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मा. रामजनम चौधरी
मन्त्री
स्वास्थ्य तथा जनसंख्या

नेपाल सरकार



स्वास्थ्य तथा जनसंख्या मन्त्रीको
स्वकीय सचिवालय
रामसाहपथ, काठमाडौं, नेपाल

दि. १५/०१/२०७२
प.सं. ३४



मिति: २०७२/१०/०४

शुभकामना

संसारमा मृदु तथा गवर्शीय सम्बन्धित रोगहरु एक प्रमुख स्वास्थ्य समस्याको रूपमा रहेको छ । मृदुसम्बन्धी रोगबाट कतौडी मानिसहरु प्रभावित हुदै आएका छन् र लाखौ मानिसहरुले अकारणै जीवन गुमाइरहेका छन् । हाम्रो देशमा पनि हालका दिनहरुमा मृदुरोगसम्बन्धी समस्याहरु बढ्दै गइरहेको परिदृश्यमा यसको उपचार, निदान र रोकथाममा शहीद गणेशाल शल्य चिकित्सा केंद्र, बाँसखोरी काठमाडौंले खेलेको भूमिका अत्यन्त प्रभावकारी रहेको छ। अत्याधुनिक उपचार पद्धतिद्वारा स्वदेशमा नै विशिष्ट विधिमाको स्वास्थ्य सेवा सर्वसुलभ र सरल तरिकाले उपलब्ध गराउँदै लैजाने नेपाल सरकारको नीतिअनुसृत्य त्यस केंद्रले पुर्यात गरेको मृदुरोगसम्बन्धी उपचारत्मक तथा पूर्वदृष्टात्मक कार्यक्रमहरु अत्यन्त प्रशंसनीय छन् ।

यसै क्रममा केंद्रले २०औं वार्षिकोत्सवको सन्दर्भमा आफ्नो वार्षिक प्रगति विवरणहरु संघर्षी अनुसन्धानात्मक लेख रचनाहरु समेटेर स्मारिका प्रकाशन गर्न लागेकोमा मलाई खुसी लागेको छ । उक्त स्मारिकामा प्रकाशित लेखहरुले सरोकारवाला क्षेत्र र जनसमुदायलाई उल्लेख्य फाइदा पुग्ने विश्वास लिदै आगामि दिनमा यस केंद्रको उत्तरीतर प्रगति एवं सफलताका निम्ति समेत हार्दिक शुभकामना व्यक्त गर्दछु ।

रामजनम चौधरी
स्वास्थ्यमन्त्री

मा. मोहम्मद मुस्ताक आलम
राज्यमन्त्री
स्वास्थ्य तथा जनसंख्या

नेपाल सरकार



स्वास्थ्य तथा जनसंख्या राज्यमन्त्रीको
स्वकीय सचिवालय
रामनाथपथ, काठमाडौं, नेपाल
मिति :- २०७२/१०/६

र.स. :
प.स. :



शुभकामना

शहीद गंगालाल राष्ट्रिय हृदय केन्द्रले आफूले वर्षभरि सम्पादन गरेका कृयाकलापका साथसाथै अनुसन्धानात्मक लेख रचनाहरु समेटी २०औं वार्षिकोत्सवको अवसरमा स्मारिका प्रकाशन गर्न लागेकोमा मलाई अत्यन्त खुसी लागेको छ ।

अत्याधुनिक उपचार पद्धतिद्वारा स्वदेशमा नै हृदयरोगको उपचार र निदानका लागि विशिष्ट किसिमको स्वास्थ्य सेवा सर्वसुलभ र सरल तरिकाले जनताको पहुँचमा पुऱ्याउने कार्यमा त्यस केन्द्रले स्थापनाकालदेखि अनवरतरूपमा खेलेको भूमिकाको म उच्च मूल्यांकन गर्न चाहन्छु । आगामी दिनमा मुटुरोगको उपचार र निदानमा देशलाई आत्मनिर्भर बनाउने छालका सशक्त कार्यक्रमहरु विकास गर्दै गरीबीको रेखामुनि रहेका दलित, महिला, आदिवासी, जनजाति, मधेशी, सिमान्तकृत एवं अल्पसंख्यक समुदायको पहुँचमा आएका सेवालाई अझ विस्तार गरी जनताको हर हृदयमा बस्न सकोस् भन्ने शुभकामना सहित स्मारिका प्रकाशनको सफलताको कामना समेत व्यक्त गर्दछु ।

मा. मुस्ताक आलम
राज्यमन्त्री



नेपाल सरकार
स्वास्थ्य मन्त्रालय

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पत्र संख्या - ०७७/८१
च.सं. :-

राजशाहपुर काठमाडौं
नेपाल ।
मिति: २७/०२/१९७५



विषय: शुभकामना ।

शहीद संग्रहालय राष्ट्रिय हृदय केन्द्रले आफ्नो स्थापनाजन्मको छोटो समयमा मृदुरोगको उपचारको क्षेत्रमा आफ्नो सफलताले बनाइ आएको सुती तारको छ । केन्द्रमा कार्यरत सबैको उत्तिकै मेहनत, निम्नोर्ध्वारोह र कर्तव्यनिष्ठताले मात्र यो सफलता प्राप्त भएको हो भन्ने कुरामा य विवरण छ ।

विश्वव्यापीरूपमा मृदुरोग एक प्रमुख स्वास्थ्य समस्याको रूपमा देखिएको छ । यसका मुख्य कारणहरूमध्ये जीवनशैली (Life Style) पनि एक हो । यसबाट करोडौं मानिसहरू प्रभावित हुने आएको छ र लाखौं मानिसहरूले अकालमै आफ्नो जीवन गुमाइरहेका छन् । हाम्रो देशमा पनि राम्रका दिनहरूमा जीवनशैलीको परिवर्तनसँगसँगै मृदुरोगसम्बन्धी समस्याहरू व्यापक बन्दै गइरहेको परिदृश्यमा यसको उपचार, निदान र रोकथाममा त्यस केन्द्रमै खेलेको भूमिका उदाहरणीय छ । यस अवस्थामा प्रभावित हुने मानिसलाई जगतको आधार रण एवं व्यवहार परिवर्तन गर्नमा सकारात्मक भूमिका खेल्ने प्रेरणा दिइएको छ ।

अन्तमा, आफ्नो दिनका मृदुरोगको उपचार, निदान र रोकथाममा देशलाई आर्जनित बनाउने किसिमका यसका कार्यक्रमहरू विकास बढी अगाडि गइने कार्यमा केन्द्रलाई सफलता मिलोस् भन्ने शुभकामनासहित योको आधिकारिक सफलताको कामना समेत गर्दछु ।

(मान्द महदुर भेष)
सचिव

EDITORIAL

Since the establishment 20 years back, Shahid Gangalal national heart centre strives to be a national leader in the prevention, diagnosis, treatment and research of cardiovascular diseases. Our centre is making the health care of tomorrow better through research and education. Employing the most advanced treatments, state-of-the-art technology, we have provided service to thousands of patients from the country, neighboring countries and around the world. It offers high quality cardiac care services to the community regardless of race, creed, ethnic origin, or economical background.

Together, we succeeded where separately we may fail. This will be no less true in the future. All of us are devoted to serve the healthcare needs of the people. Our high standards of medicine, excellent outcomes, and reputation are directly related to the mutual support each physician, nurse, therapist, and other caregivers provide to each other and to our patients. Everyday we work very hard to provide our patients with the best possible medical care in a friendly, respectful, and compassionate setting, and remarkably, over time, a unique culture has grown and flourished within the centre. We will continue to set high standards and will hold ourselves accountable for the results. We will continue to respond quickly and appropriately when improvement is necessary.

This edition of 20th Annual report clearly reflects our success of last year. We express our sincere thanks to all of our seniors, colleagues, friends and fellow staff for their support and contribution during the publication of annual report 2015.

Dr. Chandra Mani Adhikari

Dr. Apurba Sharma

Dr. Dipanker Prajapati

Dr. Poonam Sharma

Dr. Nirmal Panthee

Dr. Reeju Manandhar

Ms. Pratibadan Dangol

Mr. Santosh Dhakal

ANNUAL REPORT 2015

TABLE OF CONTENT

क्र.सं.	शिर्षक	पेज नं.
1	कार्यकारी निर्देशकको वार्षिक प्रतिवेदन	1-3
2	आ.व.०७१/७२ को वार्षिक कार्यक्रमको प्रगति तथा आयव्यय विवरण	4-7
3	Department of Cardiovascular Surgery	8-9
4	Department of Anesthesiology	10-12
5	Non-Invasive Cardiology and OPD Services	13-17
6	Pediatric Cardiology Service	18-21
7	Acute Coronary Syndrome	22-23
8	Medical Intensive Care Unit (MICU)	24-25
9	Interventional Cardiology Services	26-27
10	Cardiac Electrophysiology and Device Implantation	28-29
11	Emergency Services	30-32
12	Medical Ward	33-34
13	Department of Cardiac Rehabilitation & Health Promotiion	35-37
14	Pathology/Clinical Laboratories Services	38-39
15	Radiology Services	40-42
16	Pharmacy Unit	43-44
17	Physiotherapy Services	45-47
18	Annual Mortality : 2015	48-49
19	Perfusion Technology Unit	50-51
20	Early and Effective Resuscitation Task Force	52
21	Institutional Review Committee	53-55
22	Emergency Nursing	56
23	Any Problem..... 307	57
24	Because I am a Nurse...	58
25	Nursing Department: Its ongoing contributions and hurdles	59-60
26	नविन व्यवस्थापनमा ट्रेड यूनियनको भूमिका	61-62
27	Photographs	63-70
28	Staff List	71-81

कार्यकारी निर्देशकको प्रतिवेदन



डा. ज्योतीन्द्र शर्मा
कार्यकारी निर्देशक

शहीद गंगालाल राष्ट्रिय हृदय केन्द्रको बीसौं वार्षिकोत्सवको अवसरमा कार्यकारी निर्देशकको हैसियतले वार्षिक प्रतिवेदन प्रस्तुत गर्न पाउँदा गौरवान्वित भएको छु । नेपालमा दिन प्रतिदिन वृद्धि हुँदै गइरहेको मुटुरोगको रोकथाम, निदान, उपचार तथा हृदयरोगीहरूको पुनर्स्थापनाको लागि आवश्यक उच्चस्तरीय स्वास्थ्य सेवा सर्वसुलभरूपमा स्वदेशमा नै प्रदान गरी हृदयरोगीहरूलाई मानवोचित जीवनयापन गर्न सक्षम तुल्याउन तथा हृदयरोगसम्बन्धी उच्चस्तरीय अध्ययन र अनुसन्धानका लागि आवश्यक दक्ष जनशक्ति तयार गर्ने मूल उद्देश्य लिई नेपाल सरकारले शहीद गंगालाल श्रेष्ठको नाममा समर्पित गरी यस केन्द्रको स्थापना गरेको हो । वि. सं. २०५२ सालमा स्थापित यस केन्द्रले ९ शैयाबाट आफ्नो सेवा सुरु गरेकोमा हाल २०० शैया क्षमतामा विस्तार भई संचालनमा रहेको छ । प्रारम्भमा मुटुरोगसम्बन्धी सामान्य उपचार वाट सेवा शुरु गरेको यस अस्पतालले समयको अन्तरालसँगै मुटुरोगसम्बन्धी विभिन्न किसिमको उपचारमा विशेषज्ञ सेवाहरू उपलब्ध गराउँदै आइरहेको छ । सिमित श्रोत र साधनबाट शुरु भएको यस केन्द्र हाल प्रविधि, दक्ष जनशक्ति तथा अत्याधुनिक औजारले सुसज्जित राष्ट्रियस्तरको अस्पतालको रूपमा आफूलाई स्थापित गर्न सकेको छ । स्थापनाकाल देखिका संचालक समितिहरू, केन्द्रमा कार्यरत सम्पूर्ण कर्मचारीहरू, स्वास्थ्य मन्त्रालय, नेपाल सरकारका सरोकारवाला निकायहरूको निरन्तर मेहेनत र सहयोग एवं आम जनता तथा विरामीहरूको अटुट विश्वास

र सद्भावका कारण यो केन्द्र आजको स्वरूपमा आइपुग्न सफल भएको हो ।

विगतका २० वर्षमा केन्द्रले थुप्रै उपलब्धिहरू प्राप्त गरेको छ । वि.सं. २०५५ पौष १५ गते बहिरंग सेवा शुरू भएदेखि हालसम्म करिब ११ लाख ५० हजार विरामीहरूको बहिरंग सेवामार्फत् स्वास्थ्य परिक्षण गरिएको छ । हालसम्म करिब ४० हजार विरामीहरूको विभिन्नखालका Cath Procedures तथा करिब १६ हजार विरामीको मुटुको शल्यक्रियाहरू भएका छन् । गतवर्ष अर्थात् सन् २०१५मा मात्र १,१०,४१३ जना विरामीहरूको बहिरंग सेवामार्फत् स्वास्थ्य परिक्षण भएको छ । यही वर्ष ४०२६९ वटा Electrocardiogram (ECG), ४५३२४ वटा Echocardiogram, ४६५०४ वटा X-ray का साथै अन्य विभिन्नखाले Non-Invasive परीक्षणहरू उल्लेख्य संख्यामा भएका छन् । साथै ६,३४४ Cath Procedures गरिएको छ, जसमा ३४७६ वटा Coronary Angiogram (CAG), १५०५ वटा Coronary Angioplasty (PTCA), ४४५ वटा PTMC, २३७ वटा EPS/RFA, ३९ वटा Device closures र ५३२ वटा Pacemaker प्रत्यारोपण गरिएको छ । त्यसैगरी गतवर्ष १४१२ वटा विभिन्न खालका मुटुको शल्यक्रिया सम्पन्न गरिएको छ । यसै वर्ष १० हजार ओपन हार्ट सर्जरीको कोसेढुंगा पनि केन्द्रले पार गरेको छ । केन्द्रमा सन् २०१५ मा भर्ना भई उपचार गराउने विरामीहरू (In-patient) को संख्या १२,६७० रहेको छ ।

मुटुरोगको उपचारमा नेपाल सरकारले अत्यन्तै

महत्व दिएको छ । विगत केही वर्षदेखि नेपाल सरकारले १५ वर्षमुनिका बालबालिका तथा ७५ वर्षमाथिका जेष्ठ नागरीकहरूलाई यस केन्द्रमा निःशुल्क उपचार गर्ने व्यवस्थाको लागि बजेट प्रदान गरेको छ । यस आर्थिक वर्षमा पनि सोही प्रयोजनको लागि नेपाल सरकारले रु. १० करोड ८० लाख विनियोजन गरेको छ । साथै मुटुको साँघुरिएको भल्भ विना अप्रेसन खोल्ने प्रविधि एन्डोस्कोपीको लागि रु. १ करोड ६३ लाख विनियोजन गरेको छ । त्यसै गरी विगतका वर्षहरूमा भैं यस आ.व.मा पनि गरीब तथा असहाय विरामीहरूलाई उपचारको लागि २०० वटा निःशुल्क भल्भको व्यवस्था मिलाएको छ । यसका अतिरिक्त “विपन्न तथा असहाय” विरामीहरूको लागि गम्भीर प्रकृतिका मुटुरोगको उपचारार्थ प्रति विरामी रु. १ लाखसम्म अनुदान नेपाल सरकारले प्रदान गरेको छ । यस कार्यक्रम अन्तर्गत ठूलो संख्यामा विरामीरुले राहत पाएका छन् ।

माथि उल्लेखित सरकारी राहत कार्यक्रमहरूका अतिरिक्त जयन्ती मेमोरियल ट्रष्ट, नेपाल हृदयरोग निवारण प्रतिष्ठान, भगवती देवी सैजू अक्षय कोष, गोर्डा इको हिमाल च्यारिटी फार्मसी, सिता-केदार चालिसे ट्रष्ट लगायतका सहयोगी संघ संस्था तथा अन्य व्यक्तिहरूले पनि गरीब तथा असहाय विरामीको उपचारमा यथासक्दो आर्थिक तथा भौतिक सहयोग गरिरहेका छन् ।

मुटुरोग उपचार महंगो हुनुकासाथै जटिल छ । मुटुरोगको उपचारका साथै रोकथाममा पनि यस केन्द्रले उल्लेखनीय भूमिका खेल्दै आएको छ । मुटुरोग रोकथाममा समयमै ध्यान दिएमा यो सस्तो र प्रभावकारी हुन्छ । त्यसैले यो केन्द्र मुटुरोगीहरूको उपचारमा रातोदिन तल्लिन भएर पनि मुटुरोगको रोकथाम र यससम्बन्धी जनचेतना अभिवृद्धि गर्ने कार्यमा पनि निरन्तर लागि परेको कुरा जानकारी गराउन चाहन्छु । केन्द्रले विगतका वर्षहरूमा भैं गत आर्थिक वर्षमा पनि देशका विभिन्न जिल्लाहरू (स्याङ्जा, बारा, पर्सा, बर्दिया, कैलाली, सिन्धुपाल्चोक, दोलखा, सिन्धुली, भक्तपुर, म्याग्दी लगायतका जिल्लाहरू) मा विशेषज्ञ चिकित्सकहरूको टोलीले निःशुल्क स्वास्थ्य शिविरहरू संचालन गरेकोमा ती शिविरहरूबाट ४,६७७ जना विरामीहरूले प्रत्यक्षरूपमा सेवा लिएका थिए । जसमध्ये १२८४ जनाको इसिजि र १२३० जनाको इकोकार्डियोग्राम गरिएको थियो । यस्ता शिविरबाट हुने लाभ र प्रभावकारिताको जनस्तरबाट निकै प्रशंसा बटुल्न केन्द्र सफल भएको छ । यस्तो कार्यलाई आगामि दिनमा पनि केन्द्रले प्राथमिकताकासाथ निरन्तरता दिने नै छ । साथै केन्द्रले वहिरंग

सेवा तथा भर्ना भएका विरामीहरूको लागि दैनिक परामर्श सेवा समेत प्रदान गर्दै आइरहेको छ ।

केन्द्रलाई आत्मनिर्भर बनाउन जनशक्ति तथा प्रविधिको विकास र विस्तारमा केन्द्र गम्भीर भएर लागेको छ । विभिन्न शिक्षण तथा तालीमसम्बन्धी कार्यक्रमहरू केन्द्रमा शुरू भइसकेका छन् । देशमा Perfusion सम्बन्धी दक्ष जनशक्तिको ठूलो खाँचो भएकोले BPKIHS, धरानसँग समन्वय गरी चाँडै BSc Perfusion को अध्ययन शुरू हुन गइरहेको छ । केन्द्रका विशेषज्ञहरूलाई तालिमको लागि विदेशका उत्कृष्ट संस्थामा पठाउने तथा यूरोप तथा अमेरीकाका विशेषज्ञहरूलाई केन्द्रमा बोलाएर तालीम उपलब्ध गराउने प्रकृया सुरु छ । साथै मुटु उपचारलाई विकेंद्रीकरण गर्नुपर्छ भन्ने केन्द्रको मान्यता अनुरूप धुलिखेल अस्पताल, चितवन मेडिकल कलेज तथा BPKIHS धरानका चिकित्सक, नर्स तथा पर्ययजनका कर्मचारीलाई तालीम प्रदान गरिरहेको छ । केन्द्रमा यति धेरै गुणस्तरीय काम हुँदाहुँदै पनि एकेडेमिक प्रतिष्ठान नभएको कारणले गर्न सकिने जति शैक्षिक कृयाकलाप गर्न सकिएको छैन । केन्द्रलाई आउने दिनमा प्रतिष्ठानमा परिवर्तन गुनपने जरुरत तथा चुनौती छ ।

आर्थिक अनुशासन र आर्थिक कारोबारमा पारदर्शिता केन्द्रको नैतिक बल हो । यस केन्द्रका सम्पूर्ण खरीद प्रक्रिया अनलाईन (इ-टेण्डर) मार्फत सफलतापूर्वक गरिँदै आएको छ । विगत आर्थिक वर्षहरूमा जस्तै आ.व. २०७०/७१ को लेखा परीक्षणमा केन्द्रको बेरुजु शुन्य रहेको छ ।

यस वर्ष देशले भोग्नुपरेको भूईँचालो तथा नाकाबन्दी जस्ता विभिन्न कारणहरूले विषम परिस्थितीको सिर्जना भएतापनि केन्द्रले आफ्नो सेवालालाई विगतमा भैं सफलतापूर्वक प्रदान गर्न सक्यो । यसका लागि केन्द्रका सम्पूर्ण कर्मचारी धन्यवादका पात्र छन् ।

यस केन्द्रले विगतका २० वर्षमा आफूलाई अग्रणी संस्थाको रूपमा स्थापित गर्न सकेतापनि विभिन्न चुनौतीहरू विद्यमान छन् । केन्द्र अत्यन्त व्यस्त हुँदा यसका सेवाहरूलाई देशका अन्य भागमा विस्तारित तथा विकेंद्रित गर्न सकिएको छैन । साथै केन्द्रको विद्यमान सेवा सुविधाको गुणस्तरलाई कायम राख्दै समयानुकूल स्तरोन्नति गर्नु अर्को मुख्य चुनौति हो । केन्द्रमा आर्थिकरूपले सम्पन्न विरामीलाई आकर्षण गर्नको लागि केन्द्रमा संचालित Paying Clinic लाई अझ प्रभावकारी र व्यवस्थित बनाउनु पर्नेछ । यसको लागि यस आ.व. मा केन्द्रमा नयाँ बहिरंग तथा इमर्जेन्सी भवन निर्माणको लागि टेण्डर प्रकृया

शुरू भइसकेको छ ।

अन्त्यमा, केन्द्रको विकास, विस्तार र स्थायित्वको लागि निरन्तर लागि रहनु भएका केन्द्रमा कार्यरत सम्पूर्ण कर्मचारीहरु, स्वास्थ्य मन्त्रालय, नेपाल सरकारका सरोकारवाला निकायहरु, केन्द्रका वर्तमान एवं पूर्व संचालक समितिका सदस्यज्यूहरु, पूर्व कार्यकारी निर्देशकज्यूहरु, रक्तदाताहरु, चन्दादाताहरु, गैर-सरकारी संस्थाका

प्रतिनीधिहरु, पत्रकारहरु, विरामी तथा उनीहरुका आफन्तहरु एवं सम्पूर्ण शुभेच्छुक जनमानसमा हार्दिक धन्यवाद व्यक्त गर्न चाहन्छु ।

