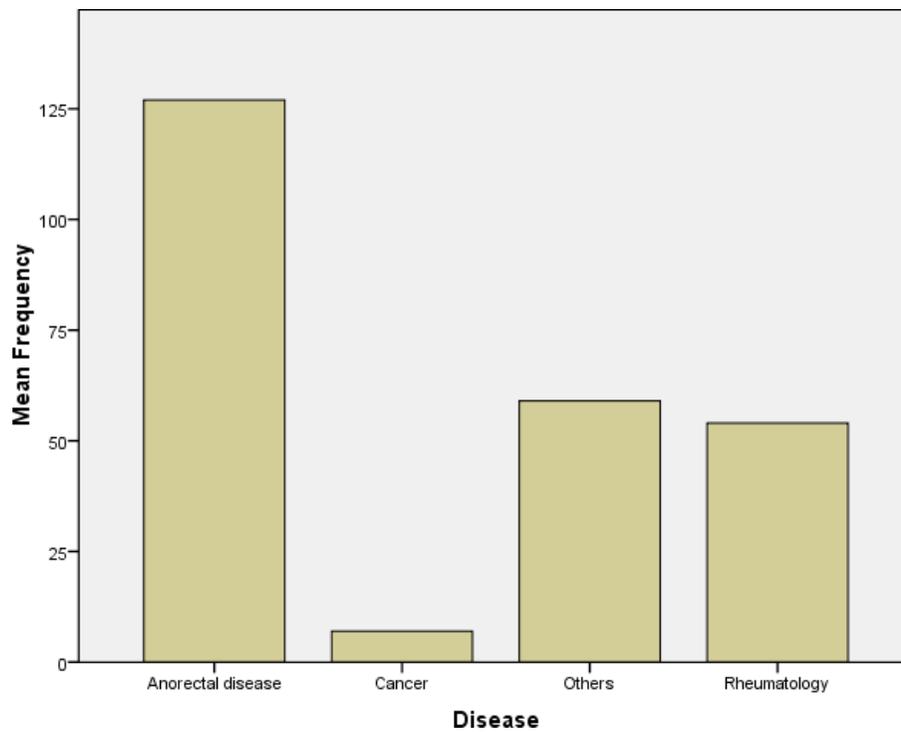
Fig 7: Frequency of Panchakarma services



Inpatient Department (IPD)

The total bed capacity for IPD is 31 beds. During the year under report, the total patients treated in IPD were 247. The bed occupancy rate was 64.8% for male and 35.2% for female. Majority of the patients admitted were from anorectal disorders (51.4%) followed by rheumatology (21.8%) and cancer (2.8%).

Fig 8: Frequency of disease categories in IPD





Shalya (Operation Theatre)

There is a separate operation theatre with latest instruments and equipment for conducting Kshar Sutra on patients. During the year under report, Kshar Sutra conducted in operation theatre is 127 (Table 2). Among the patients who performed Kshar Sutra, 48 (37.8%) were male and 79 (62.2%) are female. The most prevalent anorectal disorders for performing Kshar Sutra were anal fissure (41.7%), haemorrhoids (38.6%), fistula in ano (14.2%) and rectal prolapse (5.5%), respectively (41.5%) (Table 4 and Fig 8).

Table 2: Descriptive statistics of age in patients performing Kshar Sutra

	N	Minimum	Maximum	Mean	Std. Deviation
Age	127	10	83	39.3	13.3

Table 3: Frequency of patients performing Kshar Sutra by sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	48	37.8	37.8	37.8
Female	79	62.2	62.2	100.0
Total	127	100.0	100.0	



Table 4: Diagnosis of patients performing Kshar Sutra

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Anal Fissure	53	41.7	41.7	41.7
Fistula in ano	18	14.2	14.2	55.9
Haemorrhoids	49	38.6	38.6	94.5
Rectal prolapse	7	5.5	5.5	100.0
Total	127	100.0	100.0	



3. RESEARCH ACTIVITIES

Medicinal Plant Research

- **Quality assessment, phytochemical screening and anti-microbial assay of medicinally important plants of Nepal;** *Berberis aristata* (Chutro), *Tinospora cordifolia* (Gurjo), *Justicia adhatoda* (Asuro), *Withania somnifera* (Ashwagandha), *Rubia cordifolia* (Manjistha), *Picrorhiza kurroa* (Kutki), *Piper Longum* (Pippali), *Moringa oleifera* (Drumstick), *Andrographis paniculata* (Kalmegh), *Clerodendrum infortunatum* (Bhandir), *Zingiber officinale* (Sutho)

