MEDICAL CHANNEL

Original Article

TO OBSERVE VITAL SIGNS TAKING PRACTICE BY CLINICIANS IN OUTPATIENT DEPARTMENT OF CIVIL HOSPITAL KARACHI

** Muhammad Saad ** Noor Muhammad Soomro *** Shumaila Muhammad Iqbal **** Atiqa Muhammad Ashraf*

* M.B.B.S, Dow Medical College, Karachi. ** M.B.B.S, M.D., Consultant Oncologist, Civil Hospital Karachi, *** M.B.B.S, Dow Medical College, **** B.D.S., Dr Ishrat ul Ibad Khan Oral Health and Science Karachi

Received on: 13-012-2015
Accepted on: 04-04-2016

***Correspondence Author:*:**
SHUMAILA MUHAMMAD IQBAL
Address: B-203, Al-Habib-Pride, Civil Lines, Karachi, Pakistan
s.m.iqbal91@hotmail.com
Mobile : +923432952244

ABSTRACT:

Background: Vital signs, which include temperature, pulse, respiratory rate and blood pressure, are very important and primary indicators of chronic illnesses and their severity. Ignorance of noting vital signs in clinics can lead to serious manifestations for the patients. **Method:** This was a cross sectional survey conducted at Out Patient Departments of Civil Hospital Karachi from 1st September 2013 till 30th October 2013. The study participants (subjects) were patients and doctors from Medical Outpatient Departments (OPDs) of Civil Hospital Karachi. On the basis of inclusion exclusion criteria, patients were asked for the oral consent for participation. Further were asked about their satisfaction with the treatment given them and whether their vital signs were checked in the beginning of the visit or not. Those whose vital signs were unchecked, were recruited for the second phase of the study which comprises of measuring blood pressure of subjects using aneroid/digital sphygmomanometer; temperature (orally) using mercury thermometer; and pulse measurement with digits. In third phase their respective doctors was asked about the reasons for not measuring patient's vitals. **Result:** Among the 315 patients, 30.6% patients were not satisfied by the treatment given while only 9.2% of the subjects reported that their vitals were checked during their visit with their clinicians. During second phase of study upon rechecking of patients' vital signs, 88% were afebrile, pulse was normal in 90.4% patients, diastolic blood pressure was normal in 71.9% of patient , the systolic blood pressure was normal in 82% and respiratory rate was found to be normal in 78% patients Reasons for not checking vital signs during the visit were recorded as huge burden of patients' admission to OPDs (66.3%), variability of symptoms among the patients (21.3%), logistic problem (5.1%) and others (7.30%) by the clinicians. **Conclusion:** Most of the time vital signs of the patients attending medical Out Patient Department of Civil Hospital Karachi remain unchecked by their clinicians and patients remain unsatisfied with the treatment given them.

Key Words: Vital Signs, Medical OPDS, Civil Hospital Karachi.

Med Channel 2016 : 22 (2) 64-69

INTRODUCTION

Vital signs, which include temperature, pulse, respiratory rate and blood pressure, are very important and primary indicators of presence of illnesses and their severity.[1] Patient satisfaction is of prime interest[2] and assessing these vital signs in Out Patient Department (OPD) is an essential and integral component of services provided in Out Patient Department (OPDs) to the patients. Blood pressure has prime importance in vital signs because of high burden of hypertension. Its complications cause millions deaths worldwide every year due to heart disease[3] and deaths due to stroke. In Pakistan one in three individuals over the age of 45 years is hypertensive as revealed by the National Health Survey (NHS)[4]. A further analysis of NHS revealed 17% prevalence of risk factors for cardiovascular diseases in Pakistani population.[5] Awareness regarding symptoms, complications and treatment of hypertension is very poor in Pakistan[6]. Ignoring vital signs in OPDs can lead to serious manifestations. As hypertension is known as the silent killer because it has no specific symptoms and signs, it can be picked up only when blood pressure is checked regularly. For this purpose access to health services and self-monitoring are the two choices. If hypertension is detected early it is possible to minimize the risk of heart attacks, heart failures, strokes and kidney failures. Same above indications are with pulse, body temperature and respiratory rate measurement. Collectively an initial assessment can only be made by assessing vitals and its ignorance can turned out into some major complications. Thus keeping above aspects and consequences of ignorance of vital signs practice by clinicians during outpatient clinics, in mind, the main purpose of the underlying study is to assess vital signs taking practice by clinicians and patient's level of satisfaction with the treatment given in Medical Out Patient Departments at Civil Hospital Karachi.

Rationale:

Keeping above aspects in mind it is naturally alarming to draw attention to this serious and neglected matter. To prevent the complications and to reduce burden of communicable and non-communicable diseases is the prime interest of health care system and to do so vitals must be taken on every visit to Out Patient Department (OPD). Therefore we intend to do an observational study to observe the practice of taking vital signs by clinicians in OPDS at Civil Hospital Karachi (CHK).