डा. ज्जोतीन्द्र शर्मा
कार्यकारी निर्देशक
मिति: २०७२।१०।१५

आ.व. २०७१/०७२ को वार्षिक कार्यक्रमको प्रगती तथा आय व्यय विवरण

- बिमल कुमार उप्रेती
- मनोज कुमार बिष्ट

यस केन्द्रले आ.व.२०७१/७२ मा मुख्य ८ वटा कार्यक्रम संचालन गर्ने लक्ष्य राखिएको र सो कार्यक्रम संचालनका लागि नेपाल सरकारको तर्फबाट चालिस करोड, स्वास्थ्य करकोषको तर्फबाट तिन करोड बीस लाख र आन्तरीक श्रोतबाट सन्ताउन्न करोड छयानब्बे लाख व्यहोर्ने गरि कुल रकम एक अरब सोह्र लाख बजेटको व्यवस्था गरिएकोमा यस आर्थिक वर्षमा मुख्य ८ वटा कार्यक्रम सम्पन्न भै एक अरब उन्नान्बे लाख पचहत्तर हजार खर्च समेत भै उक्त रकमबाट निम्नलिखित कार्यक्रमहरु संचालन भएको छ ।

१. मुटुरोगीहरुको परीक्षण सेवा:
यस आ.व.२०७१/७२ मा जम्मा कूल ११०००० जना बिरामीहरुलाई बहिरंग सेवा मार्फत सेवा पुर्याउने लक्ष्य राखेकोमा यस आ.व. २०७१/७२ मा जम्मा ११५८६८ जना बिरामीहरुको बहिरंग सेवा मार्फत मुटुको परीक्षण गरिएको छ । यसरी वार्षिक लक्ष्यको आधारमा १०५ प्रतिशत भौतिक प्रगति देखिएकोछ ।
२. मुटुको शल्यक्रिया सेवा:
आ.व.२०७१/७२ मा जम्मा १२०० जना बिरामीको मुटुको शल्यक्रिया गर्ने कार्यक्रम राखिएकोमा यस आ.व.२०७१/७२ मा जम्मा १४३० जना बिरामीहरुको विभिन्न खाले मुटुको शल्यक्रिया गरिएकोछ । जसमध्ये ११७५ वटा ओपन हार्ट सर्जरी, ११८ वटा क्लोज हार्ट सर्जरी र १३७ वटा अन्य सर्जरीहरु सम्पन्न भएका छन् । यसरी वार्षिक लक्ष्यको आधारमा ११९ प्रतिशत भौतिक प्रगति देखिएकोछ ।
३. एन्जियोग्राफी/प्लाष्टी परीक्षण सेवा:
आ.व.२०७१/७२ मा जम्मा ३६००

जना मुटुका बिरामीहरुको क्याथल्याब सेवा मार्फत एन्जियोग्राफी/प्लाष्टी लगायतका विभिन्न रोगहरुको परीक्षण तथा निदान गर्ने लक्ष्य राखिएको मा वार्षिक लक्ष्यको आधारमा यस आ.व.२०७१/७२ मा जम्मा ५२८२ जना बिरामीहरुको क्याथल्याब मार्फत विभिन्न उपचार गरिएकोछ । उपचार गराएको बिरामीहरुमध्ये ३०२८ जना बिरामीको मुटुको एन्जियोग्राफी, ११६१ जना बिरामीको मुटुको एन्जियोप्लाष्टी, २९९ जना बिरामीको मुटुको पि.टि.एम.सी, २१२ जना बिरामीको पिपिआई, २१२ जना बिरामीको टि.पि.आई, १९७ जना बिरामीको इपिएस तथा अन्य १८६ जना बिरामीको क्याथल्याब मार्फत अन्य सेवाहरु उपलब्ध गराइएको थियो । यसरी वार्षिक लक्ष्यको आधारमा सतप्रतिशत भन्दा बढी भौतिक प्रगति देखिएकोछ ।

४. प्रतिकारात्मक सेवा :
आ.व. २०७१/७२ मा जम्मा ८ वटा प्रतिकारात्मक कार्यक्रम संचालन गर्ने लक्ष्य राखिएकोमा सो कार्यक्रम अन्तर्गत यस केन्द्रले मुख्य मुख्य ठाउँमा मुटुरोग सम्बन्धी शिबिर संचालन गरेको थियो । जसमध्ये..
 - जसमध्ये देशको विभिन्न स्थानमा १ दिने मुटुरोग सम्बन्धी निःशुल्क स्वास्थ्य शिबिर सञ्चालन गरी जम्मा ५७७७ जना बिरामीको स्वास्थ्य परीक्षण गरिएको जसमध्ये इसिज गर्ने बिरामी १५३५, तथा इको गर्ने बिरामीको संख्या १५०७ रहेको छ ।
 - स्याङ्जा जिल्लामा एक दिने मुटु रोग सम्बन्धी निःशुल्क स्वास्थ्य शिबिर

संचालन गरि ६०८ जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।

- बारा जिल्लामा १ दिने मुटु रोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि ३२५ जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- पर्सा जिल्लामा १ दिने मुटुरोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि १७९ जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- बर्दिया जिल्लामा १ दिने मुटु रोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि ११८० जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- कैलाली जिल्लामा १ दिने मुटु रोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि २८१ जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- सिन्धुपाल्चोक जिल्लामा १ दिने मुटुरोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि २३० जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- दोलखा जिल्लामा १ दिने मुटु रोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि ३०० जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- सिन्धुली जिल्लामा १ दिने मुटुरोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि १२०० जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- भक्तपुर जिल्लामा १ दिने मुटुरोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि ३७४ जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।
- म्याग्दी जिल्लामा १ दिने मुटुरोग सम्बन्धी निःशुल्क स्वास्थ्य शिविर संचालन गरि ११०० जना बिरामीहरूको स्वास्थ्य परिक्षण गरिएको ।

५. मुटुको भल्भ राहत कार्यक्रम:

आ.व. २०७१/७२ मा नेपाल सरकारद्वारा शुल्क तिर्न नसक्ने मुटुका गरिब बिरामीहरूका लागि घोषित राहत कार्यक्रम अनुसार स्वास्थ्य मन्त्रालय मार्फत २०० वटा मुटुका भल्भहरू खरिद गर्न रु. १ करोड रकम विनियोजित

भै आएकोमा उक्त रकमबाट २०० वटा मुटुका भल्भहरू खरिद कार्य सम्पन्न भै हाल उक्त २०० वटा भल्भहरू प्रक्रिया पूरा गरी बिरामीहरूलाई वितरण गरी सकिएको र ति बिरामीहरूलाई भल्भ लगाइदिने कार्य नियमितरूपमा भै रहेकोछ । यसरी वार्षिक लक्ष्यको आधारमा १०० प्रतिशत भौतिक प्रगति देखिएकोछ ।

६. १५ वर्षमुनीका तथ ७५ वर्ष माथिका बिरामीहरूको निःशुल्क स्वास्थ्य सेवा कार्यक्रम:

आ.व. २०७१/७२ मा नेपाल सरकारद्वारा शुल्क तिर्न नसक्ने १५ वर्ष मुनीका मुटुका गरिब बिरामीहरू तथा ७५ वर्ष माथिका मुटुका गरिब बिरामीहरूका लागि घोषित राहत कार्यक्रम अनुसार रु. ११ करोड २२ लाख ७५ हजार रकम विनियोजित भै आएकोमा उक्त रकमबाट १५ वर्ष मुनीका मुटुका ५६० जना गरिब बिरामीहरूको विभिन्न किसिमका शल्यक्रियाहरू सम्पन्न गरिएको छ भने ७५ वर्ष माथिका २५९ जना गरिब बिरामीहरूको उपचार गरिएको छ । यसरी वार्षिक लक्ष्यको आधारमा १०० प्रतिशत भौतिक प्रगति देखिएकोछ ।

७. पि.टी.एम.सी. गर्ने बिरामीहरूको निःशुल्क स्वास्थ्य सेवा कार्यक्रम:

आ.व. २०७१/७२ मा नेपाल सरकारद्वारा शुल्क तिर्न नसक्ने मुटुको भल्भ सांगरिएको बिरामीहरूको उपचारका लागि घोषित राहत कार्यक्रम अनुसार रु.१ करोड ७५ लाख रकम विनियोजित भै आएकोमा उक्त रकमबाट ३३२ जना गरिब बिरामीहरूको पि.टी.एम.सी.सम्पन्न गरिएकोछ । यसरी वार्षिक लक्ष्यको आधारमा १०० प्रतिशत भौतिक प्रगति देखिएकोछ ।

८. पुर्वाधार निर्माण तथा बिकास कार्यक्रम:

आ.व. २०७१/७२ मा जम्मा पुर्वाधार बिकास तथा निर्माणका लागि १ वटा कार्यक्रम अन्तर्गत भवन निर्माण तथा मेसिनरी औजार खरीद कार्यक्रम सञ्चालन गर्ने लक्ष्य राखिएकोमा सो बमोजिम मुख्य मुख्य कार्यमा हार्टलड मेशीन, हिटर कुलर, ओ.टी. लाइट, बेडसाइड मनिटर, डिआर एक्सरे

मेसिन, सिरिन्ज पम्प, इन्फुयुजन पम्प, ओपिडीका लागि आवश्यक उपकरणहरु व्यवस्था गरिएको साथै अस्पतालमा नियमितरूपमा हुने अन्य मर्मत सुधारका कार्यहरु पूरा भएकोछ ।

निष्कर्ष:

यस केन्द्रले चालू आ.व. २०७१/७२ को वार्षिक कार्यक्रम संचालनका लागि

मुख्य गरी ८ वटा कार्यक्रम तय गरी सोही बमोजिम बजेटको व्यवस्था गरेकोमा वार्षिक लक्ष्यको आधारमा तोकिएको भन्दा बढी अर्थात १०० भन्दा पनि बढी भौतिक प्रगति हासिल गरेको देखिएको छ भने वित्तिय तर्फ वार्षिक लक्ष्यको आधारमा ९४ प्रतिशत प्रगति देखिएकोछ ।

HOSPITAL INDICATORS 2071/072

SN	INDICATORS	VALUE
1	Infection Rate (Wound Infection)	0.48%
2	Average Length of Hospital Stay	3.31
3	Mortality Rate of Surgical Cases	6.78%
4	Mortality Rate of Medical Cases	2.14%
5	Mortality Rate of All In- Patients	2.27%
6	Doctor: OPD Patient Ratio	3049.15
7	Doctor: In-Patients Ratio	186.22
8	Nurse: In-patients Ratio	66.85
9	Percentage of Non-salary Cost (Through Total Cost)	78.52%
10	Drug Wastage Rate	0 %
11	Bed Occupancy Rate	78.006%
12	Right Use of Financial Resource	0%
13	Right use of Surgeon	143 Cases Per Surgeon
14	Total Poor Patients Charge	1.30%
15	Total Poor Patients Exemption Rate (Through Total Cost)	0.91%
16	Ratio of Referred Patients (IPD)	0.13
17	A) Cost Recovery Rate (Through Total Cost)	88.68%
18	B) Cost Recovery Rate (Through Total Budget)	82.93%
19	Clinics Sustain Rate	Special Clinic
20	Average Output Per Day (X-rays)	135.35
21	Average Output Per Day (Lab Test)	1797.30

शाहिद गंगालाल राष्ट्रिय हृदय केन्द्र
बांसबारी, काठमाडौं
आय-व्यय विवरण
आ.व. २०७१/७२

आय विवरण	अनुसूची	रकम	वैय विवरण	अनुसूची	रकम	रकम
गत बर्षको विम्मोबारी	१	१,०९३,७४१,०२८/०६	जम्मा बजेट खर्च:- प्राप्त बर्षको बजेट खर्च	८	९,०९,६४०,८२३/२४	१,०९३,६९९,२९९/३६
नेपान सरकारबाट प्राप्त अनुदान		४००,०००,०००/००	गत बर्षको बजेट खर्च	२	१,२९,९६९,४७०/१२	
स्वास्थ्य सरकारबाट प्राप्त अनुदान		३२,०००,०००/००	नवित्त बैंक (धरोटी)	२		४,६०४,६२९/००
गरीब निपलन सहस्रकोष	४	८२६,९९४,०६६/००	धरोटी खर्च	२		३,९९०,९३७/२४
आन्तरिक श्रोत आम्दानी	२	८,७९४,८६६/२४	सेवाना धरोटी (टेलिफोन, खानेपानी)	७		९७९,०००/००
फिटेन्सन तथा धरोटी	३	४४,४२४,६८२/७९	धरोटी तथा विगत खर्च	३		३०,२४९,४७०/००
ब्याज आम्दानी	६	१७९,०००/००	धरोटी वासी (प्रतिपत्र तथा अन्य)	१०		३६,३६६,०३९/३३
धरोटी (टेलिफोन खानेपानी)	५	१४,२८८/००	परिक्रम वासी (प्रतिपत्र तथा अन्य)	११		४८,३६२,७८८/००
दण्डित	४	१,०८६/२८	जम्मा विनु पर्ने:-	११		१,२९९,०००/७८
विभिन्न आम्दानी	४	१,०८६/२८	बैंक भौजगत	११(क)		२४,४०४,६७६/०६
	जम्मा	९,४१८,९६९,०९/३६	नगद तथा मार्गस्थल मौजगत			२,४९८,९९९,०९/३८

Arjun Singh

प्रमुख मोहन श्रेष्ठ
सेवा परिष्कार

Arjun Singh

(मनीष कुमार श्रेष्ठ)
व. लेखा अधिकृत

Arjun Singh

(बिमल कुमार उप्रेती)
अधिका प्रशासन प्रमुख

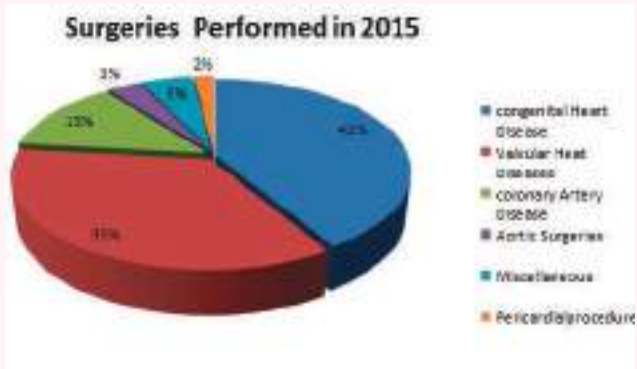
Arjun Singh

(बा.मान बलहर के.सी.)
कार्यकारी निर्देशक



The way to gain a good reputation is to endeavor to be what you desire to appear. Challenges which department of Cardiovascular Surgery had to face in difficult time of 2015 was continuing and maintaining the standard patients care despite hard time of availability to needy accessories. Another issue authority had to take care is opening opportunity of progression to faculty members of the department.

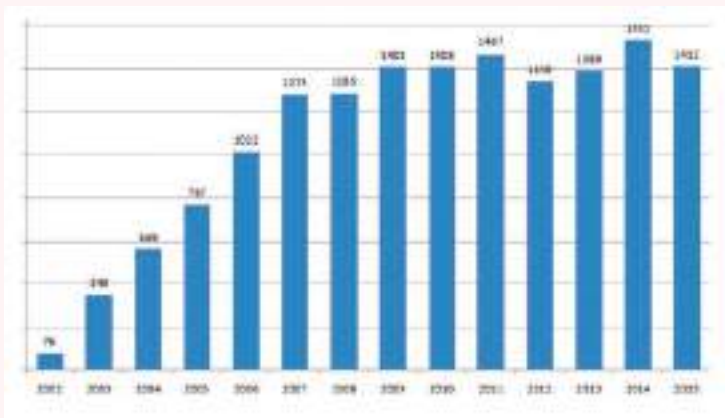
In the year of 2015 department had conducted 1412 of surgeries and had 20207 outpatients attendances.



Surgeries for congenital heart disease occupy the largest number in our centre with 584 in number. There were total 499 operations for Valvular Heart Disease, coronary artery bypass surgeries were

182, Aortic surgeries 46, other surgeries 101. Number of complex pediatric surgeries and complex adult surgeries occupied significant number. Overall mortality rate is 4% and re-exploration rate is 1.5%

The future belongs to those who believe in the beauty of their dreams. We are eager to provide more efficient services to people after completion of new modular



three operating theaters and 28 bed new ICU along with new outpatient building. To meet future challenges department is striving to expand services and training in newer challenges of minimally invasive cardiac surgeries. Considering the increase in number of faculty members department had decided to expand working surgery unit from three to six.

The significant problems we face cannot be solved at the same level of thinking we were at when we created them. The Department had a significant numbers of representations in the annual national cardiac conference organized by cardiac society of Nepal. In 2015, Dr Anil Acharya had done short term training from National University Hospital, Singapore.

This year we had notable international visitors. We are sincerely grateful to Dr Fredrik Grover, Dr David Campbell, Dr Robert Quaiife, from university of Colorado, Denver, USA; Lyle Joyce, Dr Sherry Crow, Dr Allison Cabalka from Mayo Clinic Rochester, Minnesota, USA; Dr Bashi A Velayudhin, Mohit institute of Cardiac Care, India and Dr Malakh Shrestha, from Hannover medical School, Hanover Germany.

Arriving at one goal is a starting point of another. The best way to predict the future is to create it. We are born for the responsible services, bear challenges what make life interesting and overcoming them is what makes life meaningful.

ARTICLES PUBLISHED

1. Surgical Embolectomy in Massive Acute Pulmonary Embolism: Our Experience. Krishna Bhandari, Nemirova SV, Medvedev AP, Pichugin VVNHI 2015;12(2):83-86.
2. Management of Coronary Artery Disease in Patients With Descending Thoracic Aortic Aneurysms. Rajbanshi BG, Charilaou P, Ziganshin BA, Rajakaruna C, Maryann T, Elefteriades

JA. J Card Surg. 2015 Sep;30(9):701-6. doi: 10.1111/jocs.12596. Epub 2015 Jul 30.

PAPER PRESENTATION

1. Surgical Embolectomy in Massive Acute Pulmonary Embolism. Krishna Bhandari Asia Pacific Cardiac Society Conference Hongkong
2. Early outcome of Coronary Artery Bypass Surgery : 2 years Experience at Shahid Gangalal National Heart Centre- Navin C Gautam, XIII International Congress in Management of Cardiovascular Diseases, October 2015, Kathmandu, Nepal.
3. Aortic Surgery: Current Trends in Nepal - Bijoy G Rajbanshi XIII International Congress in Management of Cardiovascular Diseases, October 2015, Kathmandu, Nepal.
4. Patient Prosthetic Mismatch and Experiences with Aortic Root Enlargement for small aortic root for valvular heart disease- Dr Jyotindra Sharma XIII International Congress in Management of Cardiovascular Diseases, October 2015, Kathmandu, Nepal.
5. Surgical outcome of Total Anomalous Pulmonary Venous Connection repair in tertiary center of Nepal- Ekta Shrestha XIII International Congress in Management of Cardiovascular Diseases, October 2015, Kathmandu, Nepal.
6. Cerebral Protection in Aortic Arch Surgery – Bijoy G Rajbanshi, XIII International Congress in Management of Cardiovascular Diseases, October 2015, Kathmandu, Nepal.
7. Chordae Preservation in Mitral Valve Surgery – Rabindra Bhakta Timala, XIII International Congress in Management of Cardiovascular Diseases, October 2015, Kathmandu, Nepal.



DEPARTMENT OF ANESTHESIOLOGY

Dr Jeju Nath Pokharel, Dr Dhandu Rani Shakya, Dr Apurb Sharma, Dr Ashish Govinda Amatya,
Dr Surendra Bhusal, Dr Battu Kumar Shrestha, Dr Smriti Mahaju Bajracharya, Dr Santosh Parajuli

Cardiac Anesthesiology at the Shahid Gangalal National Heart Centre is a multi-faceted division dedicated to perioperative cardiovascular care, education and research. The division encompasses:

- ✓ Pre-operative assessment and preparation of all patients prior to surgery
- ✓ Intra-operative anesthesia services including Trans-oesophageal echocardiography
- ✓ Post-surgical intensive care management
- ✓ All other respiratory care

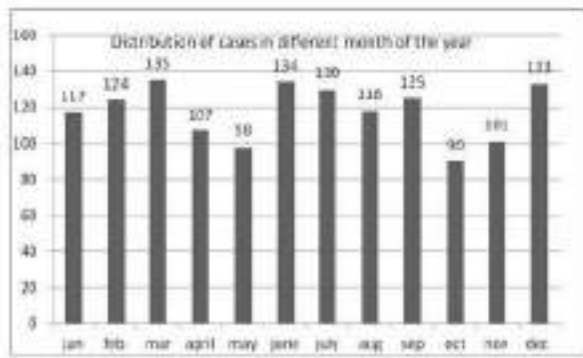
Approximately 1,400 open-heart procedures per year require anesthesia. These procedures include coronary artery bypass, valve replacement/repair surgery, surgery for repair of congenital heart lesions, vascular surgery, pericardial surgery, cardiac tumours and others. Clinical anesthesia is also provided for a

growing number and variety of pacemaker, implantable cardioverter-defibrillator (ICD), arrhythmia procedures and percutaneous procedures for diagnostic and therapeutic interventions in patients with congenital heart disease, balloon valvotomy of mitral, aortic and pulmonary valves in the cath lab. Multi-disciplinary intensive care for cardiac surgery patients is provided in the Cardiac Surgical Intensive Care Unit. Respiratory care support is also provided to the mechanically ventilated patients in the Coronary Care Unit.

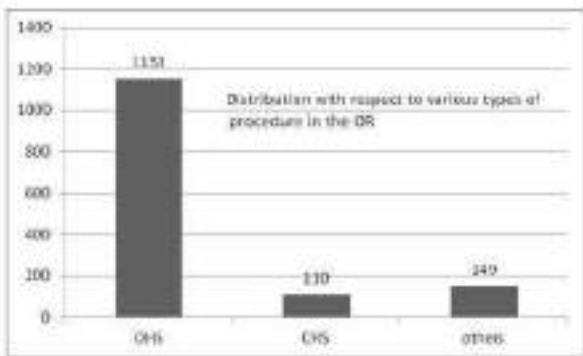
In the year 2015, 1489 patients required anaesthesia service.. Among those 1412 received general anesthesia, remaining 77 patients received monitored anesthesia care.

