

Status of Pathology Professionals

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ABSTRACT

Background: The status of basic, general and specialist workforces in pathology services in Nepal needs to be defined and explored for better pathology services. The objective of the study was to find out the status of laboratory medicine professionals (pathology workforces) and the regulation of ethics and limitations of the different level of workforces.

Methods: A cross-sectional descriptive study was conducted by observing and taking interview with the head of the clinical private institutions from August 2008 to January 2009. A total of 373 private pathology laboratories and the workforces working over there were included in the study.

Results: The workforces heading private pathology services showed that 153 (41%) of laboratories were headed by laboratory assistant, 79 (21%) by laboratory technician, 90(24%) by (medical technologist) pathology officer, 30 (8%) by histocytopathologist and 21 (6%) by non pathology professionals. Officer level Pathology workforce (eligible to work independently) was 113 (30%) whereas 260 (70%) of laboratories had no such workforces. Intermediate level Pathology workforce (eligible to work dependently and for some investigation independently) was 34% (127/373) where as 66% (246/373) of laboratories were lacking such workforces. Specialist level (MD/M. Sc) workforces in histocytopathology, clinical microbiology and cytopathology & hematology were 43(11%), 10 (3%) and 3 (1%) respectively.

Conclusions: The workforces heading the private laboratories were not according to the norms of good laboratory practices. The workforces had crossed their limitations and ethical barrier in performing pathological investigations which did not abide by the rules and regulations made by respective councils of Nepal by pathology workforces. There was intervention of non medical/clinical workforce in laboratory services especially in microbiology and biochemistry.

Keywords: pathology workforces, laboratory medicine.

INTRODUCTION

Human Resources for Health (HRH) covers different faculties, specialties, sub-specialties, super specialties and health researchers which work in coordination with a common goal to improve public health. Pathology workforces include laboratory assistant as basic level, laboratory technician as intermediate level, medical technologist and pathologist (professional with Diploma in clinical pathology after MBBS) as graduate

level, biochemist, microbiologist, haematologist and histopathologist as specialist level and different branches of biochemistry, microbiology, haematology and histopathology as super-specialized level. Health professionals working in pathology (clinical laboratory medicine) services are of basic, intermediate, officer level in general pathology and specialist level in different specialties of general pathology.¹ The

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specialist level workforces are of two categories, one from MBBS background and another from general pathology (BMLT) background. General pathology workforces include lab assistant (pathology assistant), lab technician (pathology officer assistant), medical technologist (pathology officer) and specialist level in different branches of pathology workforces include pathologist (histocytopathologist), clinical biochemist (biochemical pathologist/ chemical pathologist), clinical microbiologist (microbial pathologist) and hematologist (haematopathologist), clinical cytologist (cytopathologist).^{2,3}

Pathology service is a team work which consists of group of specialists like histocytopathologist, biochemist, and microbiologist. As one person cannot be gynecologist, nephrologists and dermatologist at the same time. Similarly one person cannot be a specialist in all branches of pathology like microbiology, biochemistry, cytology, hematology, and histopathology; hence no one can be a "Pathologist" unless one studies MD/M. Sc in all the courses mentioned above. One can be a generalist (not specialist) in pathology like professionals holding degree smallest in which they have studied all branches of pathology like microbiology, biochemistry, haematology and histopathology. But at specialist level, one can be either a histopathologist or biochemical pathologist (medical biochemist) or microbial pathologist (medical microbiologist) etc. There are either histopathologist or cytopathologist or histocytopathologist. Also the meaning of pathology can never be the histopathology/ cytopathology or histocytopathology which is the only one aspect of cell and tissue morphology in relation to pathology. But in Nepal, all types of pathology investigations are either performed, if not performed at least signed by the pathologist for legacy which is malpractices and should be stopped.¹ Laboratory professionals must provide accurate, specific and reliable information using state-of-the-art technology to facilitate evidence-based patient care decisions. Laboratory information, they provide, has a direct impact on patient diagnosis, treatment, health maintenance, and safety, length of stay, as well as resource utilization, and patient satisfaction. Thus, the quality laboratory practice is essential to protect the public from substandard laboratory services and possibly misleading information; by assuring that only proper workforces and qualified individuals perform testing in his/her specialties in well managed pathology laboratory.