Epidemiological Research

- **The prevalence of anorectal disorders among residents of Kirtipur Municipality in Nepal**

Background: Epidemiological knowledge is very poor in regards to anorectal disorders. The patients do not often discuss perianal symptoms leading to late diagnosis and treatment. There is a need of doing systematic questioning and clinical evaluation of the population to assess the prevalence of anorectal disorders. The aim of this study is to assess the prevalence of anorectal disorders among the residents of Kirtipur municipality in Nepal.

Methods: The first section was the cross-sectional survey to assess the demographic and lifestyle characteristics of the study population. The second section was the observation study to assess the prevalence of anorectal symptoms. 1483 patients were recruited from 10 wards of Kirtipur Municipality. We analyzed the comparison of diagnostic approach between patients with perianal symptoms spontaneously visited and those revealed after targeted questioning. We further analyzed the reason for not performing perianal examination by both patients and general practitioners. Factors associated with referral to a proctologist and diagnosis rate were also evaluated.

Results: The study showed that the prevalence of anorectal symptoms increased from 9.4% to 21.2% after systematic targeted questioning by general practitioners. Spice intake was the only covariate associated with decrease risk of proctological symptoms. Haemorrhoids (31.2%) and anal fissure (28.7%) were the most prevalent anorectal disorders. However, physicians have diagnosed anorectal disorders in 20.2% of patients without performing any perianal examination. Diagnosis of haemorrhoids and fistula in ano were significantly associated with referral to a proctologist.

Conclusion: This study may contribute to epidemiological knowledge about the prevalence of anorectal disorders among Nepalese population.

➤ Assessment of covid-19 symptoms among residents of Kirtipur Municipality in Nepal

There is a current worldwide outbreak of the novel coronavirus Covid-19 (coronavirus disease 2019; the pathogen called SARS-CoV-2; previously 2019-nCoV. Governments are under increased pressure to stop the outbreak from spiraling into a global health emergency. At this stage, preparedness, transparency, and sharing of information are crucial to risk assessments and beginning outbreak control activities. So, we aim to assess covid-19 symptoms among residents of Kirtipur Municipality in Nepal. In this cross-sectional study, questionnaires for assessing covid-19 symptoms were adopted from Ministry of Health and Government, Nepal covid-19 symptoms assessment questionnaires and began on April 29, 2020. Phone interview questionnaires were asked and 1035 participants responded to the questionnaire with a mean age 43.9 years old (range: 8 – 95 years). Female and male participants were 60.9% and 39.1%, respectively. The interviewees also responded the questionnaires on behalf of their family members leading to 5208 participants. None of the participants has the covid-19 related symptoms in this study. This study may preclude covid-19 outbreak in the community.

4. TRAINING ACTIVITIES

NARTC has been conducting various trainings for paramedics and Ayurveda physicians for skill development and capacity building in Ayurveda system of medicine since its establishment. The training programs conducted in FY 2075/76 are tabulated as follow:

Table 4: Training programs in the FY 2075/76

S.No.	Training programs	Duration (Days)	Participants (n)	Date	Venue
1	Training and Workshop on Anorectal Diseases and its Management by Kshar-Sutra	5	Ayurveda Medical Officers (17)		NARTC
2	Training and Workshop on Basic Panchakarma and Kshar-Sutra	5	Ayurveda Health Workers (29)		NARTC
3	Training and Workshop on Clinical Application of Marma Therapy	3	Ayurveda Medical Officers (38)		NARTC
4	Residential Stress Management Program	2			NARTC
5	Awareness Program on Ayurveda				Province 1 and 2
6	Awareness Program on Ayurveda	20	Elected ward officials of Kirtipur Metropolitan City		NARTC
7	Awareness Program on Ayurveda	20	Female health volunteers of Kirtipur Metropolitan City		NARTC

Ayurveda Health Camp

NARTC organized four Ayurveda Health Camps in different places in this fiscal year. The health camp program offered health services to more than 2500 people with free supply of medicines. The health camps were conducted at the following places.