There was even distribution of cases in different months; however October and November had least number of cases due to Dashain and Tihar, the major festivals of

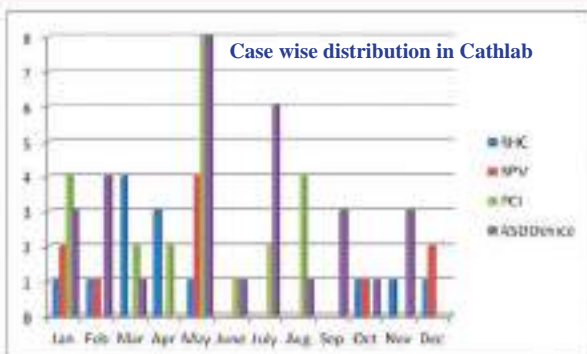
Nepalese people. This trend is seen almost every year.



According to the type of procedures in Operation Theater, maximum number of procedures was open heart procedures which included surgeries of valvular heart disease and congenital heart disease, followed by coronary artery bypass surgery. The total number of re-explorations had reduced in the past year from 3.9% to 1.6 %.



In catheterization laboratory, 77 patients required anaesthesia service. Among them right heart catheterization for cyanotic and acyanotic congenital heart diseases (CHD) were 10 (12%) and Balloon Pulmonary Valvotomy (BPV) 10 (12%), device closure for ASD, VSD or PDA were 31 (40%) and percutaneous coronary intervention (PCI) were 23 (30%).



ACADEMIC ACTIVITIES

The goal of our department is to insure quality care for the patient in the hospital, critical care, cath lab and develop the subspecialty training in cardiac anaesthesia by fostering the research activities.

Educational participation includes residency rotations for the National Academy of Medical Sciences (NAMS), Kathmandu, B P Koirala Institute Of Health Science (BPKIHS), Dharan, Universal college Of Medical Science (UCMS), Bhairawa and Nepalgunj Medical College (NMC), Nepalgunj. Cardiac surgical program are assisted in Kathmandu University Medical Sciences (KUMS), Dhulikhel Hospital and Chitwan Medical College (CMC), Chitwan as resource personal. CME program of the hospital is being conducted in regular basis.

CONFERENCE/OBSERVERSHIP ACTIVITIES

- Dr Surendra Bhusal attended ISACON in Madhurai, India in the month on January 2015
- Dr Apurb Sharma and Dr Ashish G Amatya did a month Observership in Hanover Medical School, Germany in February 2015 and expressed their experience in a State of Art and technology in the modern era.
- Prof. Jeju Nath Pokharel and Dr Battu K Shrestha attended ISACON in Jaipur, India in the month of December 2015.
- Dr Battu K Shrestha presented on “Intra Aortic Balloon Pump (IABP), a lifeline to low cardiac output patients” in International Conference of Society Of Anaesthesiology held in Kathmandu.

CONFERENCE/RESEARCH ACTIVITIES

- Dr Santosh Parajuli is conducting

research on “Ultrasound Guided Technique for internal jugular vein Central Venous catheterization in Pediatrics Cardiac surgical patients”

- Dr Ashish G Amatya completed research on Ventricular tachyarrhythmia after

aortic cross clamp release in cardiac surgeries which will be published in Journal Of Nepal Health Research Council(JNHRC) in January 2016 issue.



NON-INVASIVE CARDIOLOGY AND OPD SERVICES

Dr Reeju Manandhar, Dr Jyotsna Parajuli, Dr Amrit Bogati

INTRODUCTION

Non-Invasive Cardiology, a branch of cardiology, includes non-invasive testing for outpatients and inpatients, utilizing tests to diagnose and treat cardiac diseases. With the establishment of Shahid Gangalal National Heart Centre (SGNHC) in 1995, the tertiary center for cardiovascular disease in Nepal, there has been significant increase in the quantity as well as quality of non-invasive tests. Nepalese people all over the country as well as foreigners have benefitted from the services available in this institution.

Non-invasive services are an integral part of this institution in the form of services provided to the patients and as a major source of revenue. Every year new services are being added to this list. Advanced non-invasive cardiology imaging and technologies have dramatically improved early detection and treatment of cardiovascular diseases.

SERVICES PROVIDED

Services provided by the noninvasive cardiac unit include Adult and Pediatric echocardiography, Stress echocardiography, Trans-esophageal echocardiography (TEE), Fetal echocardiography, Treadmill test, Ambulatory blood pressure (ABP) monitoring, Holter monitoring, Electrocardiogram (ECG), X-ray, Ultrasonography, Doppler study including carotid and venous doppler, Enhanced External Counter Pulsation (EECP) and Benzathine penicillin injections.

Currently, the non-invasive unit in our institution is equipped with seven functioning Echo machines (one high end 3D echo and TEE, two high-end and two medium range with two new GE vivid I machines added this year), 4 treadmill machines, 20 functioning Holter monitoring devices and three wireless Holter devices which were added this year and eight ABP devices. This year one sonosite portable echo

machine was added to already functioning three portable echo machines, which have greatly enhanced ability of early diagnosis and management of cardiovascular diseases in emergency conditions. This year, our institution introduced some new services such as Ultrasonogram (USG) and Venous Doppler which have further helped in diagnosing peripheral vascular and other non-cardiac conditions.

Each year there was significant increase in the number of patients who attended the outpatient department. However in the year

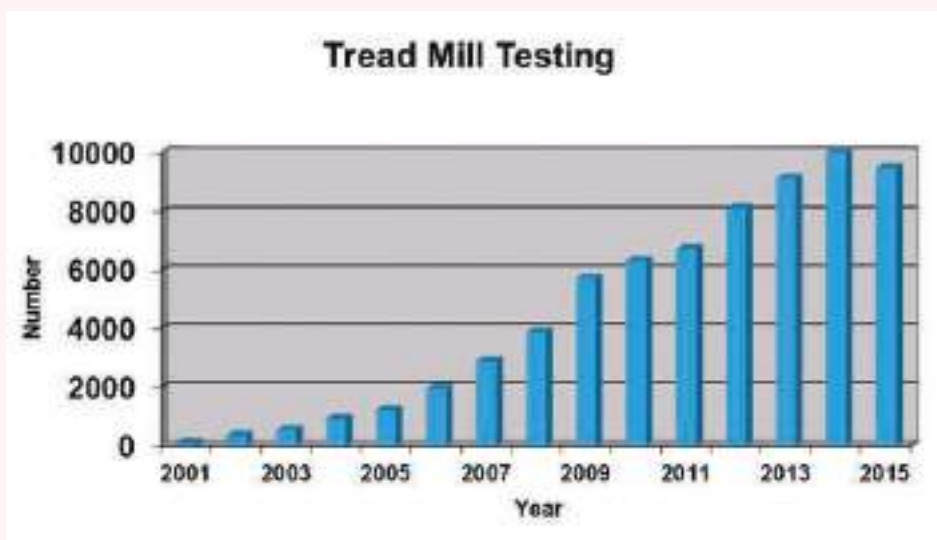
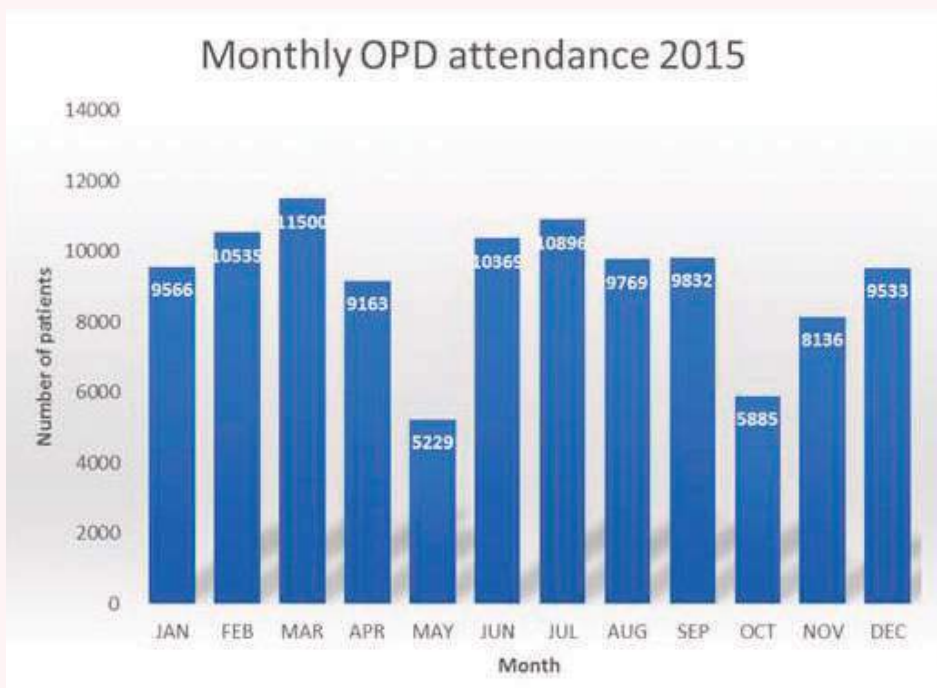
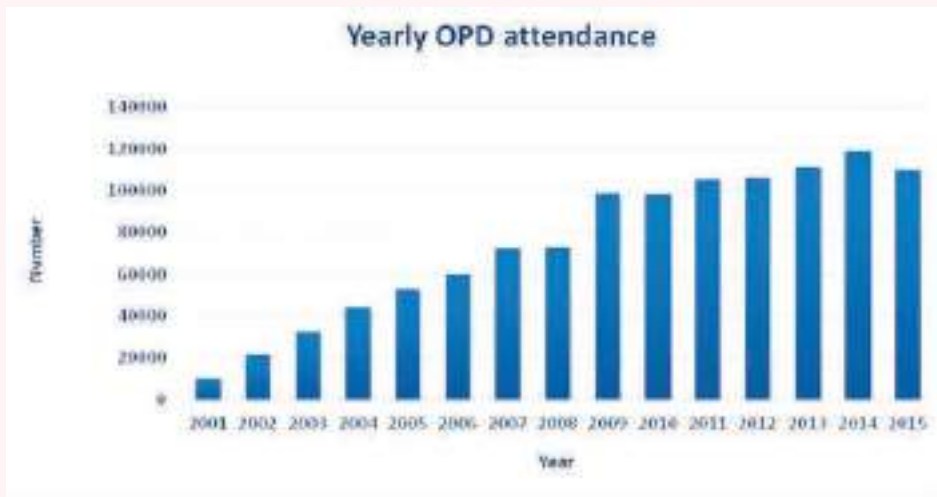
2015, a total of 1,10413 patients attended the outpatient department as compared to 1,19302 patients in the year 2014. This decrease is possibly due to natural disaster that hit the nation and the ongoing national unrest.

Since the introduction of EECPP at our centre in 2010, more than 30 patients have already benefitted from this therapy. Patients with refractory angina despite optimal medical who are not candidates or not willing for revascularization are ideal candidates for this therapy.

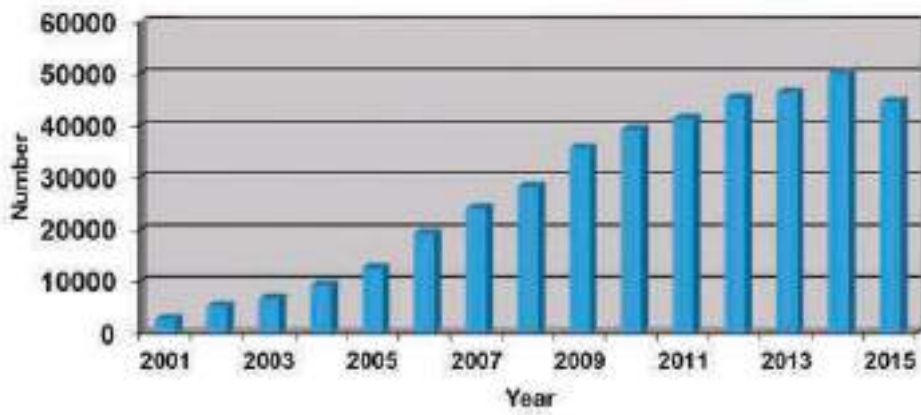
Number of Patients Receiving Non-invasive Services in 2015

Investigations	Male	Female	Total
Electrocardiogram	21925	18344	40269
Transthoracic Echocardiogram	24199	20544	44743
Echo Screening	413	466	879
Trans-oesophageal Echocardiogram	187	394	581
Stress Echocardiography	8	12	20
Dobutamine Stress Echocardiogram	21	17	38
Fetal echocardiogram		244	244
Carotid Artery Doppler	170	83	253
Venous Doppler	20	13	33
Tread mill test	6127	3337	9464
Holter monitoring	1477	1342	2819
Ambulatory Blood Pressure Monitoring	623	375	998
Total OPD attendance	58673	51740	110413
Penicillin Injections	1796	2677	4473
X-Ray	24306	22198	46504
USG abdomen and pelvis	153	140	293
USG thyroid	6	0	6
USG chest	4	2	6
USG others	2	0	2

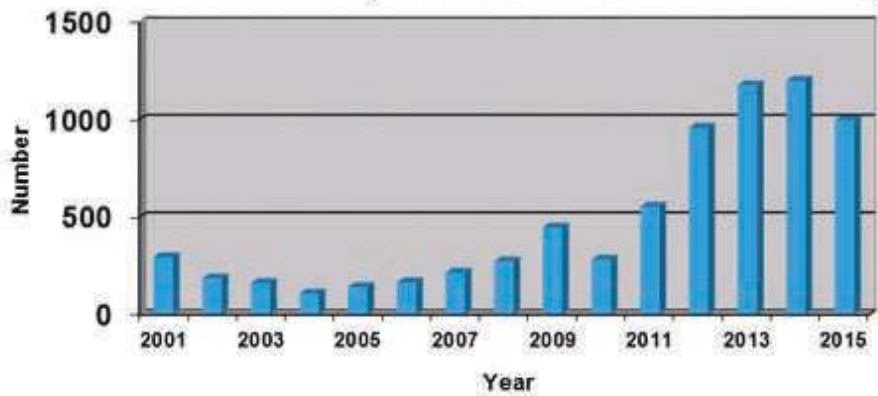
Graphs below show a comparison in the number of patients receiving non-invasive services since the beginning of the service at the OPD:



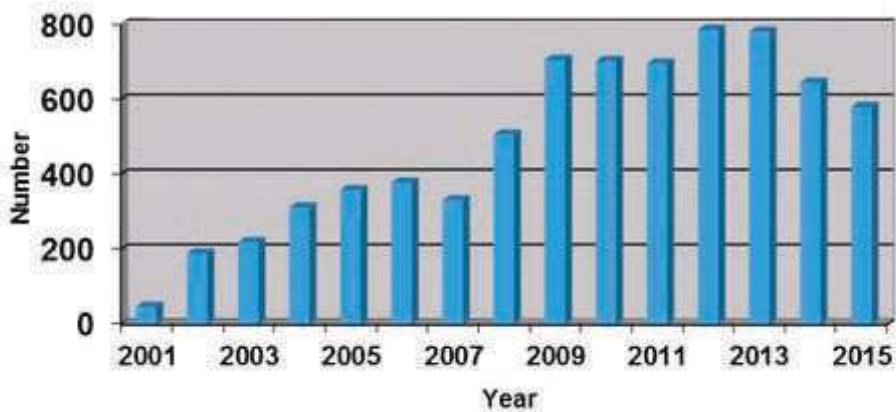
Transthoracic Echocardiogram

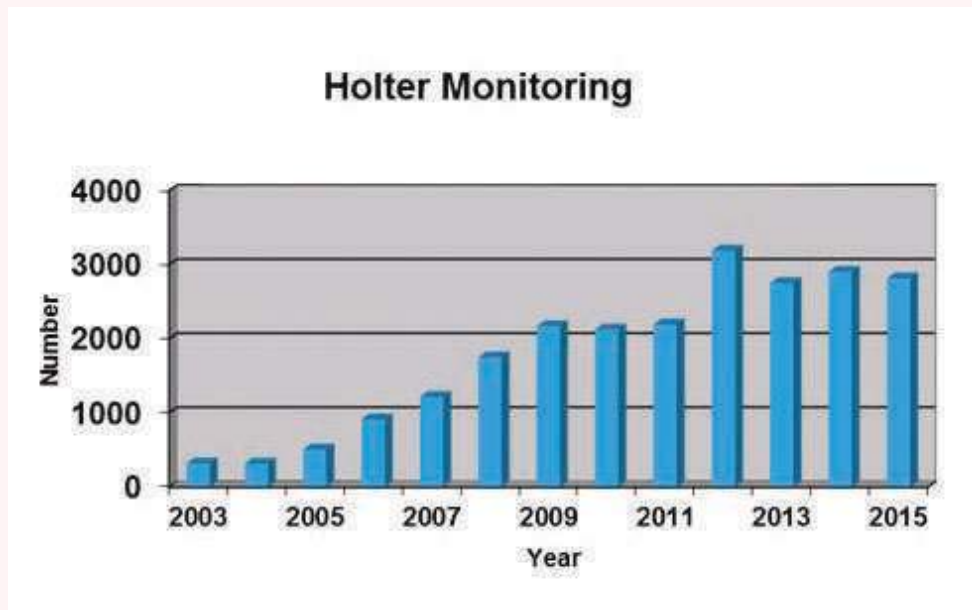


Ambulatory Blood Pressure Monitoring



Transesophageal Echocardiogram







PEDIATRIC CARDIOLOGY SERVICE

Dr. Urmila Shakya, Dr. Poonam Sharma, Dr. Sunita K. C.

INTRODUCTION

Shahid Gangalal National Heart Centre is one of the very few hospitals in Nepal to provide pediatric cardiology service. It is a major referral center from all over Nepal and neighboring country. Children with cardiac diseases are appropriately diagnosed and managed.

SERVICES PROVIDED

Pediatric Cardiology unit is providing its services on all working days. The services provided by the unit include OPD, Inpatient, Invasive and Non-Invasive services. In its starting days since 2004 A.D, due to very limited resources, the OPD services were running only thrice a week which was expanded to all working days since March 2013. Pediatric Cardiology unit deals with all types of cardiac illnesses; however the majority of the children are those with rheumatic heart disease and congenital

abnormality.

Each year there has been an increasing number of OPD attendants, however because of the earthquake and political instability, it was difficult for the patients to come to the hospital as the majority of our patients are from remote areas of Nepal. Thus there was a slight decline in the OPD attendants with a total number reaching 6334. Among them, 3680(58.1%) were male and 2654 (41.9%) were female as shown in figure 1.

Fig. 1: No. of OPD patients as per year

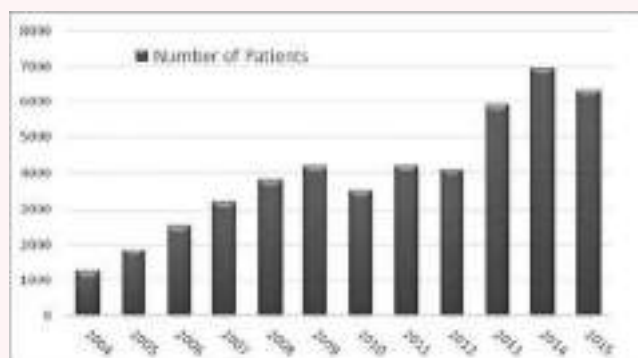
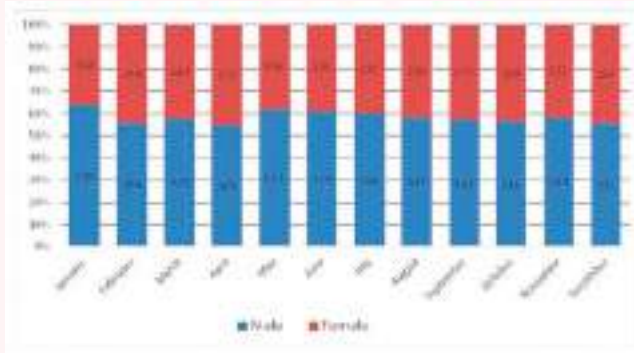


Figure 2. shows gender-wise distribution of patients visiting to Pediatric OPD in 2015. The number of male patients seeking medical care were more than female patients every month.

Figure. 2: Sex-wise distribution of OPD Patients



Inpatient services to pediatric patients had started since last three years with a six bedded pediatric ward providing services to children being admitted for various reasons. Total of 101 patients were admitted this year. Along with its own inpatient children, Pediatric Cardiology Unit is also looking after those who are being admitted in various surgical wards both pre-operatively or post-operatively.

Table 1: Distribution of Inpatient in Pediatric Ward

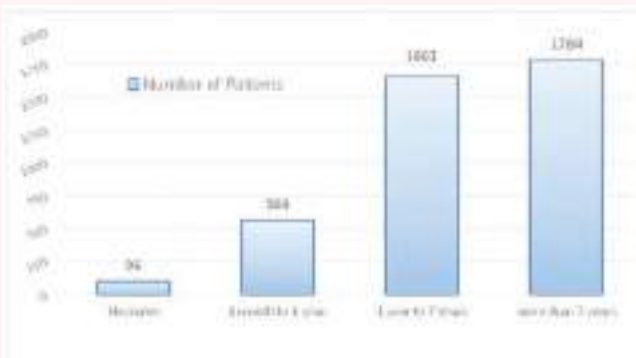
Diagnosis	No. Of Patients
Heart Failure	24
Infective Endocarditis	15
Acute Rheumatic Activity	8
S/P Diagnostic Catheterization	23
S/P Therapeutic Catheterization	13
Pericardial Effusion/ post - Pericardiocentesis	8
Arrythmia	6
Complex Congenital Heart Disease	4
Total	101

(NB: Some children undergoing catheterization procedure had been admitted in other wards due to unavailability of beds in Pediatric ward causing disparity in numbers.)

PEDIATRIC ECHOCARDIOGRAPHY

Pediatric Cardiology Unit has expanded its Transthoracic Echocardiography services from three days a week to all working days since 2013. Along with our own OPD patients we get referrals for echocardiography from different departments in the hospital mainly for congenital heart diseases. A total of 4104 patient had undergone trans thoracic echocardiography at pediatric cardiology department in 2015. Among them 56.6% (n=2321) were male and 43.4% (n=1783) were female. The mean age of children undergoing echocardiography was 6.1±4.7 years with minimum age being two days of life and maximum of 27 years of age.

Fig. 3: Age Distribution of patients undergoing Trans Thoracic Echocardiography



Abnormal finding in echocardiogram was seen in 78% (n=3203) of patients with the most common finding being Acyanotic Congenital Heart Disease which was present in 48% (n=1971) of children. Other abnormal findings were classified as Cyanotic CHD, Rheumatic Heart Disease, post intervention procedures, post-surgical procedures and miscellaneous diseases. The percentage of each of the categories is shown below.