National Public Health Laboratory (NPHL) is the governmental body under ministry of health and population to regulate and control the pathology services and the overall management of workforces. The

council authorities are Nepal Health Professional Council (NHPC)⁴ for pathology workforces from general pathology laboratory background and Nepal Medical Council (NMC) for the workforces in pathology from MBBS background.⁵ The workforces produced in pathology field are Institute of medicine, Tribhuvan University (TU), Dhulikhel Medical Institute, Kathmandu University (KU), Bisheshwor Prasad Koirala institute of health sciences (BPKIHS), Dharan, school of Biomedical Sciences, Pokhara University (PU), and technical schools affiliated to Council for Technical Education and Vocational Training (CTEVT). However the nomenclature of the same course in different university is not identical which is confusing as the universities are following different educational standard norms of different foreign universities. The workforces heading the private laboratories are not according to the norms of good laboratory practices. There are many example of crossing the limitations and ethical barrier in performing pathological investigations which does not abide by the rules and regulations made by respective councils of Nepal by pathology workforces. There is intervention of non medical/clinical workforce in laboratory services especially in microbiology and biochemistry. There is lack of human resources in laboratories in specialist level.

METHODS

A cross sectional descriptive study was conducted in Kathmandu, the capital of Nepal with respect to pathology workforces. All the private laboratories were included which were situated in the region in and around the ring road of Kathmandu from August 2008 to January 2009. A data collection Performa, developed by NAMLS (Nepal Association for Medical Laboratory Sciences) was filled by observing and taking interview with the head of the clinical private laboratories. A total of 373 private clinical laboratories institutions were included in the study. Statistical Analysis was done using Epi info data base. Regarding ethical consideration, verbal consent of the respondent was taken before taking the data.

RESULTS

The complete set of pathology workforces as specialist services comprising of histocytopathologist, microbial pathologist, biochemical pathologist and haematopathologist were lacking in the private pathology services. The same was the condition for general pathology workforces like pathology officer, pathology officer assistant and pathology assistant as the complete set was lacking in most of the pathology laboratories.

The workforces heading private pathology services showed that 41% of laboratory was headed by laboratory

assistant, 21% by laboratory technician, 24% by (medical technologist) pathology officer, 8% by histocytopathologist and 6% by non pathology professionals (Table 1). Officer level Pathology workforce eligible to work independently as per guideline NHPC and NPHL was 30% where as 70% of laboratory had no such workforces (Table 2). Intermediate level Pathology workforce eligible to work dependently and for some investigation independently as per guideline NHPC and NPHL was 34% where as 66% of laboratory had no such workforces (Table 3). Specialist level (MD/M. Sc) workforce in clinical biochemistry as per guideline of NMC, NHPC and NPHL was 4% where as 96% of the pathology services lacked such workforces (Table 4). Specialist level (MD/M. Sc) workforce in histocytopathology as per guideline of NMC, NHPC and NPHL was 11% where as 89% of the pathology services lacked such workforces. Specialist level (MD/M. Sc) workforce in cytopathology and hematology as per guideline of NMC, NHPC and NPHL was 1% where as 99% of the pathology services lacked such workforces.

Table 1. Type of workforces heading private pathology services in Kathmandu district, Nepal, 2009.

Head of the laboratory	Frequency	Percent
Lab Assistant (Pathology Assistant)	153	41 %
Lab technician(Pathology Officer Assistant)	79	21%
Medical lab Officer (Pathology Officer)	90	24 %
Non Pathology Professionals	21	06 %
Histocytopathologist	30	08 %
Total	373	100 %

Table 2. Officer level Pathology workforce eligible to work independently as per guideline NHPC and NPHL in Kathmandu district, Nepal, 2009.

Pathology Officer (PO)	Frequency	Percent
Available in private pathology	113	30 %
Not available in private pathology	260	70 %
Total	373	100 %

Table 3. Intermediate level Pathology workforce eligible to work dependently and for some investigation independently as per guideline NHPC and NPHL in Kathmandu district, Nepal, 2009.

Pathology officer Assistant (POA)	Frequency	Percent
Available in private pathology	127	34%
Not available in private pathology	246	66 %
Total	373	100 %

Table 4. Specialist level (MD/M. Sc) workforce in clinical biochemistry as per guideline of NMC, NHPC and NPHL in Kathmandu district, Nepal, 2009.

Clinical Biochemist (Biochemical Pathologist)	Frequency	Percent
Available in private pathology	12	4%
Not available in private pathology	361	96%
Total	373	100 %

Table 5. Specialist level (MD/M. Sc) workforce in laboratory as per guideline of NMC, NHPC and NPHL in Kathmandu district, Nepal, 2009.