1. Health camp at Kirtipur Municipality

This health camp was conducted on 29th Feb. 2020 A.D at Baghbhairav Secondary School, Champadevi Kirtipur ward no. 4. Prof. Dr. DL Bharkher, Dr. Nirmal Bhusal, Dr. Bikash Raj Ghimire, Dr. Amitman Joshi, Dr. Sirjana Shrestha, Dr. Nanimaiya Gurung, Dr. Jitendra Shrestha, Dr. Ujjwol Chandra Ray and Dr. Akhilesh Jha checked 281 which include 174 male and 107 female patients and distributed free medicines. Dr. Ram Adhar Yadav Thanked all the doctors, staffs and volunteers for their contribution in successful completion of the camp.



2. Health camp at Jestha Nagarik Sewa Kendra Kirtipur Municipality

This health camp was conducted on 27th September, 2019 Jestha Nagarik Sewa Kendra, Kirtipur Municipality. Dr. Amitman Joshi, Dr. Sirjana Shrestha, Dr. Jitendra Shrestha, checked about 100 patients with age group of more than 80 and distributed free medicines. Dr. Ram Adhar Yadav Thanked all the doctors, staffs and volunteers for their contribution in successful completion of the camp.



3. Health camp at Bariyarpatti, Siraha Province 2

This health camp was conducted on 19th October, 2019 at Janata Nanuma Secondary School, Bariyarpatti-3, Siraha Province 2. Mr. Bijay Yadav, Minister, Ministry of Economic Affairs and Planning was the chief guest during the program. Respected minister also did his general health checkup during the camp. Prof. Dr. DL Bharkher, Dr. Nirmal Bhusal, Dr. Bikash Raj Ghimire, Dr. Amitman Joshi, Dr. Sirjana Shrestha, Dr. Dr. Jitendra Shrestha, checked about 726 local patients of that area which includes 376 male and 350 female patients and distributed free medicines. Dr. Ram Adhar Yadav Thanked all the doctors, staffs and volunteers for their contribution in successful completion of the camp.



4. Health camp at Branch office of NARTC Province 1, Laukahi

This health camp was conducted on 9th November, 2019 at Branch office of NARTC, Province 1, Laukahi where Mr. Jagadish Prasad Kusiyait, Minister of Industry, Tourism, Forest and Environment, Province 1 was the chief guest during the program. Respected minister also did his general health checkup during the camp. Prof. Dr. DL Bharkher, Dr. Amitman Joshi, Dr. Sirjana Shrestha, Dr. Diksha Yadav, Dr. Jitendra Shrestha, Dr. Ujjwol Chandra Ray checked about 746 local patients of that area which includes 265 female and 481 male patients and distributed free medicines from the branch office of NARTC. Dr.

Ram Adhar Yadav Thanked all the doctors, staffs and volunteers for their contribution in successful completion of the camp.

Training and Certificate Distribution

NARTC stepped forward to achieve its training programs set up for fiscal year 2076-077. There were 3 training program and 3 awareness program for the year. A total of 85 Ayurveda Doctors, Paramedics and Health workers were trained this year and around 300 general public were aware regarding the importance of ayurveda this year. The training programs were organized on different dates within a year. The following were the training activities given below:

1. Event I: Training and Workshop on Ano-rectal Diseases and its Management by Kshar-Sutra.

NARTC conducted the training for 5 days from 22nd to 26th September, 2019 where Seventeen Ayurveda Doctors were trained during the workshop. The participants were selected from 7 province of Nepal. The closing ceremony featured with presence of Hon'ble Dr. Surendra Kumar Ray, State Minister, Minister of Health and Population, Prof. Dr. Dhanik Lal Bharkher, Chairman, Nepal Ayurveda Medical Council and Dr. Ram Adhar Yadav, Executive Director, NARTC.

2. Event II: Training and Workshop on Awareness Program of Ayurveda Medicine.

This awareness program was conducted on 19th October, 2019 A.D. at Janata Nanuma Secondary School, Bariyarpatti-3, Siraha Province 2. Prof. Dr. D.L. Bharkher, Dr. Ram Adhar Yadav, Dr. Sirjana Shrestha, Dr. Nirmal Busal, Dr. Bikash Raj Ghimire oriented the local people about Ayurveda medicines and local herbal remedy. Brochure regarding the importance of ayurveda and overview of NARTC is distributed to the local people of Bariyarpatti during the orientation program.