Figure. 3: Echocardiography Findings



The number of echocardiography performed has increased since 2013 when the service had been extended to six days a week. However because of the decline in OPD patients there has been a decline in the number of echocardiography performed this year in comparison to the previous years.

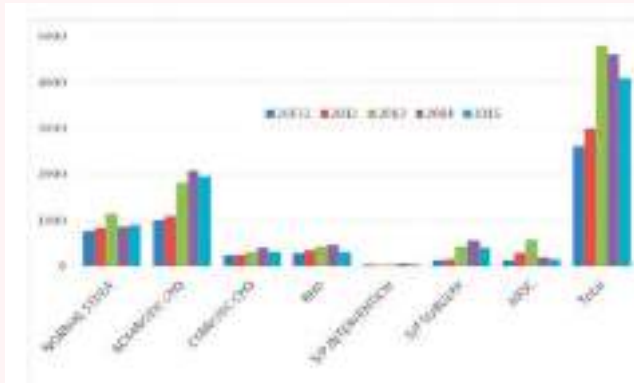


Figure. 5: Comparison of Echocardiography findings in consecutive four years.

MINIMAL INVASIVE PROCEDURES PERFORMED IN CHILDREN AT SGNHC

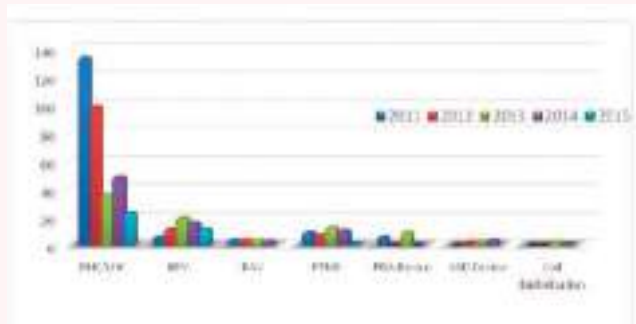
Both diagnostic as well as therapeutic cardiac catheterization procedures are being performed in children by the Pediatric Cardiology Unit of SGNHC. Since the availability of Children Assistance Programme (CAP) by the government where children undergoing intervention procedures are given services free of charge, there has been a sharp increase in the number of children seeking treatment. Therapeutic catheterization like Balloon Pulmonary Valvotomy, Balloon Aortic Valvotomy and Percutaneous Transluminal Mitral Commissurotomy are regularly being performed in children. As the device for ASD and PDA does not fall under CAP program, device closure for ASD and PDA is performed only in few cases as the patients are unwilling and/or unable to pay for the expensive device.

Table 2: Distribution of patients undergoing intervention

Procedures	No. of Patients
Diagnostic Cath Study (RHC/LHC)	23
Balloon Pulmonary Valvuloplasty	12
Percutaneous Transluminal Mitral Commissurotomy (PTMC)	1
Fistulogram	1

The decreasing number of diagnostic catheterization in the recent years have shown our improvement in the quality and accuracy of ecocardiography findings. However it still remains a gold standard tool in complex heart disease and severe pulmonary hypertension for accurate assessment of pulmonary artery pressure. Similarly more number of children are getting benefit from the minimally invasive interventions shown by the increasing number of therapeutic intervention.

Fig. 6. Invasive Service comparison in four consecutive years



HUMAN RESOURCES

Pediatric Cardiology unit is a small unit comprising of one consultant pediatric Cardiologist, two registrars and one medical officer. Also one of our registrar has gone abroad for further training in pediatric cardiac intervention. Despite its small size and inadequate manpower we are trying our

best to provide the best possible treatment to the ever increasing number of children with cardiac problems. We hope to add further on it to cope with the load in future.

Visits by expertise in pediatric cardiology from different parts of world viz. Mayo Clinic, Minnesota; University of Texas Health Science, Texas; Escorts Heart Institute, New Delhi and so on provide us with advice and guidance to improve our knowledge and technical skill in giving better services to the pediatric patients. We are also providing basic training in Pediatric Cardiology including echocardiography to interested candidates from different

institutes. Few of the pediatric residents of Tribhuvan University Teaching Hospital have also joined the department since this year for their training in pediatric cardiology.

CONCLUSION

Due to increased awareness of heart disease in Nepal, there has been steady increase in the number of patients attending Pediatric Cardiology OPD. With limited resources we are continually trying to give quality services and will leave no stone unturned for betterment of pediatric cardiology service in the future.



ACUTE CORONARY SYNDROME

Dr. Dipanker Prajapati, Dr. Bishal K.C., Dr. Sudha Ranabhat

INTRODUCTION

Coronary artery disease continues to be the leading cause of morbidity and mortality worldwide. It places a large economic burden on the health care system as acute coronary disease is also one of the most frequent reasons for hospitalization. Disability-adjusted life years (DALYs) lost can be thought of as “healthy years of life lost”. They indicate the total burden of a disease, as opposed to simply the number of deaths. According to WHO, Cardiovascular disease is responsible for 10% of DALYs lost in low- and middle-income countries and 18% in high income countries.

Coronary heart disease is decreasing in many developed countries, but is increasing in developing and transitional countries. The high burden of coronary artery disease in the developing countries are attributable to the increasing incidence of atherosclerotic diseases, perhaps due to urbanization and higher risk factor levels (such as

smoking, obesity, diabetes, dyslipidemia, hypertension, etc), the relatively early age at which they manifest, the large size of the population, and the high proportion of individuals who are young adults or middle-aged in these countries. Between 1990 and 2020, the increase in ischemic heart disease (IHD) mortality (120% in women and a 137% in men) in the developing countries is expected to be much greater than among developed countries (29% and 48%, respectively).

Acute coronary syndrome (ACS) refers to a group of conditions resulting from decreased blood flow in the coronary arteries such that part of the heart muscle is unable to function properly or dies. The most common symptom is chest pain, often radiating to the left arm or angle of the jaw, pressure-like in character, and associated with nausea and sweating. ACS indicates: ST elevation myocardial infarction (30%), non ST elevation myocardial infarction (25%), or unstable angina (38%).

Those patients presenting with typical chest pain with ST elevation in the initial ECG are classified as STEMI. It is important to recognize this because the initial choice of management besides other supportive treatment is urgent revascularization. Primary coronary intervention is the choice of revascularization method.

Despite the advancement in the diagnosis and treatment, most of the patient with MI dies in home because of initial denial that they might be having some serious disease or attributing the symptoms to indigestion and other less benign etiology. So we need to educate our population regarding the healthy diet and habits for prevention and also early recognition if they had any signs and symptoms of acute coronary syndrome.

Table 1: ACS Admission Pattern in SGNHC

ST ELEVATION WALL MI	Total Admission		
	M	F	Total %
Extensive Anterior Wall MI	97	22	119
Anterior Wall MI	244	87	331
Antero Septal Wall MI	42	11	53
Anterior and Lateral Wall MI	13	3	16
Inferior Wall MI	243	111	354
Inferior Posterior Wall MI	89	29	118
Inferior and Lateral Wall MI	9	3	12
Inferior with RV Infarction	11	8	19
Lateral Wall MI	15	4	19
Posterior Wall MI	6	1	7
STEMI	769	279	1048 (74.80%)
Unstable Angina	116	62	178 (12.70%)
NSTEMI	126	49	175 (12.50%)
TOTAL	1011	390	1401

Total STEMI		Primary PCI		Rescue PCI		STK		TNK		Mortality	
M	F	M	F	M	F	M	F	M	F	M	F
769	279	204	56	2	5	54	17	19	5	68	30
1048		260		7		71		24		98	

Mortality		
STEMI	NSTEMI	UNSTABLE ANGINA
769	279	204
80 (7.6%)	12 (6.8%)	6 (3.3%)



MEDICAL INTENSIVE CARE UNIT (MICU)

Dr Deepak Limbu, Dr Amit Agrawal, Dr Sobita Khadka

INTRODUCTION

Medical ICU was established at our centre on August 2002. Since then, the primary aim of this unit was to care for patients with cardiac failure of various etiologies. It also takes care of critically ill cardiac patients with comorbid medical conditions like chronic renal failure, stroke and sepsis with the support from anesthesia department. Medical ICU has round the clock duty of medical officer and on call registrar and efficient staffs trained in critical care.

SERVICES PROVIDED LAST YEAR

This year a total of 618 patients were admitted in the MICU, out of which the total female patients were 254 (41.1%) and male were 364(58.9%). The mean age of admitted patients was 60 yrs with the youngest patient admitted was 14 yrs old. The eldest patient admitted was 95 yrs old female admitted with the diagnosis of acute coronary syndrome.

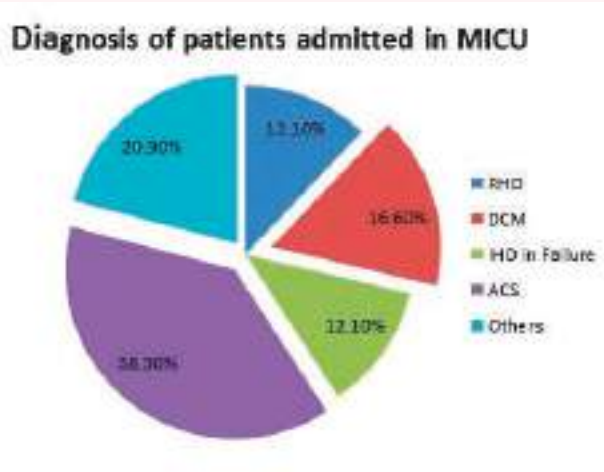
The pattern of diseases with which the patient were admitted ranged from acute myocardial infarction to chronic illnesses like COPD, chronic renal failure, Cardiomyopathies and Rheumatic Heart Disease (RHD). The most common cause of admission was acute coronary syndrome with or without intervention (38.3%) that required intensive monitoring and supportive care.

Dilated cardiomyopathies with various etiologies (idiopathic, ischemic, peripartum etc) was another leading cause of MICU admissions with almost (16.6%) of the total MICU admissions. These cases were mostly admitted following the episodes of acute decompensated heart failure and had to be managed with aggressive diuresis, inotropic support and if required ventilatory support. Ischemic heart diseases is other important cause of admission (12.1%) which mainly includes patients with percutaneous coronary intervention or with heart failure.

Subsequently RHD including post Mitral valve replacement (MVR), Aortic valve replacement (AVR) and stuck valve was another common presenting illness at the

Medical ICU (12.1%). Other diseases (20.9%) included primary respiratory illness with acute exacerbation, asthma, pneumonia with sepsis, pericardial diseases, congenital heart diseases and cardiac arrhythmias. We have our primary physicians as well as well trained cardiologists and DM fellows to make decisions regarding management in such situation. We also have facility to take frequent bedside superspeciality consultations (Nephrology, Neurology, Endocrinology, Neurosurgery etc) for better patient care. We have been giving frequent bedside hemodialysis with the help of team from National Kidney Centre to the patients requiring temporary dialysis services in acute settings . We also have facility of inter hospital referrals as and when required for better patient care and management.

Our Medical ICU services also give opportunity for poor patients who require prolonged ICU management in form of charity fund and drugs which are supplied from the Jayanti trust and Bridging the gap project.

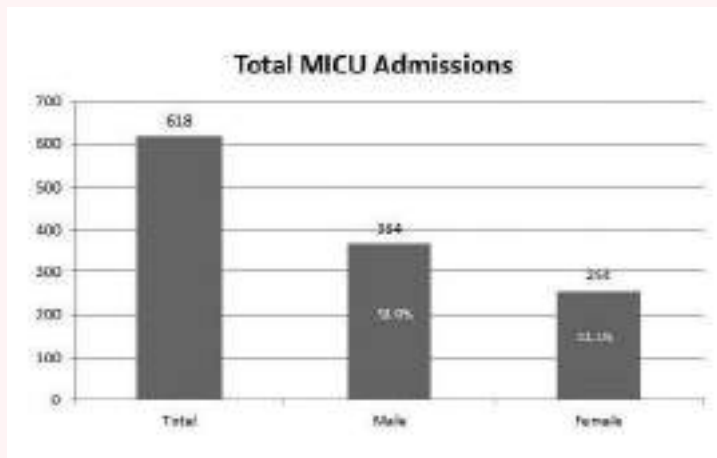


MORTALITY

Total MICU mortality was 105(16.99%). Major cause of MICU mortality was Ischemic Heart Disease (28.57%), RHD(12.1%) which mainly included post MVR and AVR patients and Cardiomyopathies(18.0%) with decompensated cardiac failure.

CONCLUSION

With this year's challenge been done, Medical ICU has and will be working with the same spirit in the patient management. In the upcoming years, the institute is planning to further expand the unit and the number of beds available seeing the rising trend of various heart failure admissions as well as multisystem illness that get admitted in our hospital.





INTERVENTIONAL CARDIOLOGY SERVICES

Dr. Satish K. Singh, Dr. Anish Hirachan, Dr. Madhu Roka

INTRODUCTION

Cardiac catheterization has been a special branch of cardiology which has contributed a lot in the management of acute cardiac problems as well as chronic coronary as well as other non coronary diseases. In recent times, cardiac catheterization and angiographies are performed for both diagnostic as well as therapeutic purposes. Cardiac catheterization (heart cath) is the insertion of a catheter into a chamber or vessels of the heart. Subsets of this technique are mainly coronary catheterization, involving the catheterization of the coronary arteries, and catheterization of cardiac chambers and valves of the cardiac system. The history of cardiac catheterization dates back to Claude Bernard (1813-1878), who used it on animal models. Clinical application of

cardiac catheterization began with Werner Forssmann in the 1930s, who inserted a catheter into the vein of his own forearm, guided it fluoroscopically into his right atrium, and took an X-ray picture of it.

SERVICES PROVIDED

The centre is the first national heart centre and the only tertiary level cardiac centre in Nepal pioneered in handling most complex cardiac cases and emergencies. The interventional unit under the centre takes the pride of running a 24 hour running cath lab services with the dedicated primary operators as interventional cardiologists, well trained nursing staffs and radiographers providing both diagnostic and therapeutic interventional procedures. The interventional cardiology branch got established at this centre in the year 2058

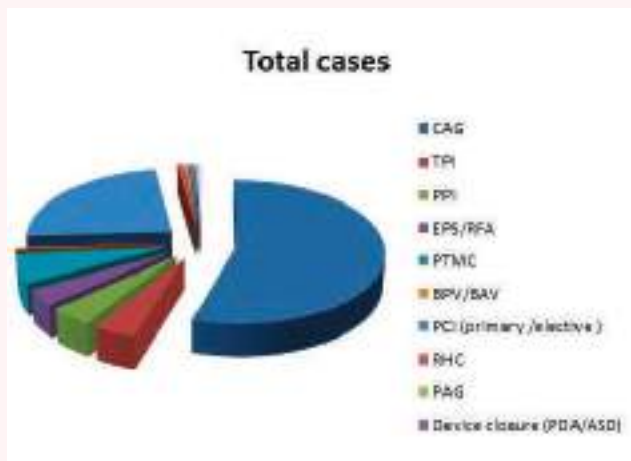
B.S. Since then the number of elective as well as emergency cardiac interventions are increasing every year with better expertise. Different coronary interventions including PTCA, FFR estimation to valvular interventions like BPV,BAV ,PTMC and pacemaker insertions are being done every year with increasing numbers .The different cardiac interventional procedures performed from JAN 2015 to Dec 2015 are as follows :

The procedures performed from Jan 1, 2014 to Dec 31, 2014 are shown below:

SN	Procedure	Total
1	CAG	3476
2	TPI	263
3	PPI	269
4	EPS/RFA	237
5	PTMC	422
6	BPV/BAV	23
7	PCI (primary /elective)	1504
8	RHC	50
9	PAG	27
10	Device closure (PDA/ASD)	39
11	Aortogram	0
12	Renal Angioplasty	2
13	PAG	27
14	Coil embolization	2
15	Others	10
	Total	4718

CONCLUSION

Shahid Gangalal National Heart Centre has already established its reputation as the tertiary and the best centre for cardiac catheterization in Nepal. Both diagnostic and therapeutic interventional procedures are performed routinely in this centre. With time, we are gaining the experience and expertise as the services provided by this centre are expanding and has established a reputation of respect .The quality of our patient care and post interventional outcomes is well known and respected in the medical community nationwide. We believe in the years to come we get the same respect and we will continue to serve the nation as the ace institute in management of most of the cardiac interventional cases.





CARDIAC ELECTROPHYSIOLOGY AND DEVICE IMPLANTATION

Dr Mukunda Sharma, Dr Amit Kumar Singh

Shahid Gangalal National Heart Centre has been providing electrophysiology service since 2004 AD. We have a separate unit which deals with all sorts of electrophysiology study (EPS) and various device implants. The department has progressed with providing service for more complex ablation like outflow tract ventricular tachycardia/Mahim/atrial tachycardia and atrial flutter. Very soon the department is having 3D electro-anatomical mapping system that will help in the more

complex and difficult studies. The number of dual chambers has gone up this year. Automated Intracardiac Cardioverter Defibrillator (AICD) is a life saving device in patients with low left ventricular ejection fraction (LVEF) and in high risk cases of sudden cardiac death (SCD). Promoting awareness among the doctors and general population for the use of AICD is of utmost importance. We are currently doing that with vigor and zeal.

The various EP procedures and device placement are presented in a tabular form below:

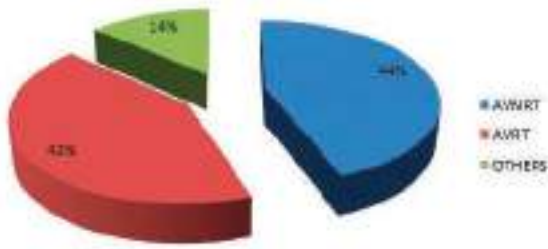
Avnrt*	91 (Typical)		1 (Atypical)			
Avrt**	(65) Left Sided		(14) Right Sided	(6) Septal	Epicardial (Middle Cardiac Vein)	Multiple Pathway
	WPW***	Concealed	WPW	Concealed	Wpw	Concealed
	32	33	13	1	5	1
Others	Total : 28 Atrial Tachycardia: 2 Atrial Flutter: 4 Atriofascicular Pathway: 3 Right Ventricular Outflow Tract –Ventricular Tachycardia (Rvot-Vt): 4 Non Inducible Tachycardia: 7 Not Attempted: 8					

* Atrio Ventricular Nodal Reentry Tachycardia

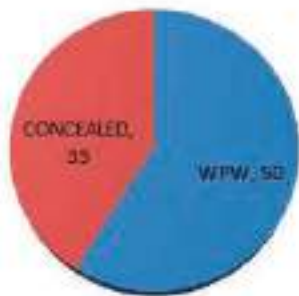
** Atrio Ventricular Reentry Tachycardia

*** Wolff–Parkinson–White syndrome

DISTRIBUTION OF VARIOUS ELECTROPHYSIOLOGICAL STUDY



DISTRIBUTION OF CONCEALED AND WPW PATHWAY



DEVICE IMPLANT

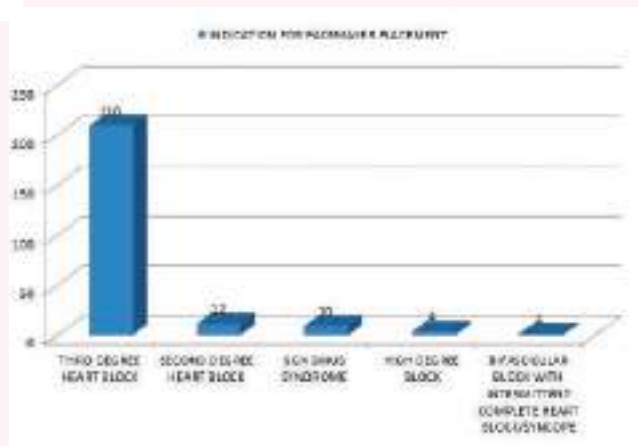
DEVICES	NUMBER	
	SINGLE CHAMBER	DUAL CHAMBER
PACEMAKERS	208	12
Automatic Implantable Cardioverter Defibrillators (AICD)		3
(Cardiac Resynchronization) Biventricular pacemaker		1

¹Rate Responsive Pacemaker

²Pacemaker without Rate Responsiveness

STATISTICS OF INDICATORS FOR PACEMAKER PLACEMENT

INDICATIONS	NUMBER
THIRD DEGREE HEART BLOCK	168
SECOND DEGREE HEART BLOCK	12
SICK SINUS SYNDROME	10
HIGH DEGREE HEART BLOCK	4
BIFASCICULAR BLOCK WITH INTERMITTENT COMPLETE HEART BLOCK / SYNCOPE	2



CONCLUSION

With advent of EPS and device implants there has been drastic change in the management of patient's arrhythmias. Many patients who were asked to continue on lifelong anti-arrhythmic drugs in the past now leave for home after a procedure and never on such drugs forever. This has definitely brought down the mortality and morbidity in such patients. We are now providing better life for the patients with this advancement in the field of EPS and device implants.



EMERGENCY SERVICES

Dr. Rikesh Tamrakar, Dr. Miqdhaadh Shareef, Dr. Sanjay Singh KC,
Dr. Dikshya Karki, Dr. Manjila Basnet, Dr. Laksheshwor Shah

INTRODUCTION

Emergency Department (ER) of Shahid Gangalal National Heart Centre (SGNHC) provides high quality and fast service to all cardiac emergencies, which should be an example to any health institute. The ER is usually the first contact for majority of patients being admitted in this hospital. Since the establishment of SGNHC, the number of patients attending to the ER of SGNHC is increasing, and it has strived hard to attend to all cardiac emergencies arriving from all corners of Nepal. The team of cardiologists, cardiac surgeons, resident doctors and well trained nurses and other supporting staff provide prompt care for the all patients 24 hours a day.

SERVICE PROVIDED

ECGs are obtained for all patients within 5 - 10 minutes of arrival in the ER, as recommended by the AHA/ACC guidelines. This ECG is immediately interpreted by the

cardiologist and the required actions are taken.

Patients with acute ST-elevation myocardial infarction receive either thrombolysis (door to needle time within 30 minutes), or primary PCI (door to balloon time within 90 minutes) on arrival in the ER, as recommended by the AHA/ACC guidelines. After the initial management and stabilization, all patients are transferred directly to the CCU from the ER or catheterization lab. Similarly, patients with unstable angina and NSTEMI are promptly shifted to the CCU, after providing the initial management and stabilizing them. Hemodynamically unstable patients are considered for urgent revascularization as required.

