Research Article

Do Nurses Value Medical History More Than Physicians?

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1.Introduction

In a 2013 study from Johns Hopkins Hospital doctors, reported in the Wall Street Journal, 190 primary care physicians missed 68 diagnoses on their general medicine patients (35.7%) [1]. According to other groups of physicians from Johns Hopkins Hospital, chronic pain patients are misdiagnosed as having sprains, strains and whiplash 40%-80% of the time, when they have some other cause for their pain [2, 3]. Both errors of commission (assigning an erroneous diagnosis to a patient) and errors of omission (neglecting to consider the correct diagnosis) were made. Specific disorders have a misdiagnosis rate ranging from 71% to 97%. As one example, when patients "diagnosed" with Reflex Sympathetic Dystrophy (RSD) or Complex Regional Pain Syndrome (CRPS), had a more careful assessment, verified with specific diagnostic tests, the Johns Hopkins Hospital doctors found that 71%-80% of these patients actually had nerve entrapment [4, 5]. Patients who survived electric shock and lightning strike had diagnostic errors of omission and commission 92% of the time [6]. Patients mistakenly called fibromyalgia did not meet the diagnostic criteria 97% of the time [7].

According to the Wall Street Journal article, the leading cause of errors were ordering the wrong tests (57%), and history taking (56%) [1]. This research will focus on just history taking issues. There have been several studies looking at history taking techniques of physicians. In one study, after a physician entered the room, patients were able to speak, uninterrupted, an average of 12 seconds, before being interrupted by the physician. The time with patients averaged 11 minutes, with the patient speaking for about 4 minutes of the 11 minutes [8]. Interruptions were due to computer use during the office visit, beepers. verbal interruptions, phone calls, and a knock on the door. Another study confirmed the truncated time physicians spend with patients. The average face-to-face patient care time measured by direct observation in this recent study was 10.7 minutes [9].

These problems led to the creation of a computer-based patient history taking method, called the Pain Diagnostic Test, developed by Johns Hopkins Hospital doctors. This questionnaire has 72 questions with 2008 multiple choice answers, which are answered by a patient, not by a doctor trying to type what the patient is telling the doctor. The test never interrupts the patient, obtains an accurate history of complaints, including the exact location of pain, the quality of the pain (hot, cold, burning, achy, pins and needles, etc., not the severity), what makes pain better or worse, and takes the patient 40 to 60 minutes to complete. The answers are scored by Bayesian analytic techniques, not Boolean logic, and give diagnoses with a 96% correlation with diagnoses of Johns Hopkins Hospital doctors [10]. The test predicts intra-operative findings with 100% accuracy [11].

There are several advantages to using a patient completed questionnaire. The questionnaire never forgets to ask pertinent medical questions, which could be forgotten due to interruptions in the history taking process. There are no transposition errors, where a patient may tell the doctor that pain is in the left foot, and the doctor erroneously records the pain is in the right foot. The best part of using the Pain Diagnostic Test is the time it saves a physician. A patient can test the B2C questionnaire at home or the B2B questionnaire in the office before they see the physician, and results are available before the patient sees the doctor. The results provide a narrative summary, diagnosis and differential diagnosis for the B2C version. The B2B version has all of the proceeding, as well as recommendations for testing using a testing protocol used at Johns Hopkins Hospital included. The results can be copied, pasted into the chart, and used as part of the electronic medical record, so the doctor never types anything, except a physical examination, and saves time doing evaluations. These tests are available from www.DiagnoseMyPains.com, and www.AILabsPS. and www.PainValidityTest.com. com to list a few of the websites offering them.

Despite these advantages, there has been a reluctance on the part of physicians to adapt this program. In an effort to determine the source of this reluctance, the author wanted to assess physician attitudes towards the value of a careful history compared to nurses. He conducted a survey from various medical groups on Linkedin. The results are reported in this article.

2. Methodology

A questionnaire was posted on the membership pages of 21 medical groups which have their own Linkedin page. The total membership of all of these groups was 392,618.

The question was "How long do you spend doing an initial evaluation?" and had three choices for answers: a) Less than 15 minutes, b) 15-30 minutes, and c) more than 30 minutes. The questionnaire was available to the membership of each group for a two week period of time, to allow as many members as possible access to it. At the end of two weeks, the number of members of each group who responded, and which of the three answers they chose were recorded.