3. Event III: Training and Workshop on Marma Chikitsa

NARTC conducted the training on Marma Chikitsa for 3 days from 7th to 9th January, 2020 where Thirty eight Ayurveda Doctors were trained during the workshop. The participants were selected from 7 province of Nepal. Dr. Sunil Kumar Joshi, MS (Shayla Tantra), Professor and Head of the Department (Gurukul Kangari State Ayurvedic College, Haridwa) was the chief resource person throughout the training period. The closing ceremony featured with presence of Hon'ble Mr. Nawaraj Rawat, Executive State Minister, Minister of Health and Population, Prof. Dr. Dhanik Lal Bharkher, Chairman, Nepal Ayurveda Medical Council and Dr. Ram Adhar Yadav, Executive Director, NARTC.



5. COVID-19 Outbreak



NARTC has always been responsible towards the society and the country. NARTC began tracing COVID-19 patients via telephone calls among residents of Kirtipur Municipality with the help of Female Health Volunteers during Nepal's first lock-down period (11th Chaitra, 2077 B.S.). During the COVID-19 pandemic, NARTC proudly welcomed and fulfilled its responsibility for the society admitting suspected cases of TUTH probably being exposed to Nepal's first COVID-19 case. The number of suspected cases were 14 admitted on 10thJestha, 2077 B.S. Fortunately, none of them had detected covid-19 infection. Ministry of Health and Population, Government of Nepal declared NARTC as an "Isolation Center" for COVID-19 patients and on 25thAshad, 2077 B.S, twenty COVID-19 patients was admitted at NARTC. In the meantime, NARTC team were working hard to contribute and help COVID-19 patients and as such experts of NARTC formulated Ayurvedicherbo-mineral formulation to boost immune system in COVID-19 patients. NARTC has been providing effective services to COVID-19 patients since then. Similarly, there is ongoing research to evaluate symptoms in COVID-19 patients and to find out the effectiveness of Ayurvedicherbo-mineral preparation in COVID-19 patients at NARTC.



Annex :1. List of Participants of Marma chikitsa

S.N.	Name	Address
1	Dr. Rajeshwor Aryal	NSU, Institute of Ayurveda
2	Dr. Surendra Ray	Department of Drug Administration
3	Dr. Om Prakash Kalouni	Mahakali Ayurveda Ausadhalaya, Kanchanpur
4	Dr. Anu Shakya	DAHC, Lalitpur
5	Dr. Anju Karki	Bagmati Zonal Ayurveda Ausadhalaya
6	Dr. Manoj Kumar Chaudhary	DAHC, Kavrepalanchowk
7	Dr. Nadan Kandel	DAHC, Bhaktapur
8	Dr. Ramesh Paudel	Nardevi Ayurveda Chikitsalaya, Nardevi, Kathmandu
9	Dr. Saroj Kumar Ray	DOA, Teku
10	Dr. Jhula Ram Adhikari	Nardevi Ayurveda Chikitsalaya, Nardevi, Kathmandu
11	Dr. Om Prakash Chaudhary	Arogya Clinic, Rupandehi
12	Dr. Anil Kumar Yadav	DAHC, Jhapa
13	Dr. Satish Kumar Yadav	DAHC, Rautahat
14	Dr. Kiran Kamal Bastakoti	DAHC, Parbat
15	Dr. Ram Prabodh Mandal	DAHC, Tanahun
16	Dr. Madhurjee Dhakal	DAHC, Myagdi
17	Dr. Sanjeev Kumar Yadav	Sagarmatha Anchal Ayurveda Ausadhalaya, Udayapur
18	Dr. Lalita Pandey	Gulmi Ayurveda Health Center, Tamghas
19	Dr. Upendra Kumar Yadav	Panchthar
20	Dr. Hemanta Shahi	PHC, Surkhet
21	Dr. Sone Lal Sah	Department of Ayurveda and Alternative Medicine
22	Dr. Bikash Raj Ghimire	NARTC
23	Dr. Nirmal Bhusal	NARTC
24	Dr. Jitendra Shrestha	NARTC
25	Dr. Amit Man Joshi	NARTC
26	Dr. Sirjana Shrestha	NARTC
27	Dr. Akhilesh Kumar Jha	NARTC
28	Dr. Ujjwal Chandra Ray	NARTC
29	Dr. Mithilesh Kumar Singh	NARTC
30	Dr. Rohit Yadav	NARTC
31	Dr. Ruby Bajracharya	Lotus Ayurveda Clinic, Lalitpur
32	Dr. Nani Maiya Gurung	NARTC
33	Dr. Jitendra Kumar Mandal	NARTC
34	Dr. Raju Dev	NARTC
35	Dr. Praveen Kumar Yadav	
36	Dr. Yogesh Prasad Baidya	Shree Mithila Ayurveda College & Research Center, Janakpurdham
37	Mrs. Malika Pandey	Nardevi Ayurveda Chikitsalaya, Nardevi, Kathmandu
38	Dr. Santosh Thakur	