All forms of life-threatening arrhythmias are managed promptly in ER itself. Those coming with tachyarrhythmias (ventricular and supraventricular arrhythmias) are managed either with drugs or with

electric cardioversion, as indicated. Patients coming to the ER with life-threatening bradyarrhythmias undergo immediate temporary pacemaker insertion without delay. Provision for emergency pericardiocentesis is always available if patient presents in pericardial tamponade.

Decompensated heart failure is a common presentation in ER. Appropriate initial resuscitation including parenteral inotropes /vasodilators along with non invasive and invasive hemodynamic monitoring are provided to patients who are then shifted to MICU/ wards after initial stabilization.

Consultations with the different departments of SGNHC are done on a timely basis. Those with non-cardiac emergencies are assessed and referred to concerned centers after counseling with the patient’s relatives.

The present ER has been expanded to meet the demand of the ever increasing number of patients. There are at present 18 beds (9 beds in the ER, and 9 beds in the ER Observation). On an average, 35 – 45 patients attend the ER daily.

Relevant and essential emergency investigations, including cardiac enzymes, routine blood counts, biochemistries, ABG analysis, ECG, portable X-rays, bed-side echocardiographic screening are available 24 hours a day. ER and ER Observation are equipped with bedside monitors (for monitoring of ECG rhythm, SPO2 and non-invasive blood pressure). Central oxygen, suction facilities, defibrillators and crash-cart with all emergency drugs and equipment are also available. This setup is ideal for provision of advanced cardiovascular life support promptly, whenever it is required.

Table 1: ER attendance in the year 2015

Male	Female	Admission	Discharge	Referred	LAMA	Mortality	DOA	Total
6627	5004	3922	6490	986	168	34	31	11631
57%	43%	34%	56%	8%	1.4%	0.3%	0.3%	100%

LAMA: Left Against Medical Advice
DOA : Dead on Arrival

Figure 1: Comparison of ER attendance between 2014 and 2015

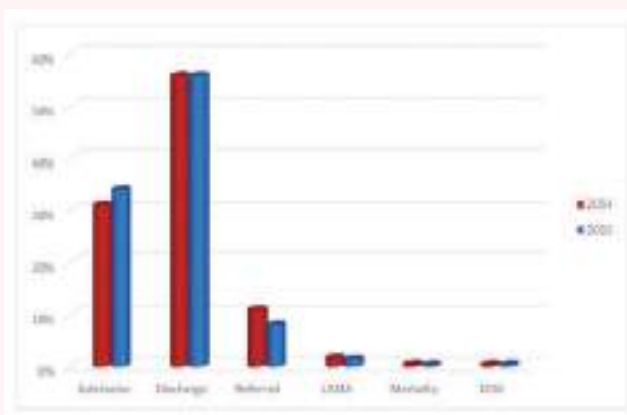


Table 2: Presenting Complain

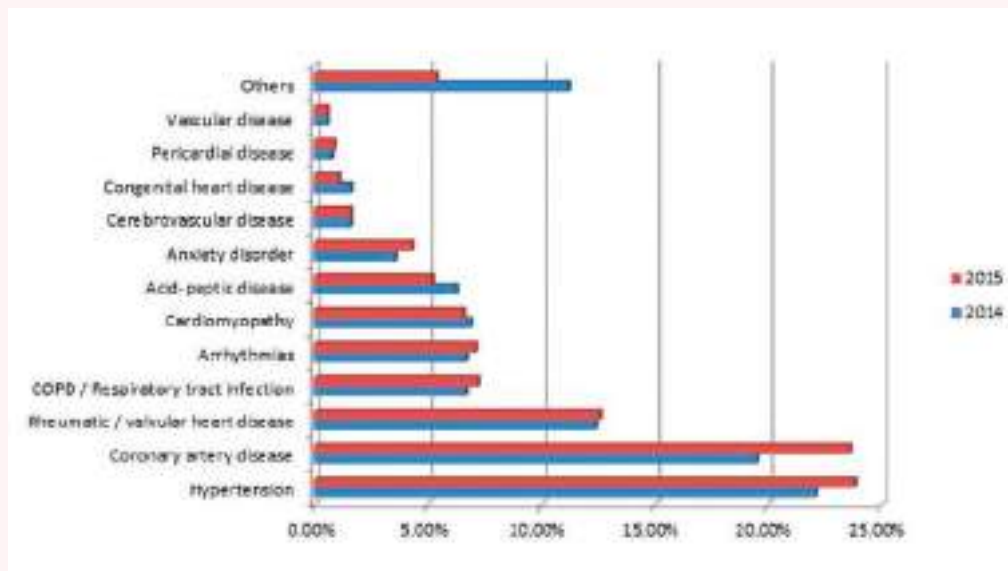
Complaint	Number	Percentage
Chest pain	3840	33.0%
Shortness of breath	3046	26.2%
Headache	1056	9.1%
Palpitation	813	7.0%
Dizziness	797	6.9%
Epigastric pain	521	4.5%
Loss of consciousness	365	3.1%
Swelling of body	243	2.1%
Nausea/ vomiting	181	1.5%
Epistaxis/haemoptysis/ black stool	94	0.8%
Others	675	5.8%

Figure 2: Presenting Complains in the ER



Table 3: Provisional / Clinical diagnosis

Diagnosis	Number	Percentage
Hypertension	2773	23.8%
Coronary artery disease	2748	23.6%
Rheumatic / valvular heart disease	1464	12.6%
COPD / Respiratory tract infection	832	7.2%
Arrhythmias	828	7.1%
Cardiomyopathy	765	6.6%
Acid-peptic disease	601	5.2%
Anxiety disorder	499	4.3%
Cerebrovascular disease	187	1.6%
Congenital heart disease	125	1.1%
Pericardial disease	106	0.9%
Vascular disease	77	0.6%
Others	626	5.4%

Figure 3: Comparison of provisional / clinical diagnosis made in ER between 2014 and 2015

NEW SERVICE PROVIDED

24 hour Emergency Registrar on duty mobile number (9851230682) with Whatsapp and Viber services, for emergency contact from Physician from any part of the country, has been provided from this year. This service will enable non-cardiac health care providers to get expert cardiac opinion immediately, even at remote locations.

CONCLUSION

These data reveals the immense effort done by the SGNHC emergency department. With the motto “Cardiac emergencies be dealt emergently”, SGNHC is working hard to meet the needs of cardiac patients all over Nepal.



MEDICAL WARD

Dr. Rabindra Pandey, Dr. Prabhesh Neupane, Dr. Prabha Koirala Chapagain,
Dr. Pratikshya Joshi, Dr. Kaushal Tamang, Dr. Smriti Acharya

INTRODUCTION

Medical ward was initially started as a 9 bedded unit during the establishment of Shahid Gangalal National Heart Centre. Since then this ward has undergone series of extensions to provide better service to the ever-growing patients seeking treatment in this hospital. Recently another unit- Annex with 14 beds has been added increasing

the total medical ward beds to 80 (21 in General ward, 14 in New medical ward, 14 in Annex, 11 in Double Cabin, 18 in Single Cabin and 2 in Deluxe Cabin). The hospital being a major tertiary cardiac centre is constantly upgrading facilities to provide quality services to patients.

Medical wards receive patients through direct admission from OPDs, Emergency

DISEASES WISE DISTRIBUTION OF CASES IN THE YEAR 2014

S. No.	Name of Diseases	No. of cases			% of Total
		Male	Female	Total	
1	Coronary Artery Disease	1983	817	2800	45.4%
2	Valvular Heart Disease (other than rheumatic)	137	156	293	4.7%
3	Rheumatic Heart Disease	142	247	389	6.3%
4	Hypertension	609	367	976	15.8%
5	Dilated Cardiomyopathy	273	185	458	7.4%
6	Arrhythmias	319	216	535	8.6%
7	Congenital Heart Disease	26	44	70	1.1%
8	Infective Endocarditis	21	10	31	0.5%
9	Pericardial Effusion	53	34	87	1.4%
10	COPD	81	63	144	2.3%
11	Non Specific Chest Pain	29	16	45	0.7%
12	Others	188	142	330	5.3%
Total		3861	2297	6158	100%

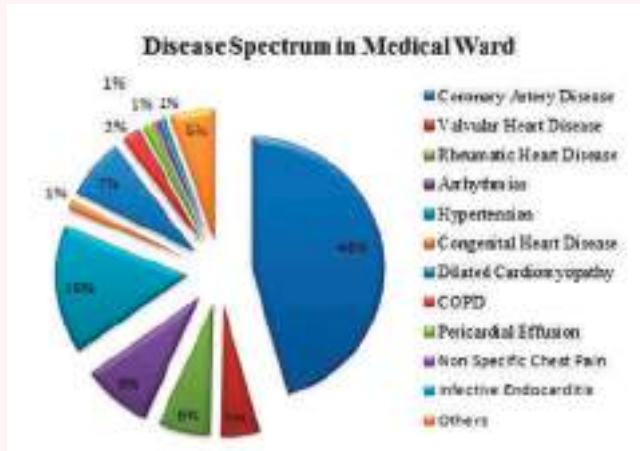
ward, and Pre-cath; and also serve as a step-down unit from Critical care units (Coronary Care Unit and Medical ICU). In view of increasing workload, a separate resident doctor is allocated for a 24 hour duty just to cover Medical ward.

The Medical ward patient population thus reflects the true spectrum of disease pattern in our centre. The illustrative table above outlines the disease spectrum treated in this centre from 1st January 2015 to 31st December 2015.

DISEASE DISTRIBUTION

We have categorized the patients as those having Coronary Artery Disease (CAD), Valvular Heart Disease (VHD), Rheumatic Heart Disease (RHD), different forms of Arrhythmias, Hypertension, Congenital Heart Disease (CHD), dilated Cardiomyopathy (DCM), Chronic Obstructive Pulmonary Disease (COPD), Pericardial Effusions, Infective Endocarditis (IE) and those admitted to evaluate the suspicious chest pain. Others category included patients having chest infections, pulmonary embolism, Aortic Dissection, Peripheral Vascular Disease etc.

Figure 1: Disease Spectrum in Medical Ward



CONCLUSION

As the figure illustrates; majority of the patients admitted had Coronary Artery Disease (45.4%) followed by Hypertension (15.8%), Arrhythmias (8.6%), DCM (7.4%), RHD (6.3%), VHD (4.7%), COPD (2.3%), Pericardial Effusion (1.4%), CHD (1.1%), IE (0.5%). There has been remarkable increase in CAD and Hypertensive Patients (6.5% last year Vs 15.8% this year). Total number of patients admitted for Infective Endocarditis has dropped by about half as compared to last year.



DEPARTMENT OF CARDIAC REHABILITATION AND HEALTH PROMOTION

Pushpa Neupane, Binita Tamrakar

INTRODUCTION

Cardiac rehabilitation (cardiac rehab) is a medically supervised program that helps improve the health and well-being of people who have heart problems. Department of Cardiac Rehabilitation and Health Promotion is one of the key departments of Shahid Gangalal National Heart Center, playing an important role in primary and secondary prevention of cardiovascular diseases. Cardiac rehab program includes education on heart healthy living, and counseling on life style modification, reduce stress and help you return to an active life and exercise training.

Cardiac rehab can help:

- Recover after a heart attack or heart surgery.
- Prevent future hospital admission, heart problems, and death related to heart problems.
- Address risk factors that can lead to coronary heart disease and other heart problems. These risk factors include high blood pressure, high blood cholesterol, overweight or obesity, diabetes, smoking, lack of physical activity and other emotional health concerns.
- Adopt healthy lifestyle changes. These changes may include following a heart healthy diet, being physically active, and learning how to manage stress.
- Improve overall health and quality of life.

These activities of this department are guided by four basic principles of health promotion. We conduct free cardiac camps, community awareness programs, school health programs; produce health education materials in order to raise health awareness among the people. We provide counseling service to the patients in both indoor and outdoor basis regarding their disease process, planned intervention and life style modification. Moreover, we have been conducting structured education program for patients with coronary artery diseases regarding its risk factors. Other people who are interested to know about cardiovascular disorder can also attend this program. In addition, we are conducting various research activities.

PROGRESS REPORT

FREE CARDIAC CAMPS

SN	Camp date	Place	Total participants	Total Echo	Total ECG
1	10th January 2015	Bhaktapur	374	127	180
2	12th February 2015	Sindhuli	1200	240	193
3	21st February 2015	Charikot	300	104	132
4	28th February 2015	Jalbire	230	50	10
5	9th March 2015	Dhangadi	281	133	156
6	14th March 2015	Bardiya	1180	201	247
7	29th March 2015	Birgunj	179	100	82
8	30th March 2015	Simara	325	100	112
9	11th April 2015	Syangja	608	175	172
Total			4677	1230	1284



In the year 2015 we had conducted nine free cardiac camps for the purpose of screening cardiac diseases in different districts of Nepal. During these screening programs we had received 4,677 participants who were directly benefited by the camps. There were 1284 electrocardiography and 1230 Echocardiography done.

INDOOR COUNSELING

Counseling is one of the regular services in our hospital that is provided to the admitted patients especially focused to patient prior to discharge. During counseling we noted their queries and counseled about disease condition, life style modification and need of regular exercise according to their health condition. In the year 2015 we counseled 2077 Patients and their visitors. Moreover patients are referred for structured

education program too in order to deliver more intensive education for them.

OUTDOOR COUNSELING

This department has extended outdoor counseling services as well. It targets to educate patients and visitors who have attended outpatient department as well as indoor patients. Hypertension and diabetes are the most common topics we counsel for, followed by heart attack and its risk factors, heart failure, valvular heart diseases etc. In 2015, we counseled 4823 patients and their family members.



STRUCTURED EDUCATION PROGRAM (SEP)

Structured Education Program is a weekly running awareness program. It is designed for patients with coronary artery disease (CAD) patients with its risk factors. Its primary objective is to prevent and manage CAD and its risk factors. It can also help patients who are recovering from a heart attack, as well as those who recently had cardiac surgery. Benefits of this cardiac



Shahid Gangalal National Heart Centre, Bansbari, Kathmandu

rehabilitation program can include reduced cardiac symptoms, better long-term survival, weight loss, improved cholesterol levels, improved blood pressure, lower blood sugar levels in diabetics and reduced stress. One cycle of program consists of eight different classes. Currently, we have been running 23rd cycle. In this program total number of 1031 participants directly benefited.

COMMUNITY AWARENESS PROGRAM

It is a community based awareness program. In 2015, we conducted 2 programs, one in Kathmandu and the other in Birgunj.

HEALTH EDUCATION MATERIAL PRODUCTION

Our department has been serving as a resource center for health education materials. We have produced plenty of brochures, posters, pamphlets and power point presentations. It provides free access of these materials for patients, health care providers and other institutions.

OBSERVATION OF SPECIAL DAYS

Every year we celebrate World Hypertension Day and World Heart Day. In World Heart Day, we conducted free blood pressure screening and counseling service in Shahid Gangalal premises. About 400 people were participated in this program.

RADIO PROGRAM

There is a regular broadcasting of Public Service Announcement (PSA) about hypertension, heart attack, rheumatic heart disease and seven rules of healthy heart in Radio Sagarmatha.



PATHOLOGY/CLINICAL LABORATORY SERVICES

Dr. Bipesh Acharya

INTRODUCTION

Quality service provided by the laboratory show the true image of the entire hospital. Laboratories in Nepal today face increasing pressure to automate their system as they are challenged by a continuing increase in workload, need to reduce expenditure and difficulties in recruitment of experienced technical staff. The implementation of a laboratory automation system in the Clinical labs rely on minimizing laboratory errors, staff satisfaction and the outcome of the end result. Considerable effort is needed to overcome the initial difficulties associated with adjusting to a new system new software, new working procedure.

PRESENT CONTEXT

With the increasing charm in automation at present department is equipped with following equipments:

1. Automated Five Parts and three parts Differential Cell Counter.
2. Fully automation biochemistry machine.
3. Fully automated coagulation machine.
4. Separate Blood bank.

OVERVIEW

The Following details of the responsibilities of clinical laboratory:

- Hematology works with whole blood to do full blood counts and blood films as well as many other specialised tests.
- Coagulation requires citrated blood samples to analyze blood clotting times and coagulation factors.
- Clinical Biochemistry usually receives serum or plasma. They test the serum for chemicals present in blood. These include a wide array

of substances, such as lipids, blood sugar, enzymes, and hormones.

- Microbiology receives clinical specimen including swabs, feces, urine, blood, sputum, cerebrospinal fluid, synovial fluid, as well as possible infected tissue. The work here is mainly concerned with cultures, to look for suspected pathogens which, if found, are further identified based on biochemical tests. Also, sensitivity testing is carried out to determine whether the pathogen is sensitive or resistant to a suggested medicine. Results are reported with the identified organisms and the type and amount of drugs that should be prescribed for the patient.
- Parasitology is a microbiology unit that investigates parasites. However, blood, urine, sputum, and other samples may also contain parasites.
- Virology is concerned with identification of viruses in specimens such as blood, urine, and cerebrospinal fluid.
- Immunology/Serology uses the concept of antigen-antibody interaction as a diagnostic tool.
- Blood bank determines blood groups, and performs compatibility testing on donor blood and recipients. It also prepares blood components, derivatives, and products for transfusion.

Number of test done in 2014

- Biochemistry 367680 test
- Haematology 156592 test
- Microbiology 2105 test
- Coagulation 22215 test
- Serology 39300 test
- Blood donation 5321 test
- Special test 9072 test

MORE ACHIEVEMENTS

- Automation upgraded in biochemistry.
- Quality control analysis in biochemistry.
- Quality control analysis in Haematology.
- Quality control analysis in Coagulation.
- Quality control to all the analyzers.
- Conducted blood donation programme with acquisition of local youth club which minimizes the problem for the patient to manage the blood components.
- Able to manage and minimize the rush of phlebotomy section by providing prompt reports and quality services.

FUTURE PLAN

- Introducing Laboratory information system to the hospital information system along with electronic reporting system.
- Automation in the microbiology in detection and isolation.
- To start Histopathology, Cytopatology and Bone marrow studies.



RADIOLOGY SERVICES

Indesh Thakur

Shahid Gangalal National Heart Centre (SGNHC) is a specialized and dedicated referral health care centre for cardiac patients. Radiology service, here is specially predestined and rendered for diagnosis and prognosis of relevant cardiac disease and its periphery. Radiology is one of the most important branches of medical science and an integral part of health care delivery system without which no medical treatment & therapy can be successfully bestowed.

HISTORY

At SGNHC, radiology services commenced from 2055 B.S. along with the hospital OPD services. In the beginning, the service was provided with only one mobile X-ray unit and one manual processing unit used both for OPD and IPD Patients. As the number of patients attending the hospital was few, only one radiographer & one dark

room operator were appointed to provide the radiology services.

PRESENT SCENARIO

Since then radiology services at SGNHC has boost up by leaps and bounds operating twenty four hours a day. These days, we perform about 150 radiographic examinations every day. We provide digital radiology imaging services (Digital Radiography & Computed Radiography) from both OPD and IPD Radiology unit. Computed radiography services started at this centre from the beginning of 2066 B.S. and DR services started from mid 2072 B.S. USG and x ray reporting services was started from the early 2072 B.S.

Our radiology department is allocated with the following sophisticated equipments:

1. One Set DR System (Prognosys Medical System, India)
2. Three CR reader units (Konica Minolta, Japan)
3. Two Dry Laser Imagers (Konica Minolta, Japan)
4. One Dry Laser Imager (Fuji, Japan)
5. One fixed 500 mA X-ray Unit (Quantum medical imaging, USA)
6. One mobile 400 mA X-ray Unit (Shimadzu, Japan)
7. One mobile 250 mA X-ray Unit (Hitachi, Japan)
8. One mobile 100 mA X-ray Unit (Siemens, India)
9. One mobile 100 mA X-ray Unit (Medx Tech., India)

HUMAN RESOURCES

We have well trained and erudite technical manpower in our department with the following professionals:

1. One Radiologist
2. One Sr. Radiography Technologist
3. Two Radiography Technologists
4. Nine Radiographers
5. One Sr. DR Operator

Our staffs are posted in OPD and IPD Radiology units as well as in Cath Labs. We perform all kinds of general radiography with particular emphasis on chest radiography and bedside radiography in all wards such as ASICU, PSICU, ER, MICU, CCU, GW and others. In SGNHC, we have three state of the art Cath Labs (Two Philips Integris, Netherlands and One Siemens Cath Lab, Germany). These units are in full operation twenty four hours a day performing

about 20 to 25 cases per day. Radiology manpower are concomitant to Cath Lab for a number of invasive procedures like CAG, RHC and LHC, Peripheral Angiograms, Interventional procedures (PTCA, PTMC, BPV, BAV, Device Closures, PPI, TPI, EPS and Ablation etc) assisting the cardiologists and radiologists concerned.

FUTURE PLAN

Very soon, we are going to equip our radiology department with a sophisticated USG unit and a 300 mA mobile x-ray machine. We have plans to upgrade our departmental services with PACS, Multi-Slice CT (MS CT), Nuclear Medicine Imaging Technology (NMIT) and MRI modalities to provide all kinds of diagnostic services to cardiac patients.

OTHERS

In SGNHC, we perform an average of 30-40 portable x-ray examinations per day and about 120 cases of OPD x-ray examinations per day. While the benefits of clinically appropriate radiographic examinations outweigh the risks from ionizing x-rays, every effort is made to minimize the risks by reducing unnecessary exposure to the patients. All examinations using ionizing x-ray radiation are performed only when it is essential and clinically justified. However, ALARA (as low as reasonably achievable) and TDS (Time Distance Shield) principle is always followed while choosing equipment settings to minimize radiation exposure to the patient.

The risk of radiation hazard must be minimized not only to the patients but also to ourselves as operators. In case of portable x-rays, there is always a chance of scattered radiation. Therefore, x-rays especially, the portable x-ray examinations, should be performed only when there is dire necessity. By doing so, not only the radiographers but

the nursing staffs, doctors and others will be protected from the unnecessary exposure.

CONCLUSION

Radiology services at SGNHC are functioning full fledge and are fully dedicated to provide quality digital radiography services.

