

## Practice of “Defensive Medicine” Among Doctors at a Tertiary Care Hospital

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### ABSTRACT

**Introduction:** Defensive medicine is the short term coined for a defensive medical decision making. It means advising diagnostic tests, prescribing more drugs than required or avoids treating and operating high risk patients. These may not be the best options for the patient but the practice among doctors is currently adopted to avoid litigation. A situation aggravated by the promulgation of tough consumer laws and other criminal laws applicable to health care providers. This study was conducted to assess the frequency of defensive medicine practice among doctors at the teaching medical college hospital of NGMC. **Methods:** A cross sectional study was conducted at Nepalgunj Medical College, Teaching Hospital, Kohalpur, a tertiary care center in between January to December 2018. A questionnaire was developed to assess the various aspects of defensive medicine practice. In this study, a total of 75 doctors participated. **Results:** Practice of defensive medicine was common in age between 30-40 years. Fear of caring high risk patients (76%), ordering un-necessary tests (56%) followed by avoiding high risk procedures (46%) were common forms of defensive medicine practices observed in sampled doctors. Senior faculties were found practicing more defensive medicine than juniors (69.4% versus 30.6%) and more in surgical field as compared to non-surgical 61% vs. 39%. **Conclusion:** Defensive medical practice in various ways is common among the doctors. This has produced a positive impact in the form of greater communications with the patients and awareness to have a good medical record keeping. However, the negative impacts on the doctors have been more in the form of prescribing more investigations, drugs, more referral and reluctance to accept high risk patients if there is choice.

**Keywords:** *Defensive medicine practice, Indemnity, Law suits, Legal demands, Litigation*

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### INTRODUCTION

The term defensive medicine actually means, a defensive decision making while prescribing drugs, asking more investigations, the hesitancy to accept high risk patients and making un-necessary referrals, which could have been avoided. Defensive medicine is a deviation from sound medical practice that is induced primarily by a threat of liability<sup>1</sup>. The practice of defensive medicine was reported globally to avoid lawsuits against medical practitioners<sup>2,3</sup>. Defensive medicine reduces the tendency of doctors to accept high-risk patients. Defensive medical practices can be either positive or negative. Positive defensive medicine includes unnecessary prescriptions, unnecessary referral of patients to specialists, asking patients for more details. Negative defensive medicine includes avoiding prescribing risky procedures for curing patients and avoiding accepting high-risk patients<sup>4,5,6</sup>. Lawsuits against negligence and violent reactions by patients and their relatives are increasing day by day. Defensive medicine is also expensive, has no basis in evidence-based studies, and sometimes exposes patients to complications due to unnecessary tests, medications and procedures. Studies regarding practice of

defensive medicine are lacking. The main aim of this study was to assess the frequency of different modalities practice of defensive medicine among medical doctors in this hospital.

### METHODS

A descriptive cross sectional study was conducted at Nepalgunj Medical College, teaching hospital, a tertiary care center in year 2018 January to December. Ethical approval was taken from Institutional Review Board (IRB). A structured questionnaire was developed, consisting of various aspects of defensive medicine like awareness towards defensive medicine, positive and negative impact of the defensive medicine on doctors, the practice of defensive medicine in relation to age, gender, grade, years of experience and specialty was noted. Medical practitioners from clinical disciplines were chosen for study and full confidentiality was maintained of each respondents. Resident doctors were graded as juniors and lecturers and above ranks (Assistant and Associate Professor) were graded as seniors. Data collected in structured proforma were entered in Microsoft Excel 2007 and statistical analysis was done with SPSS 20 software.

## RESULTS

The study comprised of a total of 75 participants. Characteristics of the participants were shown in Table I. Majority of the respondents were in age group of 30-40 years (61%) with male predominance 54(72%). Among different specialty, majority of participants were from department of medicine 15(20%) and surgery 15(20%) According to grade of participants lecturer accounts the most 35(47%). Majority of participants were having less than 5 year experience 38(50%).

### 1. Characteristics of participants (n=75)

Characteristics	Number	Percentage (%)
AGE (YEARS)		
20-30	10	13.00%
30-40	46	61.00%
40-50	19	26.00%
GENDER		
Female	21	28.00%
Male	54	72.00%
SPECIALTY		
Dermatology	3	4.00%
ENT	11	15.00%
Medicine	15	20.00%
Neurosurgery	2	3.00%
Obs and Gyane	10	13.00%
Orthopedic	7	9.00%
Pediatric	7	9.00%
Plastic surgery	1	1.00%
Psychiatric	2	3.00%
Surgery	15	20.00%
Uro-surgery	2	3.00%
GRADES		
Assistant Professor	8	11.00%
Associate Professor	10	13.00%
Lecturer	35	47.00%
Resident	22	29.00%
WORKING EXPERIENCE		
11-15 years	8	11.00%
15-20 years	5	7.00%
5-10 years	24	32.00%
Less than 5 years	38	50.00%

Table I

Awareness of defensive medicine was reported by 42(56%) but majority believe the need of practicing defensive medicine 62(83.70%). None of the participants had indemnity cover and 13(18%) had experienced litigation. Majority 69(92%) believed in working in blame free culture and felt that working environment was influence by legal demands 72(96%) [Table II]

### 2. Awareness of defensive medicine and related experience (n=75)

Awareness and experience	Number	Percentage (%)
Are you have aware that you are practicing defensive medicine?	42	56.00%
Is it your compulsion practicing defensive medicine?	62	83.70%
Do you think legal claims against doctors are increasing	74	98.00%
Do you have an indemnity covers?	0	0.00%
Do you have experience of litigation (i.e. been sued in past)?	13	18.00%
Do you believe in working in blame free culture?	69	92.00%
Do your works have been influenced by legal demands?	72	96.00%

Table II

### 3. Different shades of defensive medicine practiced by the respondents.

Positive impact of defensive medicine was majority believed in maintaining patient's records 74(98%), others form of positive defensive medicine among sampled doctors was found to be better counseling to patients and relatives 70(93%) and majority 72(96%) feel need of insurance cover.