Annex :2. List of Participants on Training and workshop on Anorectal diseases and its management by Kshar-sutra

S.N	Name	Address
1	Dr. Surya Narayan Mehta	Inaruwa, Sunsari
2	Dr. Sudarsan Pokhrel	Bara-7, Dumarware
3	Dr. Sanjeev Kumar Yadav	Siraha
4	Dr. Sujata Sharma	Tansen-9, Palpa
5	Dr. Shiv Shankar Ray	DAOH, Parsa, Birgunj
6	Dr. Supriya Shrestha	Pokhara
7	Dr. Akhilesh Kumar Jha	NARTC
8	Dr. Anil Kumar Yadav	DAHC, Morang
9	Dr. Satish Kumar Yadav	DAHC, Sindhuli
10	Dr. Umesh Kumar Mehta	Inaruwa, Sunsari
11	Dr. Mithilesh Kumar Singh	NARTC
12	D. Lalita Pandey	Arghakhachi
13	Dr. Alok Pandey	DAHC, Bardiya
14	Dr. Kiran Kamal Bastakoti	Pokhara
15	Dr. Sunita Acharya	Pokhara
16	Dr. Raj Kumar Sah	Siraha
17	Dr. Rabindra Kumar Yadav	Birgunj

Annex :3. List of Participants on Training and workshop on Basic training and workshop on Panchakarma and Kshar-sutra

S.N	Name	Address
1	Mr. Chunchun Prasad Yadav	Kalbilashi Ayurveda Aushadhalaya, Sarlahi
2	Mr. Rudra Narayan Mahato	DAHC, Rautahat
3	Mr. KapildevSah	DAHC, Rajbiraj, Saptari
4	Mr. Rakesh Thakur	DAHC, Chainpur
5	Mr. Bijay Hathi	Pipara Ayurved Ausadhlaya, Mahottari
6	Mr. Ganga Prasad Birla	Sabaila Ayurveda Ausadhalaya, Dhanusha
7	Mr. Sanjay Kumar Yadav	Manahara Ayurved Ausadhalaya, Mahottari
8	Mr. Mahesh Prasad Jaiswal	DAHC, Malangwa, Sarlahi
9	Mr. Nagendra Prasad Patel	DAHC, Birgunj
10	Mr. Dharendra Kumar Singh	Jagarnathpur, Gaupalika
11	Mr. Pramananda Pathak	Jingadwa Ayurved Aushadhalaya, Parsa
12	Mr. Pramodh Yadav	Shiswani Ayurved Ausadhalaya, Siraha
13	Mr. Devendra Kumar Yadav	DAHC, Chitwan
14	Mr. Tarni Prasad Chaudhary	DAHC, Rasuwa
15	Mr. Devendra Acharya	DAHC, Syangja
16	Mr. Khem Raj Devkota	Khulung Deurali Ayurved Ausadhalaya, Syangja
17	Mr. Hari Paudel	Dhaulagiri Anchal Ayurveda Ausadhalaya
18	Mr. Krishna Dev Singh	Burtibanj Ayurveda Ausadhalaya
19	Miss Ram Kumari Khadka	Kapilbastu Ayurveda Swasthya Kendra
20	Mrs. Januka Bhattarai (Dhungana)	DAHC, Lalitpur
21	Mrs. Sirjana Marasini	DAHC, Bhaktapur
22	Mrs. Anshu Jha	NARTC

23	Mr. Pramod Kumar Sah	NARTC
24	Mr. Mukesh Jha	NARTC
25	Mrs. Indu Joshi	NARTC
26	Mr. Sanjib Prasad Thakur	NARTC
27	Mr. Shyam Kumar Mishra	NARTC
28	Mr. Tirth Narayan Yadav	G.K. Ayurveda
29	Mr. Ganesh Koirala	Bhimad Ayurveda Ausadhalaya, Tanahaun