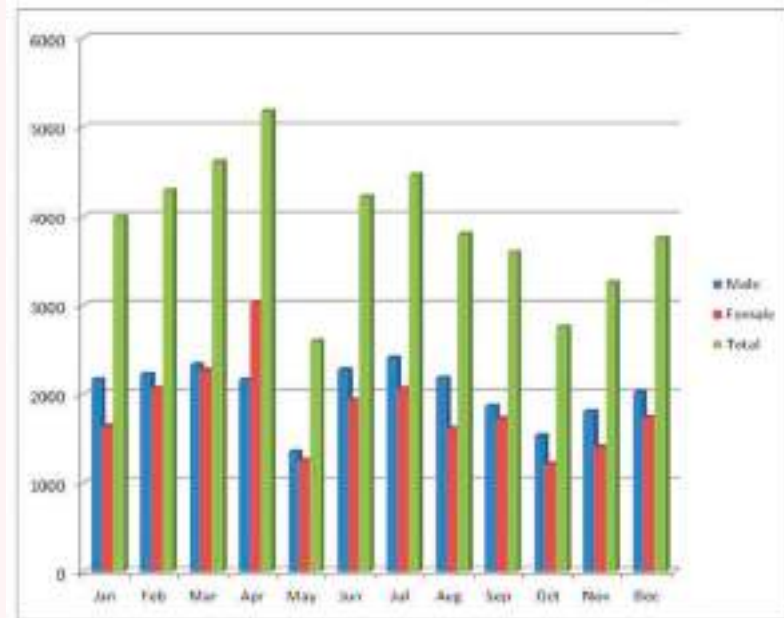


Figure 1: Monthly statistics of x-ray examinations of 2015.

Total patients: 51130



PHARMACY UNIT

Madhu Giri

Hospital pharmacy is the department in Shahid Gangalal Natinal Heart Centre, which is under the direction of a professionally competent pharmacist. In the department of pharmacy, the drugs are procured, stored, compounded, checked for quality, manufactured, packed and distributed to in patients and outpatients by legally qualified pharmacist. The function of the hospital pharmacist is vital not only to the professional care of the patient but to the management of the hospital as well. Other services of the hospital pharmacy are as follows

1. Participation in patient education programs
2. Preparation of patient drug use profile
3. Communicating about new product information to doctors, nursing service and hospital personnel
4. Cooperation in the teaching and research programs of the hospital
5. Parenteral nutrition program participation
6. Providing drug information and drug information service
7. Rational drug selection, monitoring, dosing and control of patient's overall drug therapy.

STAFFS

Total 10 staffs are involved in pharmaceutical care, which includes one senior pharmacist, five pharmacy assistants and four health assistants.

ACTIVITIES PERFORMED

- a) Puchasing of medicine and sugicals
- b) Storage and restocking
- c) Inventory management
- d) Distribution
- e) Dispensing and drug counseling

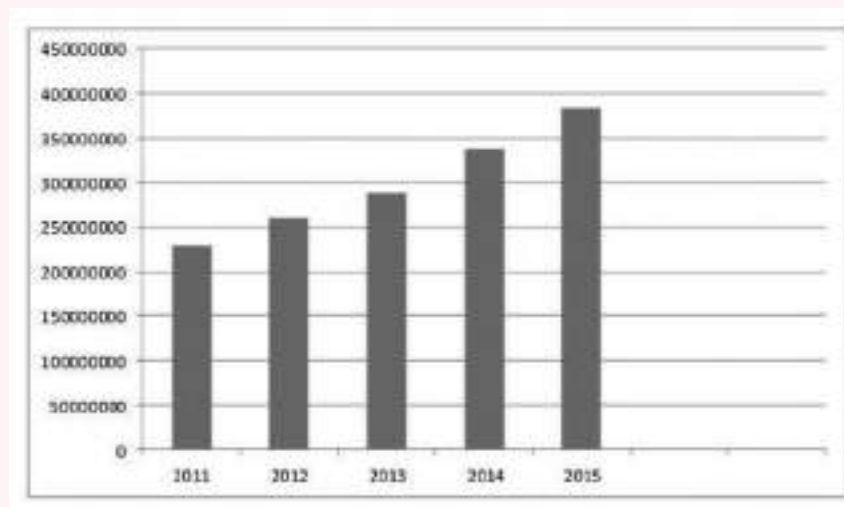
PHARMACY REPORT

The transaction from hospital pharmacy is increasing every year. So, pharmacy is one of the most important sources of revenue to the hospital. As compared to previous years,

the transaction has increased as shown in the diagram. (Transaction in amount (NRs) has been shown along the Y-axis).

FUTURE PLAN

1. Drug counseling
2. Establishment of drug information centre (assimilation and provision of comprehensive information on drug and their actions).
3. Satellite pharmacy in each floor
4. Initiate drug and cost related research and educational activities
5. Initiate therapeutic monitoring of drugs having narrow therapeutic index and inter- pharmacokinetic variables
6. Initiate drug interaction surveillance program.
7. Development and conduction of a quality assurance program for the pharmaceutical services.





PHYSIOTHERAPY SERVICES

Dr. Shaili Thapa Budhathoki, Yashoda Luitel Shrestha, Rajeev Kumar Yadav

INTRODUCTION

Physiotherapy is a well established branch of medical sciences being practiced at global level. It is a health care profession, concerned with human function and movement to maximize human body potential. It is a scientific physical procedures used in the treatment of patients with a disease, injury or disability to achieve and maintain functional rehabilitation and to prevent malfunction or deformity. Treatments are designed to minimize residual physical disability, hasten convalescence, contributing to the patient's comfort and well-being.

Physiotherapy treatment can be given to patient both in isolation and in conjunction with other types of medical and surgical management. When used together physiotherapy can complement medical or surgical techniques to provide a speedy and complication-free return to normal activity.

In addition to direct patient care,

physiotherapists are involved in other areas including consultation, supervision, teaching, administration and research.

Physiotherapy can help individuals by:

- Identifying and treating the problem area.
- Identifying the causes and predisposing factors.
- Providing rehabilitation following occupational or sporting injuries.
- Providing rehabilitation and exercise before and after surgery.
- Providing education on postural awareness and corrections.
- Providing or advising on special equipment.
- Providing exercise prescriptions for various conditions.

Physiotherapy unit of Shahid Gangalal National Heart Centre (SGNHC) is an integral part of Cardiac Rehabilitation and Health Promotion Department. It is spacious, well equipped and is located on the ground floor with a large waiting lounge for the patients and visitors. It plays the vital role in prevention and management of cardiac diseases. It also provides services to various medical and surgical conditions which require physiotherapy treatment.

HUMAN RESOURCES

At present our unit has one senior physiotherapist, one senior physiotherapy assistant and one physiotherapy assistant. We hope to add further on it to cope with the load in future.

SERVICE PROVIDED

Physiotherapy unit at SGNHC have been giving its best service to the patients since 2057 B.S. It provides both in-patient and out-patient services regularly six days a week. It has also extended various new programs like fitness program for staff, fitness program for patients with hypertension, obesity, dyslipidemia and diabetes mellitus via cardiac rehabilitation program.

For inpatient service, most often physiotherapy unit at SGNHC deals with the function of the cardio-pulmonary and vascular system. The physiotherapist at SGNHC mostly aims to optimize the function of the Cardio-pulmonary and vascular system and patient comfort resulting in reduced chance of developing complications such as chest infections, shortness of breath, DVT and other musculoskeletal problems and increase exercise tolerance of the patient and the hospital stay.

We have been effectively running morning fitness program for our staffs regularly which was opened last year with the motto “movement for health”.

We have also been effectively running Cardiac Rehabilitation (CR) program. This year in addition to effective inpatient cardiac rehabilitation (in-patient phase) program we were also successful to enroll the out-patient and run the out-patient cardiac rehabilitation (out-patient phase) program along with the fitness program for the patients with hypertension, dyslipidemia, obesity and diabetes mellitus.

Under the CR program, Structured education program (SEP) for coronary artery disease has been running successfully every Tuesday of since 2012, where Physiotherapy unit is also conducting the classes about the importance and benefits of the exercises for the patients and their visitors. We are also planning to extend the other education program for other cardiac conditions in coming years.

Some of the treatment techniques used and activities done by physiotherapist for the patient care at SGNHC:

- Patient positioning.
- Oxygen therapy and nebulizer.
- Breathing techniques either to reduce shortness of breath or increase lung expansion and to prevent atelectasis.
- Incentive spirometer.
- Sputum clearance with Autogenic drainage, postural drainage, percussion, vibrations, huffing, coughing, deep breathing, segmental breathing, ACBT, FET, suction.
- Mobilizing, sitting out of bed, walking and gait training.
- Medications used for aerosol therapy and other required analgesics for phonophoresis
- Exercise programs and exercise prescription for various cardiac conditions.
- Fitness program for staff and other individuals.

As an outpatient service, we provide physiotherapy services and rehabilitation program to the patient with cardio-thoracic, musculoskeletal and neurological disorders who are seeking physiotherapy treatment.

STATISTICAL DATA OF THE YEAR 2015 (2071-2072 B.S.)

In-Patient		Out-patient		Grand Total
General	5410	General	149	
CR (In-patient phase)	498	CR (out-patient phase)	191	
		Staff fitness	31	
Total	5908	Total	371	

Months and year	Number of In-patients	Number of Out-Patients
JANUARY-2015	553	27
FEBURARY-2015	531	29
MARCH-2015	566	21
APRIL-2015	445	37
MAY-2015	375	15
JUNE-2015	663	33
JULY-2015	634	74
AUGUST-2015	454	30
SEPTEMBER-2015	398	34
OCTOBER-2015	287	30
NOVEMBER-2015	353	31
DECEMBER-2015	649	13

UP COMING PROGRAMS

- Providing safe and reliable physiotherapy service to the hospital.
- More effective aerobics and fitness classes.
- Community exercises programs via

camps organized by SGNHC.

- Exercise tolerance test and exercise prescription for patients.
- Research activities on effectiveness of various exercise protocol.

CONCLUSION

Physiotherapy unit is an integral part of Cardiac Rehabilitation and Health Promotion Department at SGNHC. It has a major contribution in prevention and management of cardiac diseases. Hence we would like to thank all the departments and the staffs for their constant support and encouragement. We also hope to get more referrals in upcoming days. We would also like to thank our patients and their relatives for their cooperation and trust on us.



ANNUAL MORTALITY: 2015

Dr. Nagma Shrestha, Dr. Milan Gautam, Dr. Monika Shrestha, Dr. Sabita Aryal

INTRODUCTION

Cardiovascular disease (CVD) is responsible for the largest proportion of all non-communicable disease deaths globally. CVD is also the leading cause of mortality and morbidity in South Asian region, which is home to about a quarter of world's population. The disease burden is projected to rise in parallel with increase in prevalent risk factors, life expectancy, and socio-economic transitions.

Shahid Gangalal National Heart Center (SGNHC), the first cardiac tertiary center, has been providing specialist care in the field of cardiology and cardiac surgery. The center has been recognized as national referral center for cardiology and cardiac surgery, and has been playing a major role in minimizing the burden of heart disease in the country.

Annual mortality reports are part of the SGNHC's robust quality management and improvement system. The mortality findings are used for assessment of hospital performance, for quality improvement efforts, to trigger corrective action, and to reduce future risk for the people. In this article, we summarized the mortality in department of cardiology and cardiac surgery in 2015 AD.

METHODS

Three main methods were used for presenting a single-year (2015 AD) in-hospital mortality data: tables, histograms, and pie charts. Observed mortality was confined to in-hospital deaths among admitted patients.

RESULTS

A total of 23,187 (male-13,402, female-9785) patients were managed at this hospital and out of which 397 (male-235, female-162) patients died. Sixty-four patients were dead on arrival in the emergency. Patterns of mortality in the admitted population are influenced by a number of important factors as follows:

Age: The relationship between age and mortality demonstrated the expected trend: the youngest age groups had the lowest rates of death and the mortality rate increased with age. As shown in Figure 1, the most number of deaths was noted in sixth to eighth decade of life. This finding is consistent with previous year's mortality rate by age data.

Gender: Mortality by gender closely resembled the gender distribution of the admitted population. Although there are

year-to-year variations in the actual number of deaths by gender, the data consistently demonstrate that more men than women die each year (Table 1, Figure 2).

Level of care: There are substantial differences in mortality between the different levels of care. Mortality rates are highest for patients with serious health conditions admitted in intensive care units such as Medical ICU (16.82%), Paediatric Surgical ICU (9.01%), CCU (6.82%), and Adult Surgical ICU (5.09%), and as expected, the mortality rates are lower in patients admitted in General Ward A (0.90%), General Ward B (0.50%), Single Cabin (0.41%), Double Cabin (0.30%), Annex-1 (0.30%), New Medical Ward (0.29%), and New Surgical Ward (0.08%). Emergency, a place where patients undergo triage sorting and then passed to another area of the department or another area of the hospital, had mortality of 0.46% (male-0.29%, female-0.17%, Table 1).

Cause specific mortality: The causes of death in 2014-2015 AD are noted in Table 2. Acute Myocardial Infarction - Cardiogenic

Shock, Septic Shock and MODS, Dilated Cardiomyopathy - Heart Failure, Post Surgery - Low Cardiac Output Syndrome, and Acute Myocardial Infarction - Arrhythmias were top five causes of death in 2014-2015 AD.

CONCLUSION

In conclusion, trends in mortality are influenced by a number of important factors. Rates of mortality show a linear relationship with advancing age: the youngest age groups have the lowest rates of death and the mortality rate increases with age, highest in 6-8th decade of life. There are substantial gender differences in mortality: the more men than women die each year. The most common cause of death was Acute Myocardial Infarction - Cardiogenic Shock.

By monitoring these data, treating doctors, nurses, para-medics, public health officials, program managers, and decision makers can collectively identify areas for improvement and develop programs to improve health and quality of life.



PERFUSION TECHNOLOGY UNIT

Mr. Mahendra Bhatta, Mr. Umesh Khan, Mr. Ram Bharos Yadav, Ms. Lalita Shakya, Ms. Laxmi Shrestha

INTRODUCTION

Perfusion technology deals with maintenance of the circulation, and thus organ perfusion, using various technologies. Artificial pumps and oxygenator were used for the first time in 1953 by Dr. John Gibbon to close an Atrial Septal Defect successfully. Initially devised to help in the treatment of massive pulmonary embolism, it is now the mainstay in almost all heart surgeries.

The Faculty of perfusion technology is a sub-unit of the Department of Cardiovascular surgery. This unit has completed 14 years of service here at this hospital. During our brief history, we had to face many different ups and downs, which have provided us opportunities to learn many life time experiences.

The faculty is responsible for cardiopulmonary support during open heart

surgery. The faculty started with a single heart-lung machine, a Gambro, which lacked many of the safety features, that we now take for granted. At present, we have fully automated Sarns 8000 and Maquet HL-20, Stockert (S5) Heart-lung machines, a Medtronic ECMO machine and four IABP machines for cardiac support.



ECMO

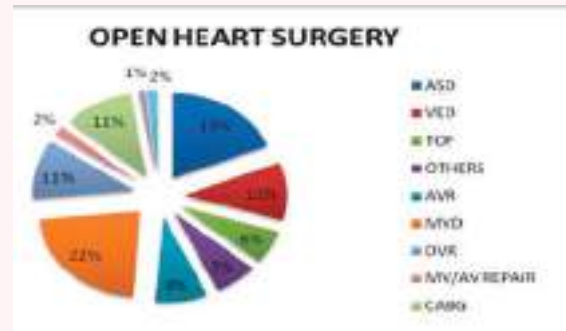
Extra corporeal membrane oxygenation or extra corporeal life support (ECLS) is a miniaturised heart-lung machine, but with the capacity to support the circulation for a much extended period. It can function as an

isolated respiratory support in patients with acutely diminished respiratory function or as a combined device to support both the heart and the lungs. ECMO provides the opportunity for the heart to recover after an extensive and complex heart surgery, thus it is a lifesaver at times of adverse conditions.



CONCLUSION

Faculty of Perfusion Technology is a relatively young field, but without which Open Heart Surgery would not be possible. The road travelled certainly has not been a smooth one. Thus, with more than 11,000 surgeries in the past there are still avenues to advance on and improve in coming days.



SERVICES

The first cardiac operation was done in this hospital was ligation of a patent ductus arteriosus and till now, we have done more than 11,000 open heart surgeries at SGNHC. The surgeries range from Congenital Heart Diseases, Valvular Heart Diseases, CABG, Thoracic Aortic Surgery, and many others (Myxoma, Sub-Aortic Excision, Rupture of Sinus of Valsalva, Coarctation of Aorta) etc.



CASE-WISE DISTRIBUTION

		CASE	NUMBERS
1	CONGENITALS	1. ASD	2065
		2. VSD	1210
		3. TOF	706
		4. OTHERS	752
		TOTAL	4733
2	VALVES	1. AVR	912
		2. MVR	2436
		3. DVR	1239
		4. MV/AV REPAIR	193
		TOTAL	4780
1	CABG		1197
2	AORTIC SURGERY		113
3	OTHERS		177
4	TOTAL		11,000

CELEBRATING 10,000 OPEN HEART SURGERIES



EARLY AND EFFECTIVE RESUSCITATION TASK FORCE

Early & effective resuscitation task force is formed in Shahid Gangalal National Heart Centre one and half years back. It is a unit with multidisciplinary staffs working together for a single goal. Our goal is to provide training on recent cardiopulmonary resuscitation methods for both healthcare and non health care personnel.

Our plan in first phase is to train all the staffs of our hospital. We have so far given training to about 80% of our staffs. Our program is halted for four months due to adverse situation in our country. We are soon going to start training for remaining staffs. In next phase we will extend our program outside our hospital.

We would like to thank all the staffs who participated. We are encouraged by the appreciations and positive feedbacks. We have planned to publish our own manual. Last year we have successfully conducted marathon program on hospital day. This was aimed to increase awareness about cardiopulmonary resuscitation within and outside the hospital. This program will be continued this year also.

At last we are indebted to all who support us and encouraged to go further. We would like to thank all the volunteers of the task force. Together we will achieve our goal.

INSTITUTIONAL REVIEW COMMITTEE

Dr. Sujeeb Rajbhandari, Binita Tamrakar

BACKGROUND

Shahid Gangalal National Heart Centre (SGNHC) in its quest for further development as an academic institute encourages researches within and outside the centre. In order to make the research work more systematic and ethical, Institutional Review Committee (IRC) of SGNHC was established on 27 September 2015 (10.Asoj.2072). All the research activities conducted at our centre are to be done within the norms and regulations of National Health Research Council (NHRC), which is a larger body and looks after research activities at the national level.

The IRC of SGNHC has put forward “The Guidelines for IRCs for Health Research in SGNHC”. It will provide a basic framework for the development of quality and consistency in the ethical review processes which is solely based on NHRC guidelines. There is wider involvement of reviewers of research proposals, ethical committee members, health and medical researchers, health professionals and students of health and medical sciences.

IRC of SGNHC aims to facilitate the health researches in our centre. Since its establishment it has been working in developing a research culture in the health sector. In the present context, health sector in Nepal requires high quality researches that could significantly contribute to formulate policies, programmes and their effective implementation. Despite many

constraints and challenges, the IRC has been able to prioritize the health research needs and strengthen health research system in our centre.

In addition, the IRC is moving ahead to establish the state of the art knowledge management system to enhance good relationship with global research community to learn and share from each other. It stimulates to generate evidences and translate them into practice. As a monitoring body, the IRC promotes good research practice at SGNHC by setting and implementing the ethical standards and norms. It also creates a favorable environment for health and population scientists/researchers to carry out various researches that provide evidences to policy makers and program managers. It can also generate the public opinion on health and development issues.

Since we are at the early stage of establishment, we are currently awaiting accreditation from NHRC for the purpose of establishing a common system of institutional review process.

OBJECTIVES

The overall objective of this guideline is to establish a framework for the research conducted within SGNHC.

The specific objectives of this guideline are:

- To ensure that all studies conducted within SGNHC in ethical manner.

- To ensure consistency in the supervision and monitoring of health researches.
- To protect rights of human and animal involved in the research.

1. Covering letter addressed to Executive Director of SGNHC requesting for any research to be conducted in Shahid Gangalal National Heart Centre.
2. Submission of the proposal to the Institutional Review Committee for

MEMBERS

S.N.	NAME	DESIGNATION
1.	Dr. Deewakar Sharma (Prof/Senior Consultation Cardiologist, HOD of Cardiology)	Chairman
2.	Dr. Sujeeb Rajbandari (Consultant Cardiologist)	Member Secretary
3.	Dr. Siddhartha Pradhan (Consultant Cardiac Surgeon, HOD of cardiac surgery)	Member
4.	Ms. Krishna Kumari Subedi (Matron)	Member
5.	Dr Chandra Mani Adhikari (Cardiologist)	Member
6.	Dr. Dipanker Prajapati (Registrar - Cardiology)	Member
7.	Mr. Dipendra Pokharel (Lawyer/Sr. Administrative Officer)	Member
8.	Mr. Bidur Khadka (Consumer Representative)	Member
Office Secretary - Binita Tamrakar (Khadka)		

Principal Activities of the Councils

1. Screening, reviewing of research proposals.
2. Ethical approval of research proposals.
3. Providing technical guidance and possible support including services for scientists, researchers.
4. Monitoring and evaluation of all the researchers conducted at the field level.
5. Review from the experts in the field of the proposal(s).
6. Ethical approval for publications in international and national journals or the research work
7. Meeting held on 1st Monday of every month, when all the submitted research proposals are reviewed and discussed among the IRC members.

ethical approval in hard copy as well as in electronic version. (The form can be obtained from the IRC office or via e mail).

3. Passport size photo of the Principal Investigator (PI).
4. Applicant's Signature.
5. Curriculum vitae of the PI, Co PI and other personnel who are involved in the study.
6. Submission of the application processing fee to the administration as per the rules and regulations of Shahid Gangalal National Heart Centre.
7. Bibliography and references relevant to the research study.
8. List of Abbreviations/ acronyms.
9. If the research study is to be conducted in any other hospital or institution in addition to Shahid Gangalal National Heart Centre; approval from National Research Council (NHRC) is mandatory. This applies for any foreign national who wants to do research in Nepal as PI or Co PI.
10. Consent form should be in Nepali & local language (if necessary).
11. Tools and guidelines for data collection preferably in Nepali. In case of English

Research Proposal Submission Procedure

Following documents/information need to be submitted by the applicant:

language, the PI should fully explain in Nepali or in the local language to the participant.

12. Covering letter from the college/institute head where the PI is studying or working.

IRC Office location:

The IRC office is located in the academic block of SGNHC, main building, 2nd Floor.