3. Results

From the 392,618 members exposed to the questionnaire, only 638 members responded. The most responsive groups, in terms of number of responses, were RN Case Managers, RN Network-Nursing Community, Case Management Society, and The Physician Assistant and Nurse Practitioner Network. The groups with more than 20 responders, which reported spending 30 minutes or more during an initial evaluation, with the highest frequency, were the RN Case Managers (58%), Case Management Society of America (54%), Chiropractic Professionals, (46%), and Physician Assistant and Nurse Practitioner Network (46%). The only physician group with any significant response rate was the Practice of Regional Anesthesia, which had 73 responses and reported that only 8% of the responders spent more than 30 minutes with a patient for the initial evaluation. The rest of the physician groups, as shown in the table after References (Table 1), either had no response, or had response rates so low that no significance could be attached to their response.

	Group	# of Members	# of Responders	< 15 min.	15-30 min.	> 30 min.	# <15	#15-30	#>30
1	RN Case Managers	27,097	249	10%	32%	58%	24.9	79.68	144.4
2	Case Management Society of America	26,094	101	12%	34%	54%	12.1	34.34	54.54
3	Chiropractic Professionals	25,870	46	15%	39%	46%	6.9	17.94	21.16
4	Physician Assistant and Nurse Practitioner Network	34,164	93	9%	45%	46%	8.37	41.85	42.78
5	RN Network - Nursing Community	115,517	47	17%	45%	38%	7.99	21.15	17.86
6	Legal Nurse Consultant and Attorney Network	17,469	3	0%	0%	100%	0	0	3
7	Personal Injury Legal Network	16,607	13	15%	31%	54%	1.95	4.03	7.02
8	Medical-Legal Professionals	10,001	0	0	0	0	0	0	0
9	Practice of Regional Anesth	14,136	73	55%	37%	8%	40.2	27.01	5.84
10	The Spine Group	18,574	0	0	0	0	0	0	0
11	Telemedicine & E-Health	15,134	1	100%	0	0	1	0	0
12	American Telemedicine = Association Group	15,416	4	50%	50%	0	2	2	0
13	Anesthesia Technician	5,239	2	0	100%	0	0	2	0
14	American Academy of Pain Medicine	3,222	1	0	100%	0	0	1	0
15	Anesthesiology and Pain Medicine	9,157	3	0	33%	67%	0	0.99	2.01

#	Name								
16	American Pain Society	5,451	0	0	0	0	0	0	0
17	Orthopedic Network	14,523	1	0	0	100%	0	0	1
18	Neurosurgeon / Neurological Surgeon	2,193	0	0	0	0	0	0	0
19	Marketing and Networking for Chiropractors	7,504	1	100%	0	0	1	0	0
20	Chiropractor Network USA	2,720	0	0	0	0	0	0	0
21	Find a Chiropractor	6,530	0	0	0	0	0	0	0
	Total	392,618	638				106	232	299.6

4. Discussion

The low response rate from physicians suggests issues of medical history are not a concern nor are they of interest. However, of the groups which did respond, the most responsive ones were the nursing groups, physician assistants and chiropractors. It is difficult to explain why the response rate from physician groups was non-existent. Is it possible that the physicians felt a questionnaire about the time spent on medical history taking was of no value nor interest? Another observation was that the groups with the highest response rate, the nursing groups, also spent the most time doing an initial evaluation, with the exception of regional anesthesiologists. Is it possible that not only is there a correlation between truncated history taking, and misdiagnosis (1), but a cause-effect relationship? This requires further study.

Physicians from Karolinska Institutet have stated "Patients' medical histories are the salient dataset for diagnosis. Prior work shows consistently, however, that medical history-taking by physicians generally is incomplete and not accurate. Such findings suggest that methods to improve the completeness and accuracy of medical history data could have clinical value." [12]. However, the data of this research suggests that this attitude is not shared by the physician groups on Linkedin.

Clearly, the survey reported in this article has failings. Perhaps the methodology of using LinkedIn to disseminate a questionnaire was flawed, as opposed to a direct email or phone call to an office. However, the use of Linkedin allowed access to a larger number of potential responders at a lower cost of research. This should be considered a preliminary study, which will lead to larger studies.

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