Specialist level (MD/M. Sc) workforce in laboratory	Frequency	Percent
Clinical Microbiologist (Microbial Pathologist)	10	3%
Pathologist (Histocytopathologist)	43	11%
Clinical Cytologist (Cytopathologist)	4	1%
Hematopathologist (Haematologist)	3	1%
Total Specialist	60	16%
Total	373	100%

DISCUSSION

NPHL is the governmental body to regulate and control regarding the pathology services and the workforces management. All private and governmental laboratories require significant strengthening with respect to quality assurance, human resource recruitment and competency and development of service range and physical infrastructure. NPHL is providing laboratory services in the peripheral level by helping to establish laboratories at these places. The other government authorities are NHPC for pathology workforces from general pathology laboratory background and NMC for the workforces in pathology from MBBS background.⁶

The result showed many example of crossing the limitations and ethical barrier in performing pathological investigations which did not abide by the rules and regulations made by respective councils of Nepal by pathology workforces. The national guideline regarding the human resources in pathology services should be made to solve the problem related to pathology workforces in Nepal. The code of conduct should be regulated to stop the malpractice situation in pathology services. These malpractices should be controlled by rules and regulations of code of ethics issued by NHPC, NPHL and NMC.

Specialist level (MD/M.Sc) workforce in histocytopathology as per guideline of NMC, NHPC and NPHL was 11%

where as 89% of the pathology services lacked such workforces. Specialist level (MD/M. Sc) workforce in cytopathology and hematology as per guideline of NMC, NHPC and NPHL was 1% where as 99% of the pathology services lacked such workforces. The complete set of pathology workforces as specialist services comprising of histocytopathologist, microbial pathologist, biochemical pathologist and haematopathologist were lacking in the private pathology services.

The study showed the lack of workforces in general pathology, microbiology, biochemistry and other branches of laboratory medicine. National Academy of Medical Sciences (NAMS) Bir Hospital has started MD in pathology to cope with the shortage of workforces in pathology services as recommended by NPHL. This action of producing MD pathologist would not be sufficient to solve the problem of specialists in pathology services, M. Sc/MD should be started immediately in biochemistry, microbiology and other branches of laboratory medicine. At the same time Graduate and intermediate level of pathology workforces should be produces to solve the shortage of workforces in pathology. The concerned authorities like NAMS and NPHL should take initiative to produce graduate and specialist level of pathology workforces.

The laboratory medicine professionals should be given proper naming according to their work responsibility and the different level workforces should be provided with professional limitations in performing the investigation. The malpractices present within the professionals and other non medical professional should be stopped at the earliest to give quality services in this profession⁷. The work of clinical microbiology and clinical biochemistry should not be performed by general microbiologist or biochemist and also there is some vested individual interest to introduce general microbiology and biochemistry people in laboratory medicine which will cause deteriorating effect on health care of public.

CONCLUSIONS

The results of the study showed deficit marker in the quantity and quality of different level of workforces in general and specialist pathology workforces and also the condition of the most of the private laboratories did not correlate with complete set of pathology workforces in general and specialist level. Approximately half of the laboratory was headed by unauthorized laboratory professionals according to the guideline of NHPC and NPHL. Specialist level (MD/M. Sc) workforce in histocytopathology as per guideline of NMC, NHPC and NPHL was on the increase in comparison to other branches of laboratory medicine. There is massive

unauthorized intervention of general microbiology people in laboratory medicine leading to poor quality services in health care. The specialist in microbiology and biochemistry was less than histopathologists and was underutilized in advanced pathology services provided by well established private hospitals due to dominance of histopathologist as specialists in all branches of pathology and lack of recognition of medical biochemists and microbiologists.

The ethics and limitations of the different level of workforces have been seriously violated by general and specialist level of workforce. The guideline issued by Nepal Health Professional Council (NHPC), Nepal Public Health Laboratory (NPHL) and Nepal Medical Council (NMC) was not regulated strictly regarding performing of the investigations by concerned workforces and the malpractices should be stopped for better pathology services.

The guideline issued by NHPC, NPHL and NMC should be regulated strictly regarding performing of the investigation by concerned workforces and the malpractices should be stopped for better pathology services. The concerning authorities should take initiative to improve the existing condition of pathology workforces in Nepal.

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