No.	Subject	Number
1.	Cardiology	3
2.	Anaesthesiology	1
3.	Cardiac Surgery	1
4.	Nursing	4
5.	Microbiology	1
6.	Telemedicine	1
7.	Public Health	1
Total		12

Contact Address

Institutional Review Committee Office
2nd Floor, Academic Block

Shahid Gangalal National Heart Centre
Bansbari, Kathmandu

PO Box: 11360
Kathmandu, Nepal

Telephone
977-1-4371322/4370622/4371374 Ext: 620

Fax 977-1-4371123

Email: ircsgnhc@gmail.com

**Form collection and submission time:
2:00 to 3:00 pm (Except Saturdays)**

EMERGENCY NURSING

Vidhya Joshi Koirala, Shilpa & ER Nurses

ER nurses are elegant generalist.....

They must know a great deal about virtually all aspects of nursing.

Emergency Room (ER) nurses are the first medical person on the scene when the patients are brought to the ER. They specialize in rapid assessment and treatment. They must respond at slight notice and think on their feet as in the ER, every patients experience is unique and every second counts. They must tackle diverse tasks with professionalism, efficiency and above all with care.

Patients in a cardiac emergency department come with a variety of complaints, among which chest pain is the most common one. At least every 4 out of 9 patients arrive with the complaint of chest pain. It is the prominent symptom in majority of disorders ranging from life threatening disease like Acute MI to mild self limiting disorders like muscular pain. Nurses who are often the first health professional to assess pain have an essential role to play in the assessment, diagnosis, treatment, observation, discharge and follow up of these cases.

The first step in assessment involves recording an ECG which is the known to be the corner stone tool in assessing chest pain in ER. AHA guidelines recommend 12 lead ECG recording within 10 minutes of presentation to ER. Thus the responsibility of ER nurses are related to acquisition of standard 12 lead ECG to ensure door to ECG goal of 5-10 minutes, accurate and consistent electrode placement of serial ECG and acquisition of prior ECGs for comparison. A study done by Henson Jet.

al. (2011) showed timely ECG resulted in timely intervention and better outcome.

While the doctors take medical history and conducts physical examination, ER nurses can facilitate by opening IV access and taking blood samples for cardiac markers thus minimizing the time for diagnosis.

Administration of Aspirin, Clopidogrel, β -blockers, Nitrates and Statins, which are the mainstay of therapy in acute coronary syndrome, is an integral part of ER nurses. One of the major responsibilities of ER nurses is to minimize the time for reperfusion through prompt administration of fibrinolytics. It is proven fact that the management of ST elevation myocardial infarction is effective if door to needle and door to balloon time is as short as possible.

Diligently monitoring the patient for acute ischemic changes and arrhythmias is another major responsibility of nurses. Proper instructions at the time of discharge regarding lifestyle modification and medication are of great importance.

Similarly other common cases presenting to ER are arrhythmias. Prompt ECG facilitating timely diagnosis, assessing IV line and administration of prescribed antiarrhythmic drugs to relieve the symptoms of patients within few minutes of arrival in ER are the rewarding duties of the nurses. Most of the times, a single dose of Adenosine does the magic of reverting the rhythm to sinus.

Emergency cardiac nursing is a privileged part of nursing to help the patients during the most difficult times of their lives

ANY PROBLEM.....307

Bhagawan Karki

Would you have any problem, your hands immediately go to telephone-set and dial 3-0-7(307). This is a popular telephone number in Shahid Gangalal National Heart Centre. I have received lots of phone calls during my one decade of service in this centre. Our team solved most of them which were under our capabilities and competencies.

Eight members of our unit are available 24hours for phone calls to hear problem, difficulties and grievances. Daily we receive calls of general as well as biomedical problem. It's related to breakdown maintenance and preventive maintenance. Our teams were keen on solving the problem with great responsibility. Good teamwork and friendship behavior between members made success of this unit.

However there is need for update in our team as per technological changes. So it requires skill advancement of our members resulting in better performance which helps to achieve our organization's goal.

Any trouble, please, do not hesitate to dial our extension 3-0-7(307) - Engineering and Maintenance Unit.

BECAUSE I AM A NURSE...

Nira Shrestha Maharjan

I get up in the dawn
Lost to the silent road
Living behind my mother's breakfast
I engage myself; tucking the beds of patients
When I left my bed untidy
I make enquiry on the patient's lunch
When mice are running in my stomach

I get busy in removing others agony
Hiding behind my own
I try my best to keep on smiling
Even when my heart is burning

I keep on compromising every time
When my soul rises with ego
I give up my whole life
Managing the place I work
When my life itself
Is so messed

Because???
I am a nurse
Sacrificing every zeal
For serving the patients
Living for the patients
Living with the patients

Views expressed in this article is author's own and doesn't represent editor's views.

Nursing Department, its Ongoing Contributions and Hurdles

Krishna Kumari Subedi

It goes without saying that nursing profession has a dominant role in Health Care Delivery System. There are discrepancies among people's perceptions towards nursing profession which is common. Historically, nurses used to stress merely on caring of sick and injured people. Now, they stress on health promotion and prevention aspects as well. In the past, mere local training services used to be rendered for nurses production. But, the lady with the lamp, Florence Nightingale had something special up her sleeve. She instigated formal nursing education and defined nursing role in a more profound way. She is widely venerated today for her deeds and contributions in nursing profession. Although nursing practice varies both through its various specialties and countries, following definition of nursing provided by International Council of Nurses is the most appropriate for nurses. "Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education are also key nursing roles."

We nurses of SGNHC are able to provide comprehensive care to all types of cardiac patients within preventive - rehabilitative continuum and can handle the sophisticated technology effectively and efficiently.

Additionally, we are not only involved in patient care but also in preparation of nursing man power. Every year more than 300 student nurses from different nursing colleges come here for their clinical posting. Nursing department takes all responsibilities regarding their practicum. This posting serves salutary to our hospital as we benefit 15-20 lakhs from it. The proceeds are utilized for hospital welfare. We are well acquainted with the fact that training is a major strategy for boosting knowledge and skills of nurses and for alleviating their callowness. We have instigated different relentless training services henceforth. In this year around 70 % nurses have got CPR (cardiopulmonary resuscitation) training which is very salutary for saving life of cardiac arrest patient. Similarly all in charges and senior staff nurses got infection prevention training. Likewise, to minimize nosocomial infection and promote clean safe environment, nursing department designed a job for infection prevention nurse and assigned one representative for this crucial job. Realizing that nursing leadership and management play vital role for boosting morales of all nurses, nursing department has adopted participatory management styles and fair promotion mechanisms. This year is also fruitful from the aspect of nursing research. Nursing department has carried out two researches 1). Assessment of patient safety culture and 2). Assessment of patient right culture of Shahid Gangalal National Heart Centre. We anticipate further research will be carried out by nursing department to promote evidence based practice.

However, nursing profession still encounters some visible and invisible hurdles. Visible hurdles are dearth of safe staffing level, lack of carrier incentives and adequate support from management. Prime invisible hurdle is patronization of nurses. In this Centre, we all know that we nurses comprises 50% work force. In spite of this prominent status, we are seldom considered as equal as other health care professionals. Consequently, our unique ideas, knowledge, and skills are often underutilized. This not only affects nursing profession and its members but also dwindles quality care to the patients. We do raise voices but they get wasted in vain. To some extent it may be because our profession is undermined and viewed as a profession of female. In our country, we all female nurses witness that women in our country are still not treated equally as male. So it won't be hyperbole to say that prevailing gender issues in our country metamorphically influence nursing profession. "Women are goddesses". This is well known cliché in Nepal. However, it is sorely agonizing to witness that a woman in Nepal is still deprived of her fundamental right. We have ugly thoughts and perception regarding women in Nepal. An incidence that our first lady present Vidhya Bhanddari endured months ago personifies it. No sooner than she became president had she visited Janaki temple for worshipping. But some so-called deprived rebellious people defied this action. They hold a conviction that a widow cannot worship in a temple.

So, after she worshipped, the rebellious people performed numerous rituals to purify the temple. But our first president Ram Baran Yadav didn't have to endure such patronizing incidence. He also went to Janaki Mandir after his election as president every year and he was widower too. But people didn't rebel against it. This personifies third class treatment of women in Nepal. Nursing profession is being victimized from similar kinds of evil thoughts. Therefore, we must be aware that, to uplift our nursing profession, well recognition of women in our society is a must.

CONCLUSION

Despite many hurdles, we are trying our best to uplift our profession by ourselves in SGNHC. For instance, to enhance the skill and knowledge of nurses' frequent training programs are incorporated in nursing. Separate field for infection prevention nurses is created. This era of nursing is era of evidence based practice. So research activities are also integrated with our regular clinical activities. We hope that this enthusiasm of nursing department will sustain forever. It is realized that women empowerment is prerequisite for decent status of nursing profession. So, tenacious efforts should be made to overhaul the status of women in our society for the sake of nursing profession's welfare.

Views expressed in this article is author's own and doesn't represent editor's views.

नविन व्यवस्थापनमा ट्रेडयुनियनको भूमिका

भूपाल आचार्य

व्यवस्थापनको अभ्यास एवं विकास मानव सभ्यताको विकास क्रमसँगै शुरु भएको मानिन्छ। मानव सभ्यताको दुगें युग देखि औद्योगिक युगमा समेत व्यवस्थापन सम्बन्धी काम हुने गर्दथ्यो। राज्यका आम नागरिकलाई विभिन्न रूपले आवश्यक पर्ने वस्तु तथा सेवाका लागि विभिन्न ओहोदामा रहेका व्यक्तिहरूले आफ्नो क्षेत्रको महत्वपूर्ण कामहरू व्यक्तिगत तथा सामुहिक रूपमा सम्पादन गर्दै संगठनहरूले निश्चित उद्देश्य हासिल गर्न प्रकृयावद्ध र सहज रूपमा गरिने कृयाकलाप नै व्यवस्थापन हो। अर्को शब्दमा भन्दा सिमित श्रोत र साधनलाई अधिक मात्रामा प्रयोग गरी बढी प्रतिफलमुखी बनाउन सक्नु व्यवस्थापन हो।

कुनै पनि संगठनको विकास त्यस संगठनको स्वस्थ एवं कुशल व्यवस्थापनमा निर्भर हुन्छ। व्यवस्थापन मानिसको आर्थिक तथा सामाजिक जीवनको एक महत्वपूर्ण पक्ष मानिएको छ र यो एक वैज्ञानिक विचार र शिल्पशास्त्रीय नविन पद्धतीबाट परिष्कृत आधुनिक सामाजिक तथा व्यवसायिक संगठनहरूमा नभईनहुने ठानिन्छ। यसले सामुहिक रूपमा कृशलतापूर्वक काम गर्ने कलाको अवधारणालाई मान्यता दिएको हुन्छ। संस्थामा आफु अन्तर्गतका सहयोगी कर्मचारीहरूबाट बढीभन्दाबढी काम लिन सक्ने कला असल व्यवस्थापन भित्रको अन्तर बस्तुको रूपमा रहेको हुन्छ। संगठनमा विभिन्न पेशागत संगठित समूहहरू पनि रहेका हुन्छन् यी सबै समूहहरूलाई मिलाउँदै सहजरूपमा संस्थागत विकाश गर्नु कृशल व्यवस्थापन भित्रको कलात्मक शैली हो। संगठनले तय गरेका निश्चित उद्देश्य तथा लक्ष्य हासिल गर्न विभिन्न शीपयुक्त अर्धशिपयुक्त, प्राविधिक तथा अप्राविधिक श्रमजीवि कर्मचारीहरू संगठनका लागि महत्वपूर्ण श्रोतका रूपमा रहेका हुन्छन्। उनीहरूलाई कार्य सम्पादन गर्न व्यवस्थापन तहबाट समर्थन, सहयोग, समन्वय, उत्प्रेणा आदि हुनु पर्दछ। कर्मचारी तथा कामदारले चाहेको प्राविधिक सामाजिक, मनोवैज्ञानिक, बन्धुत्व भातृत्व, असल मानवीय सम्बन्धको वातावरण संगठनको व्यवस्थापकले तयार गर्नुपर्दछ। असल वातावरणमा मात्र कर्मचारीले आफ्नो शीप कौशल, दक्षताको प्रयोग गरेर सहज रूपमा कार्य सम्पादन गर्न सक्दछन्। कुनै पनि संस्थाको लागि व्यवस्थापनका साथै प्रशासन पनि उत्तिकै महत्वपूर्ण मानिन्छ। संगठनको कार्यप्रकृया तथा पद्धतिलाई मध्यनजर गरी कतिपय विद्वानहरूले प्रशासन र व्यवस्थापनको उस्तै उस्तै परिभाषा दिई दवैलाई बराबरीमा राखेको पाइन्छ। प्रशासनलाई वृहत धारणा र व्यवस्थापनलाई शुक्ष्म धारणा को रूपमा प्रतिपादन गरेको पाइन्छ। प्रशासनले संगठनलाई मर्यादित, स्थिर तथा गतिशिल बनाउनको लागि

प्रकृयागत कृयाकलाप संचालन गर्दछ, भने व्यवस्थापनले संगठनलाई मर्यादित, स्थिर, नीतिगत गतिशिलता का लागि प्रकृया पुन्याउने कृयाकलाप सञ्चालन गर्दछ, त्यसो भएको हुँदा प्रशासन र व्यवस्थापन एक अर्काका परिपूरक हुन र संगठनमा दुवैको उपस्थिति अनिवार्य शर्त हो।

संस्थाको उद्देश्य तथा लक्ष्य एक व्यक्तिको प्रयासबाट मात्र हासिल गर्न नसकिने भएको हुँदा त्यहा संलग्न तल्लो तहदेखि माथिल्लो तहसम्मका कर्मचारीहरूको सामूहिक प्रयास, सहयोग, समन्वय, हातेमालो तथा सामन्जस्यता विकास गरेर संस्थाको निर्दिष्ट तथा निश्चित उद्देश्य पुरा गर्न सकिन्छ। कुनै व्यक्तिले म र मैले गरे भन्नेर घमण्ड गर्नु सबैभन्दा ठुलो भुल हुनेछ र ती सहयोगी समुह माथि अन्याय हुनेछ। सामूहिक प्रयासबाट गरिने काम मात्र दिगो र प्रभावकारी हुनेछ, र व्यवस्थापकिय कार्य गर्दा निम्न तत्वहरूमा ध्यान दिन आवश्यक देखिन्छ।

- योजना तर्जुमा गर्नु, व्यवस्थापन गर्नु, नेतृत्व गर्नु, समन्वय गर्नु, नियन्त्रण गर्नु, पदस्थापन तथा नियुक्ति गर्नु, उत्प्रेणा गर्नु आदी..

संस्थाको प्रविधि, पद्धति कार्यप्रकृति अनुसार कार्यशैली फरक फरक हुने भएको हुदा व्यवस्थापन संयन्त्र पनि परिस्थिति अनुसार निर्माण भएको हुन्छ। यसलाई आन्तरिक तथा बाह्य कारणले प्रभाव पारेको हुन्छ र व्यवस्थापनले उपयुक्त तथा अनुकूलता हेरी विभिन्न शैलीको प्रयोग गर्न सक्नुपर्दछ। व्यवस्थापनको प्रयोग समयानुकूल फरक फरक सिद्धान्तमा आधारित भएर शुरुका दिनमा उद्योगहरूमा बढी प्रयोग भई औद्योगिक सफलता पछि यसको प्रयोग सबै किसिमका संस्थाहरूमा भएको पाइन्छ। समय र प्रविधि संगै क्लासिकल थेउरी देखि मोर्डन थेउरी सम्म आइपुग्दा शुरुका सिद्धान्तमा भएका कमीकमजोरीलाई हटाउँदै परिष्कृत रूपमा नयां सिद्धान्तहरू समेत प्रतिपादित भए। पुराना सिद्धान्तहरू असफल भएपनि हामीमा अझै पनि त्यस्तै प्रकारका सिद्धान्तहरूको अभ्यास र प्रयोग बढीमात्रामा भएको पाइन्छ जसले संस्थालाई समय सापेक्ष र चुस्त बनाउन नसकेको यथार्थताका कारण त्यस्ता किसिमका संस्थाहरू आधुनिक प्रतिस्पर्धात्मक युगमा टिकिरहन गाढो देखिन्छ। मोर्डन थेउरी मा व्यवस्थापकिय अभ्यास गर्दा एउटै शैलीलाई मात्र प्रयोग नगरी संस्थाको अवस्था, परिस्थिति र बाह्य वातावरणको अध्ययन उपयुक्तता तथा अनुकूलता अनुसार भूमिका निभाउनु पर्दछ। व्यवस्थापनले सबैलाई उचित जिम्मेवारी दिएर तिनिहरूलाई उत्तरदायी (एकाउन्टेबल)

बनाउन आवश्यक छ। व्यवस्थापनका आधुनिक सिद्धान्त मध्ये 7-s model लाई सबै भन्दा नविन सिद्धान्तको रूपमा लिइएको पाइन्छ। जसलाई shared values, systems, style, staff, skills, strategy and structure भन्ने जनाउँदछ र नविन सिद्धान्तहरूको अभ्यास र प्रयोगले संस्थागत व्यवस्थापनमा आमूल परिवर्तन गर्न समेत सहजिकरण हुन सक्दछ।

२१ औं सताब्दीको व्यवस्थापनमा work place democracy लाई एउटा प्रमुख मान्यताको रूपमा लिइएको पाइन्छ। यसको विकास अमेरिकामा स्वतन्त्र मजदुरसंगठन जसमा कर्मचारीहरूबाट निर्वाचित गरी प्रतिनिधित्व गराइन्थ्यो र यसको नारा 'the members run this union' भन्ने थियो। कुनै पनि संस्था वा संगठनमा मजदुर संगठनको प्रतिनिधि त्यहा कार्यरत कामदारहरूको तर्फबाट व्यवस्थापकिय गतिविधिहरूमा सहभागि जनाउन छनौट गरेर पठाइन्छ र उक्त प्रतिनिधिले कामदार कर्मचारीहरूको प्रतिनिधित्व गर्दै हरेक व्यवस्थापकिए तह समिति, उपसमिति तथा सञ्चालक समिति जस्ता निर्णायक स्थानमा आफ्नो उपस्थिति जनाउँदछ। कार्यस्थलमा हुने लोकतन्त्रमा कामदार कर्मचारीहरूलाई उत्तरदायी भई आफ्नो कार्यसम्पादन गर्न आवश्यक पर्ने पूर्वाधारहरूको विकास गर्नु, आपसी समझदारी कायम गर्दै संस्थागत विकास गर्नु, स्वच्छ, चुस्त तथा प्रभावकारी तरिकाले कार्य सम्पादन गर्नु, वृत्तिविकास गर्नु आदि कुराहरूमा जोड दिइन्छ र स्वतन्त्रताको यथोचित अनुभूति संगठनमा काम गर्ने श्रमजिवि कर्मचारीहरूमा हुदा स्वतस्फुर्त रूपमा सबै कर्मचारीहरूले आफ्नो उत्तरदायित्व वहन गर्न उत्प्रेरित हुने, संस्था हाम्रो हो भन्ने भावना जागृत हुने र आपसी सहिष्णुताको विकास भएर समग्रमा उत्पादन तथा सेवाको गुणस्तरमा समेत सुधार आउने कुराको राय विज्ञहरूमा रहेको पाइन्छ भने कार्यस्थलमा स्वतन्त्रताको वातावरण तयार नहुदा कतिपय संगठनमा काम गर्ने कामदार कर्मचारीहरूमा नैरास्यता आउने, कर्मचारी छिटो छिटो परिवर्तन भइरहने, उत्पादन तथा सेवामा कमी आउने

तथा बन्द हडताल जस्ता गतिविधि बढ्नुका साथै संस्थाको गतिमा समेत न्यूनता आउने सम्भावना प्रवल रहने भएकोले पनि कार्यस्थलमा हुने लोकतान्त्रीक वातावरण आधुनिक युगमा सबै संगठित संस्थाहरूमा हुन आवश्यक छ। व्यवस्थापकिय वृटीका कारण कतिपय संस्थाहरू लामो समय सम्म टिक्न नसकेको यथार्थलाई मनन गर्दै संस्था भित्र काम गर्ने सबै श्रमजीवि कर्मचारीहरूको राय सुभावा समेतलाई महत्व दिइ दिगो व्यवस्थापन गर्न सक्नु कुशल व्यवस्थापन हो।

श्रमजीवि कर्मचारीहरूको प्रतिनिधित्वको लागि विगत लामो समय देखि आवाज उठे र नेपालमा पनि ट्रेड युनियन ऐन २०४९ लागु भए पश्चात विभिन्न प्रतिष्ठानहरूमा ट्रेड युनियन विकशित हुदै गयो। विभिन्न संघ, संस्था तथा संगठनहरूमा हुने श्रम शोषण, महिला र पुरुषमा हुने श्रमको विभेद जस्ता कुराहरूमा आवाज उठे र ट्रेडयुनियनको स्थापना पश्चात त्यस प्रकारका विभेदहरू कमश न्युनिकरण हुदै गएको देखिन्छ र यो एउटा श्रमिक वर्गकोलागि हितकर नै मान्नु पर्दछ। ट्रेडयुनियनको मुल्य र मान्यता अनुसार यस केन्द्रमा पनि प्रतिष्ठान स्तरको ट्रेड युनियन २०६३ सालमा स्थापना भए पछि प्रतिष्ठानमा हुने क्रियाकलाप, कर्मचारीहरूको सामुहिक हित तथा अस्पताल विकाशमा आफ्नो भूमिका सक्रिय रूपमा निर्वाह गर्दै आएको छ। यसै सन्धर्वमा संगठनले औल्याएका विषयमा व्यवस्थापन संग सामुहिक सौदाबाजी गर्दै निरन्तर अधि बढीरहेको छ। कुनै पनि संगठनमा सम्पूर्ण कर्मचारीहरूको सामुहिक प्रयास बाट नै विकाश निर्माण कर्मचारीहरूको हित र संगठनको हित हुने निश्चित छ। यसका लागि सम्पूर्ण श्रमजीवि कर्मचारीहरू तथा व्यवस्थापनमा क्रियाशि व्यक्तिव आ-आफ्नो कर्तव्य बोधकासाथ एकताबद्ध भई सामुहिक हितका लागि एक अर्काको लागि सहयोगि भूमिका निर्वाह गरी संस्थागत विकास भए मात्र हामी हामी सबै विकसित हुन सक्छौं भन्ने भावनाले अभिप्रेरित भई अधि बढ्नु अपरिहार्य छ।