Positive Impacts of Defensive Medicine	Number	Percentage (%)
Have you started keeping a better patient's records	74	98
Are you doing better counseling to the patient and relatives?	70	93
Would you like to be covered by insurance?	72	96

Table III

Among different forms of negative defensive medicine, refusing high risk patients was most common 57(76%) then followed by prescribing additional diagnostic tests 42(56%), avoiding risky procedures 35(46%).

Negative Impacts of Defensive Medicine	Number	Percentage (%)
Refuse accepting high risk patients if you have a choice	57	76.00%
Avoiding high risk procedures/Interventions	35	46.00%
Avoid operating high risk patients if you have a choice to cover yourself	20	26.00%
Prescribing additional diagnostic tests which could have been avoided	42	56.00%
Are you referring more to other speciality consultation	29	38.00%
Prescribe more medicines out of fear	8	10.00%
Are you prepare to observe the patient for a trial of labour or you quickly resort to caesarian (Applicable for obstetrician and gynecologist only)	Reluctant response	

Practice of defensive medicine was found more common in the age groups of 30-40 years 39(63%). As compared to residents, Lecturers and above were found practicing more defensive medicine (69.4% versus 30.6%). Practice of defensive medicine was found more in different surgical specialty as compared to non-surgical one 61% vs. 39%. No significant relations observed with years of work experience and practicing defensive medicine. [Table IV].

#### 4. The practice of defensive medicine among the sampled doctors

Variables	Defensive medicine N=62 (%)	Non-defensive medicine N=13 (%)	P-Value
<b>Age group (Years)</b>			
20-30	9(14.5)	1(7.8)	
30-40	39(63)	7(53.8)	0.498*
≥40	14(22.5)	5(38.4)	
<b>Gender</b>			
Male	48(78.0)	6(22.2)	
Female	14(22.0)	7(77.8)	1.000*
<b>Grades</b>			
Residents	19(30.6)	3(23.1)	
Lecturer & above	43(69.4)	10(76.9)	1.000*
<b>Specialty</b>			
Surgical <sup>#</sup>	38(61.0)	10(77.8)	
Non-surgical <sup>##</sup>	24(39.0)	3(22.2)	0.459*
<b>Working Experience</b>			
< 5 Years	32(51.7)	6(46.1)	
≥ 5 Years	30(48.3)	5(53.9)	0.253*
<sup>#</sup> Surgical: General Surgery, Uro-surgery, Plastic surgery, Neuro-surgery, Orthopedics and ENT			
<sup>##</sup> Non-Surgical: Medicine, Psychiatric, Pediatrics, and Dermatology			

Table IV

## DISCUSSION

It is reported that practice of defensive medicine is increasing day by day. In our study, awareness of defensive medicine was found only in 42 respondents (56%), none had indemnity cover but majority 74 (98%) believed that legal claims against doctors are increasing. As compare to our study, majority of doctors in western world were aware of defensive medicine and also had indemnity covers, lawsuits against doctors was also reported higher in their studies<sup>7,8</sup>. In our study among sampled doctors 57(76%) practice defensive medicine in the form of avoiding care of risk patients and 35(46%) avoiding performing high risk procedure. Similar observation was also reported by Hiyama et al and Summerton et al<sup>9,10</sup>. Ordering additional diagnostic tests to avoid complaints and litigation was noted nearly half of the respondents 42(56%), similar figure was found in other studies too<sup>11,12</sup>. This kind of medical practice harm the patients in the form of financial burden. Our study revealed defensive medicine practice was more common in surgical specialty as compare to non-surgical (61%vs39%). Studdert et al also reported similar result<sup>13</sup>. The reason may be that surgical outcome not solely depend upon surgery but other factors like pre medical condition, co-morbidity, anesthesia, post-operative complications also contribute to final outcome. Rate of cesarean section was increasing among different hospitals, however no body responded to questionnaire from Obstetrics and Gynecology department in our study. Asher et al, in his study also reported cesarean section was high even in the absence of clear medical indication<sup>14</sup>. In our study no significant relation was found regarding age of respondents and defensive medicine practice. Respondents in age groups of 30-40 years were found to be practicing more defensive medicine. Regarding work experience, practice of defensive medicine was found more common on those having work experience less than 5 years (51.7% vs 48.3%). This suggest that only age is not a best indicator of competency<sup>7</sup>. Regarding grading of sampled doctors, Junior grade (Residents) were found practicing less defensive medicine than seniors (Lecturers and above). Marin et al also reported similar result<sup>15</sup>. The reason may be that residents doctors are working under supervision to their senior faculties in different respective field, even if incase of any adverse outcome, major responsibilities comes under seniors to tackle all the medico legal issues.

**LIMITATION:** The main limitation of our study is small sample size. This is a single center study needs multicenter studies for better generalization of results. Another limitation may be self reported questionnaires and exaggeration of participants in responding to questions related to positive defensive medicine.

**CONCLUSION:** Practice of defensive medicine was found in sampled doctors. Fear of caring high risk patients, avoiding high risk procedure and prescribing additional diagnostic tests are common form of defensive medicine practiced by doctors. Consumer protection and other very stringent laws imposed on doctors might have great influence on practice of defensive medicine. Defensive medicine is costly, it should be

minimized, more emphasis should be on proper counseling regarding disease stage, it’s prognosis and patient education, which will definitely reduce the burden of defensive medicine and also help in building trust in between patients and doctor relationship.

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