PHOTOGRAPHS



DEPARTMENT OF CARDIOVASCULAR SURGERY



DEPARTMENT OF CARDIOLOGY



DEPARTMENT OF ANESTHESIOLOGY



DEPARTMENT OF CARDIAC REHABILITATION AND HEALTH PROMOTION



DEPARTMENT OF PEDIATRIC CARDIOLOGY



DEPARTMENT OF NURSING



DEPARTMENT OF ADMINISTRATION



INSTITUTIONAL REVIEW COMMITTEE



PHARMACY UNIT



PATHOLOGY UNIT



RADIOLOGY UNIT



PERFUSION TECHNOLOGY UNIT



MAINTENANCE UNIT



TRANSPORTATION UNIT

STAFF LIST

DEPARTMENT OF CARDIOVASCULAR SURGERY

SN	NAME	DESIGNATION
1	Dr. Anil Acharya	Cardiac Surgeon
2	Dr. Ashish Dhakal	Resident Doctor
3	Dr. Avash Karki	Resident Doctor
5	Dr. Bijoy Rajbansi	Consultant Cardiac Surgeon
6	Dr. Bishow Pokhrel	Registrar Surgery
7	Dr. Dikshya Joshi	Resident Doctor
8	Dr. Ekta Shrestha	Resident Doctor
9	Dr. Krishna Bhandari	Resident Doctor
10	Dr. Marisha Aryal	Resident Doctor
11	Dr. Nabin C Gautam	Cardiac Surgeon
12	Dr. Nirmal Panthi	Resident Doctor
13	Dr. Nivesh Rajbhandari	Registrar Surgery
14	Dr. Rabindra Bhakta Timala	Consultant Cardiac Surgeon
15	Dr. Ramesh Raj Koirala	Sr. Consultant Cardiac Surgeon
16	Dr. Sangam K.C.	Resident Doctor
17	Dr. Sidhartha Pradhan	Consultant Cardiac Surgeon
18	Dr. Yogeshor Man Singh	Registrar Surgery
19	Lalita Shakya	Perfusion Assistant
20	Laxmi Shrestha	Perfusion Assistant
21	Ram Bharosh Yadav	Perfusion Assistant
22	Umesh Khan	Perfusionist

DEPARTMENT OF CARDIOLOGY

SN	NAME	DESIGNATION
1	Dr. Amit Kumar Singh	Resident Doctor
2	Dr. Amrit Bogati	Registrar Cardiologist
3	Dr. Arun Maskey	Sr. Consultant Cardiologist
4	Dr. Binay Kumar Rauniyar	Cardiologist
5	Dr. Chandramani Adhikari	Cardiologist
6	Dr. Deepak Limbu	Registrar Cardiologist
7	Dr. Deewakar Sharma	Sr. Consultant Cardiologist
8	Dr. Dharma Nath Yadav	Registrar Cardiologist
9	Dr. Dikshya Karki	Resident Doctor
10	Dr. Dipanker Prajapati	Registrar Cardiologist
11	Dr. Himamshu Nepal	Consultant Cardiologist
12	Dr. Jyotsna Parajuli	Resident Doctor
13	Dr. Kaushal Tamang	Resident Doctor
14	Dr. Laxeshwar Pradhan Sah	Resident Doctor
15	Dr. Madhu Roka	Resident Doctor
16	Dr. Man Bahadur K C	Sr. Consultant Cardiologist
17	Dr. Manjila Basnet	Resident Doctor
18	Dr. Milan Gautan	Resident Doctor

SN	NAME	DESIGNATION
19	Dr. Monika Shrestha	Resident Doctor
20	Dr. Mukunda Sharma	Registrar Cardiologist
21	Dr. Murari Dhungana	Registrar Cardiologist
22	Dr. Nagma Shrestha	Registrar Cardiologist
23	Dr. Prabesh Neupane	Resident Doctor
24	Dr. Pratikshya Joshi	Resident Doctor
25	Dr. Rabi Malla	Sr. Consultant Cardiologist
26	Dr. Rabindra Pandey	Registrar Cardiologist
27	Dr. Rajeeb Rajbhandari	Consultant Cardiologist
28	Dr. Ranjit Sharma	Consultant Cardiologist
29	Dr. Reeru Manandhar	Resident Doctor
30	Dr. Rikesh Tamrakar	Registrar Cardiologist
31	Dr. Rishikesh Rijal	Resident Doctor
32	Dr. Roshan Raut	Consultant Cardiologist
33	Dr. Sabita Aryal	Resident Doctor
34	Dr. Sajan G Baidhya	Consultant Cardiologist
35	Dr. Sanjay Singh K.C.	Resident Doctor
36	Dr. Satish Kumar Singh	Registrar Cardiologist
37	Dr. Smriti Acharya	Resident Doctor
38	Dr. Sobita Khadka	Resident Doctor
39	Dr. Subodh Kansakar	Consultant Cardiologist
40	Dr. Sudha Ranabhat	Resident Doctor
41	Dr. Sujeeb Rajbhandari	Consultant Cardiologist
42	Dr. Surakshya Joshi	Resident Doctor
43	Dr. Yubaraj Limbu	Consultant Cardiologist

DEPARTMENT OF ANESTHESIOLOGY

SN	NAME	DESIGNATION
1	Dr. Apurba Sharma	Anesthesiologist
2	Dr. Ashish Amatya	Registrar Anesthesiologist
3	Dr. Battu Kumar Shrestha	Registrar Anesthesiologist
4	Dr. Jejunath Pokharel	Sr. Consultant Anesthesiologist
5	Dr. Santosh Sharma Parajuli	Registrar Anesthesiologist
6	Dr. Smriti Mahaju Bajracharya	Registrar Anesthesiologist
7	Dr. Surendra Bhusal	Registrar Anesthesiologist

DEPARTMENT OF CARDIAC REHABILITATION & HEALTH PROMOTION

SN	NAME	DESIGNATION
1	Binita Tamrakar	Staff Nurse
2	Dr. Shaili Thapa	Sr. Physiotherapist
3	Dr. Yubaraj Limbu	Consultant Cardiologist & HOD

SN	NAME	DESIGNATION
4	Pushpa Neupane	Sr. Staff Nurse
5	Rajeev Kumar Yadav	Physiotherap Assistant
6	Yashoda Luitel	Sr. Physiotherap Assistant

VISITING SPECIALISTS

SN	NAME	DESIGNATION
1	Dr. Dhandu Rani Shakya	Consultant Anaesthesiologist
2	Dr. Ranjit Baral	Consultant Cardiologist
3	Mr. Mahendra Bhatta	Sr. Perfusionist

DEPARTMENT OF NURSING

SN	NAME	DESIGNATION
1	Aarati Gautam	Staff Nurse
2	Aarti Caudhary	Staff Nurse
3	Aleena Khanal	Staff Nurse
4	Ambika Shrestha	Staff Nurse
5	Amita Joshi	Staff Nurse
6	Amita Sigh	Staff Nurse
7	Amrita Upadhya	Staff Nurse
8	Anisha Ghimire	Staff Nurse
9	Anita Bhandari	Staff Nurse
10	Anita Dewan	Nursing Supervisor
11	Anita Sharma Paudel	Staff Nurse
12	Anjana Koirala	Sister
13	Apeksha Ghale	Staff Nurse
14	Apsara Bhandari	Staff Nurse
15	Apurwa Sawad	Staff Nurse
16	Asha Kumari Jha	Staff Nurse
17	Ashmita Shrestha	Staff Nurse
18	Asmita Karki	Staff Nurse
19	Asmita Lamichhane	Staff Nurse
20	Astha Baniya	Sr. Staff Nurse
21	Bal Kumari Chaudhary	Staff Nurse
22	Bandana Bogati	Staff Nurse
23	Bandana Sankhi	Staff Nurse
24	Barsha Oli	Staff Nurse
25	Barsha Shrestha	Staff Nurse
26	Basanta Sharma	Staff Nurse
27	Bhagawoti Chapagain	Staff Nurse
28	Bidhya Malla	Staff Nurse
29	Bidushi Dhital	Staff Nurse
30	Bijaya Aryal	Staff Nurse
31	Bina Paneru	Staff Nurse

SN	NAME	DESIGNATION
32	Bishnu Pandey	Sr. Staff Nurse
33	Chahana Singh	Staff Nurse
34	Chanchala Shrestha	Staff Nurse
35	Chandani Singh Nakarmi	Staff Nurse
36	Chandika Gwachha	Staff Nurse
37	Chitra Pudasani (Adhikari)	Staff Nurse
38	Chunam Khadka	Staff Nurse
39	Deepa Bajracharya	Staff Nurse
40	Deepa Basnet	Staff Nurse
41	Deepa Devkota	Staff Nurse
42	Deoki Saru	Sister
43	Dibyashori Khati	Sr. Staff Nurse (Star Bridhi)
44	Dikchhya Karki	Staff Nurse
45	Geeta Tiwari	Staff Nurse
46	Gita Tamang	Staff Nurse
47	Hemu Pun	Staff Nurse
48	Hira Adhikari	Staff Nurse
49	Isha Lama	Staff Nurse
50	Ishwori Gautam	Staff Nurse
51	Janaki Ayer	Staff Nurse
52	Januka khadka	Staff Nurse
53	Jaya Pokhrel	Staff Nurse
54	Jenisha Shrestha	Staff Nurse
55	Jina KC	Staff Nurse
56	Jyoti Shrestha	Staff Nurse
57	Kabita Baniya	Staff Nurse
58	Kabita Gautam	Staff Nurse
59	Kalpana Thapa	Staff Nurse
60	Kalpana Timilsina	Sister
61	Kamala Poudel	Staff Nurse
62	Kamana Paudel	Staff Nurse
63	Kiran Sebedi Dahal	Staff Nurse
64	Kopila Luitel	Nursing Supervisor
65	Krishna Kumari Subedi	Sr. Nursing Supervisor/Matron
66	Krishna Shwari Gwachha	Staff Nurse
67	Kunti Khanal	Sister
68	Lalita Maharjan	Sr. Staff Nurse
69	Lalita Poudel	Sr. Staff Nurse
70	Laxmi Adhikari	Staff Nurse
71	Laxmi Shrestha	Staff Nurse
72	Leela Khanal	Staff Nurse
73	Leela Rana KC	Sr. Staff Nurse (Star Bridhi)
74	Lhamu Sherpa	Staff Nurse
75	Luna Maharjan	Staff Nurse

SN	NAME	DESIGNATION
76	Madhuri Thapa	Staff Nurse
77	Madhushree Khanal	Staff Nurse
78	Mahima Shrestha	Staff Nurse
79	Mamata Khadka	Staff Nurse
80	Mamata Ojha	Staff Nurse
81	Man Kumari Shris Thapa	Staff Nurse
82	Mandira Khadka	Staff Nurse
83	Manira Gautam	Staff Nurse
84	Manju Khadka	Staff Nurse
85	Manju Pyakurel	Staff Nurse
86	Manju Timilsina	Sister
87	Mausami Paudyal	Staff Nurse
88	Menuka Silwal	Staff Nurse
89	Mina KC	Sr. Staff Nurse
90	Mukta Shrestha	Staff Nurse
91	Namrata Maharjan	Staff Nurse
92	Namrata Rawal	Staff Nurse
93	Nashna Maharjan	Staff Nurse
94	Nilima Joshi	Staff Nurse
95	Nira Kumari Shahi	Staff Nurse
96	Nira Shrestha	Staff Nurse
97	Nirjala Khanal	Staff Nurse
98	Nisha Thapa	Staff Nurse
99	Nita Dangol	Sr. Nursing Supreviser
100	Pabitra Pandey	Staff Nurse
101	Pooja Poddar	Staff Nurse
102	Poonam Gurung	Staff Nurse
103	Prabha K.C.	Staff Nurse
104	Prabha Paudel	Staff Nurse
105	Prabha Rawal	Staff Nurse
106	Pragya Acharya	Staff Nurse
107	Pragya Kuikel	Staff Nurse
108	Prajita Shrestha	Staff Nurse
109	Pramila Aryal	Staff Nurse
110	Prati Badan Dangol	Nursing Supervisor
111	Pratichhya Maharjan	Staff Nurse
112	Pratigya Bhattarai	Staff Nurse
113	Pratima Dhakal	Staff Nurse
114	Pratistha Bhattarai	Staff Nurse
115	Prativa Koirala	Staff Nurse
116	Puja Kafle	Staff Nurse
117	Puja Satyal	Staff Nurse
118	Punam Shrestha	Staff Nurse
119	Pushpa Sharma	Staff Nurse

SN	NAME	DESIGNATION
120	Puspa Kumari Gurung	Staff Nurse
121	Puspa Mahara	Staff Nurse
122	Puspa Marasini	Staff Nurse
123	Radhika Mudbhari	Staff Nurse
124	Raj Kumari Shrestha	Staff Nurse
125	Rajani Balami Adhikari	Sr. Staff Nurse
126	Rajani Shrestha	Staff Nurse
127	Rajyalaxmi Bhele	Sr. Staff Nurse
128	Rameswori Duwal	Staff Nurse
129	Ramita Pandey	Staff Nurse
130	Ranjana Pandey	Staff Nurse
131	Ranjita Guragain	Staff Nurse
132	Rashmi Basnet	Staff Nurse
133	Rashmi Karki	Staff Nurse
134	Rashmila Manandhar	Staff Nurse
135	Ratna Devekota	Staff Nurse
136	Rekha Karki	Staff Nurse
137	Rekha Kumari	Staff Nurse
138	Renu Tamang	Staff Nurse
139	Reshma Thapa	Sr. Staff Nurse
140	Richa Bista	Staff Nurse
141	Rita Karki	Staff Nurse
142	Roji Shakya	Sister
143	Rojina Rayamajhi	Staff Nurse
144	Rubina Khadka	Staff Nurse
145	Rukmini Upadhyaya	Staff Nurse
146	Rukumani Khadka	Staff Nurse
147	Rupisha Karki	Staff Nurse
148	Sabina Baral	Staff Nurse
149	Sabina Thimi	Staff Nurse
150	Sabita Gyawali	Staff Nurse
151	Sabita Khanal	Staff Nurse
152	Safala Subedi	Staff Nurse
153	Sagun Sharma	Staff Nurse
154	Sajina Sharma Ruwali	Staff Nurse
155	Sakuntala Karki	Staff Nurse
156	Samita Thapa Magar	Staff Nurse
157	Samjhana Karki	Staff Nurse
158	Sangita Baskota	Staff Nurse
159	Sangita Kafle	Staff Nurse
160	Sanjita Dhakal	Staff Nurse
161	Sanju Shah	Staff Nurse
162	Sapana Maharjan	Sr. Staff Nurse
163	Sarala Malla	Staff Nurse

SN	NAME	DESIGNATION
164	Sarina Basu Shrestha	Staff Nurse
165	Sarita Maharjan	Staff Nurse
166	Sashi Lama	Staff Nurse
167	Sati Devi Manandhar	Nursing Supervisor
168	Season Bista	Staff Nurse
169	Shailee Karanjit	Staff Nurse
170	Shakuntala Mahat	Staff Nurse
171	Shama Singh Kunwar	Staff Nurse
172	Shanta Singh Thakuri	Staff Nurse
173	Shanti Gurung	Staff Nurse
174	Sharmila Dhukuchhu	Staff Nurse
175	Sharmila Neupane	Staff Nurse
176	Sharmila Thapa	Staff Nurse
177	Shila Shrestha	Staff Nurse
178	Shilpa Shrestha	Staff Nurse
179	Shilpa Shrestha	Staff Nurse
180	Shobhana Shrestha	Sr. Staff Nurse
181	Shova Shrestha	Staff Nurse
182	Shovna Shrestha	Staff Nurse
183	Shreejana Gautam	Staff Nurse
184	Shristi Maharjan	Staff Nurse
185	Shushma Tamang	Staff Nurse
186	Siba Laxmi Shrestha	Staff Nurse
187	Sirjana Adhikari	Staff Nurse
188	Sirjana Paudel	Staff Nurse
189	Sisira Rajthala	Staff Nurse
190	Sovita Sapkota	Staff Nurse
191	Srijana Bhele	Staff Nurse
192	Srijana Ghaley	Staff Nurse
193	Srijana Thapa	Staff Nurse
194	Sudina Shrestha	Staff Nurse
195	Sujan G.C.	Staff Nurse
196	Sujata Ghimire	Staff Nurse
197	Sumitra Poudel	Staff Nurse
198	Sunaina Shakya	Staff Nurse
199	Sunita Khadka	Sister
200	Supala Gautam	Staff Nurse
201	Suraksha Dhungana	Staff Nurse
202	Sushila Ghimire	Staff Nurse
203	Sushila Khanal	Staff Nurse
204	Sushmita Bista	Staff Nurse
205	Sushmita Kaldan	Staff Nurse
206	Tripti Singh	Staff Nurse

SN	NAME	DESIGNATION
207	Tulasa Banjara	Staff Nurse
208	Tulasa KC	Nursing Supervisor
209	Usha Paudel	Staff Nurse
210	Ushna Shrestha	Staff Nurse
211	Vidhya Koirala	Nursing Supervisor
212	Yogina Maharjan	Staff Nurse

ADMINISTRATION

SN	NAME	DESIGNATION
1	Bhagawati Gaire	Administrative Assistant
2	Bhupal Acharya	Administrative Officer
3	Bikash Khaniya	Administrative Assistant
4	Bimala Aryal	Administrative Officer
5	Bimala Sapkota	Administrative Assistant
6	Chunam Lama	Sr. Administrative Assistant
7	Dipendra Khadka	Chief of Administration
8	Dipendra Pokharel	Sr. Administrative Officer
9	Dr. Jyotindra Sharma	Executive Director
10	Kabita Koirala Khatiwada	Administrative Assistant
11	Mahendra Lamsal	Sr. Administrative Assistant
12	Mandira Khadka	Administrative Sub- Assistant
13	Pratima Malla Thakuri	Administrative Assistant
14	Ram Acharya	Sr. Administrative Officer
15	Ram Babu Raut	Sr. Medical Record Assistant
16	Santosh Dhakal	Administrative Assistant
17	Sudha Sigdel	Administrative Sub- Assistant
18	Yuba Raj Timilsina	Sr. Administrative Assistant

RADIOLOGY

SN	NAME	DESIGNATION
1	Baburam Kharel	Radiographer
2	Baidh Nath Yadav	Radiography Technologist
3	Bijaya Shrestha	Radiographer
4	Dr. Pragati Shrestha	Resident Doctor
5	Indesh Thakur	Sr. Radiography Technologist
6	Laxminarayan Singh	Radiographer
7	Pramod Khatri	Radiographer
8	Ramesh Thapa	Dark Room Assistant II(Star Bridhi)
9	Saroj Chhetry	Radiographer
10	Sebika Baniya Pandit	Radiographer
11	Seema Gyawali	Radiographer
12	Shulav Paudel	Radiography Technologist

SN	NAME	DESIGNATION
13	Shyam Kumar Adhikari	Radiographer
14	Shyam Thakur	Sr. Radiographer

FINANCE

SN	NAME	DESIGNATION
1	Bibek Thapa	Account Assistant
2	Bimal Kumar Upreti	Chief Financial Administration
3	Krishna Bahadur Kumal	Account Sub- Assistant
4	Manoj Kumar Bista	Dy Chief Financial Administration
5	Naresh Chipalu	Finance Officer
6	Niru Dahal	Sr. Account Assistant
7	Sabin Manandhar	Account Assistant
8	Sanjay Maharjan	Account Sub- Assistant

PATHOLOGY

SN	NAME	DESIGNATION
1	Arya Tara Shilpakar	Sr. Lab Technician
2	Bijaya Kumar Thakur	Lab Technician
3	Bikash Bhusal	Lab Technician
4	Bindeshor Yadav	Medical Lab Technologist
5	Binod Kumar Yadav	Medical Lab Technologist
6	Birendra Chaudhary	Lab Technician
7	Dr. Bipesh Acharya	Resident Doctor
8	Narendra Shrestha	Lab Technician
9	Nawal Kishor Yadav	Lab Technician
10	Pradeep Khanal	Lab Technician
11	Pranila Chitrakar	Lab Technician
12	Prasanta Koirala	Lab Technician
13	Prem Hari Bhasima	Lab Technician
14	Rajnarayan Mishra	Sr. Lab Technician
15	Renu Shakya	Sr. Lab Technician
16	Sarala Koirala	Lab Technician
17	Shanti Sharma	Lab Technician
18	Sunita Giri	Lab Technician
19	Suresh Kumar Gupta	Lab Technician
20	Sushila Shrestha	Lab Technician

PHARMACY

SN	NAME	DESIGNATION
1	Atmaram Timalisina	Sr. Pharmacy Assistant
2	Devendra Yadav	Health Assistant
3	Indrajit Yadav	Health Assistant
4	Jaykishor Shah	Health Assistant

SN	NAME	DESIGNATION
5	Kamal Bahadur Rana	Pharmacy Assistant
6	Madhu Giri	Sr. Pharmacist
7	Manoj Kumar Yadav	Health Assistant
8	Nabina Thapa	Pharmacy Assistant
9	Niru Ratyal	Health Assistant
10	Prem Raj K.C.	Pharmacy Assistant
11	Upama Parajuli	Pharmacy Assistant

MAINTENANCE UNIT

SN	NAME	DESIGNATION
1	Bhagawan Karki	Overseer
2	Bhogendra Narayan Shah	Sub- Overseer
3	Bishwa Ram Adhikari	Plumber
4	Dinesh Maharjan	Plumber
5	Kedar Raj Khadka	Plumber
6	Nawaraj Roka	Sub- Overseer
7	Pradip Kumar Yadav	Sr. Overseer
8	Shamsher Bahadur Basnet	Plumber

TRANSPORTATION UNIT

SN	NAME	DESIGNATION
1	Krishna Bahadur Budhathoki	Driver II
2	Sanu Lama	Driver II
3	Bharat Bahadur Khadka	Driver
4	Pitambar Bhujel	Driver
5	Bhej Bahadur Moktan	Driver
6	Bhai Narayan Maharjan	Driver
7	Rup Bdr Thapa	Driver
8	Gyan Kaji Maharjan	Driver
9	Sadhuram Pandit	Driver
10	Yagya Bahadur Khulal	Driver

OFFICE HELPER

SN	NAME	DESIGNATION
1	Bharat Bahadur Basnet	Office Helper II
2	Biju Kuwar Chhetri	Office Helper
3	Gauri Devi Sharma	Office Helper II
4	Kalpana Bhattarai	Office Helper
5	Kamala Gautam	Office Helper
6	Madhav Thapa	Office Helper II
7	Shanti KC	Office Helper II
8	Sharada Khanal	Office Helper II
9	Sushila Bista	Office Helper