Objective:

To assess vital signs taking practice by clinicians and patient's level of satisfaction with the treatment given in Medical Out Patient Department at Civil Hospital Karachi

MATERIAL AND METHODS

Study Design And Place Of Study: The study was a cross sectional survey conducted in Medical Outpatient Department of Civil Hospital Karachi from 1st September 2013 till 30th October 2013.

Sample Size: Putting prevalence of hypertension (p) as 27.6 %[7], Confidence Level 95%, Margin of Error (d) 5% and $Z_{d/2}$ 1.96 in One Sample Proportion Sample Size Calculation Formula $n= (Z_{d/2})^2 pq$, Sample Size (n) was calculated as minimum of 307 (min). d^2

Sample Technique: Technique used was non probability purposive sampling. For this purpose medical OPDs were visited each day of week for two months.

Data Collecting Tool:

Data collecting tool was interview based questionnaire comprising 7 items in totality. 7 items of the questionnaire are explained below:

- First item inquires about demographic data of the patients.
- Second was about patients' satisfaction with the treatment given to them.
- Third item of the questionnaire was to assess the reasons for their dissatisfaction.
- Fourth item was about whether patients' vital signs were checked or not in their fore done visit.
- Fifth item was filled with the observations of reassessed vital signs.
- Sixth one was about clinicians demographic profile
- The seventh one was inquiring reasons of not including vital sign taking practice in the initial assessment by clinicians.

Inclusion Criterias:

- Patients attending medical Outpatient Departments of Civil Hospital Karachi.
- Patients present in Outpatient Departments on previously decided days of data collection.
- No gender discrimination was made
- Adult patients were approached (>18 years)

Exclusion Criterias:

- Previously diagnosed hypertensive individual.
- Pediatric age group.
- Individuals unwilling to participate in this study.

Sample Collection:

Ethical approval for the study was taken prior, from Institutional Review Board of Dow University of Health Sciences Karachi. The study was based on three phases approach. To begin with, oral consent was taken from doctors and patients volunteering to participate. In phase I the patients were inquired whether they were satisfied with the treatment given and whether they were checked for their vitals or not in their visit with clinicians on the same day. Those, whose vitals were not checked in the fore done visit, were recruited for the second phase of the study. The second phase comprised of measuring blood pressure of the subjects using aneroid/ digital sphygmomanometer; temperature using mercury thermometer orally; and pulse measurement manually. In third phase their respective doctors was asked about the reasons for not measuring patient's vitals. After collection, the data was entered and analyzed using SPSS (version 16.0). Confidentiality of subjects' information was maintained at every stage.

RESULTS

For the given survey based research, 315 patients from OPDs of Civil Hospital Karachi were approached. Among 315 included patients, 49% were males and 51% were females. The study findings revealed that 30.6% patients were not satisfied with the treatment given to them by their clinicians. Several reasons came into vision regarding reason of their dissatisfaction among which lack of explanation of disease and its nature by clinicians leads rest (47.1% patients were dissatisfied due to this). The other reasons for their dissatisfaction and their frequencies are shown by graph 1.

90.8% patients denied having any procedure of initial assessment of their vital signs before their visit with clinicians.

In the second phase of study, those patients whose vital signs were not checked were assessed for their vital signs after their visit with their clinician. Surprisingly 12.9% among them were with higher systolic B.P (>90 mm of Hg), 24.9% were with higher diastolic B.P (>140 mm of Hg), 7.9% had their pulse >100, 12% were with temperature >99 degree Fahrenheit and 12% of them had their respiratory rate >16. Further result is shown in table 1.

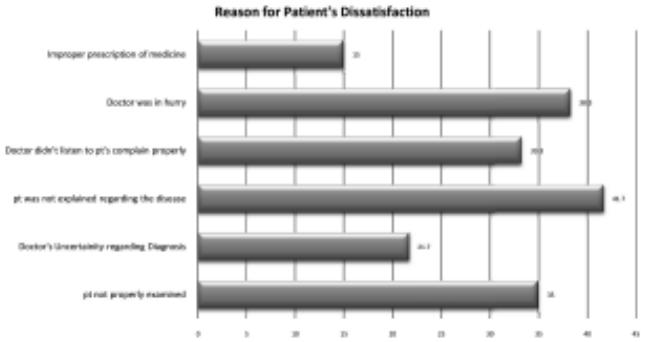
Doctors included in the study were 56.1% house officers, 39.3% Postgraduates or Resident Medical Officers, and 3.9% other faculty members. When reasons were asked for not observing vital signs in the initial assessment which they made, 66.3% said, due to higher patient load they usually omit taking vital signs during clinic visit. 21% confessed that due to variability of symptoms among their patients they usually omit taking vital signs. Rest of the responses by them in this regard are shown in graph 2.

TABLE 1:

	No of Patients (%)		
	Normal	**Less than lower Limit**	**Greater than upper limit**
Systolic Blood Pressure	82	5.1	12.9
Diastolic Blood Pressure	71.9	3.9	24.2
Pulse	90.4	1.7	7.9
Temperature	88	0	12
Respiratory rate	78	10	12

Normal range for pulse in adults: 60-100 beats per minute
Normal range for systolic blood pressure in adults: 120-139 mm of Hg
Normal range for diastolic blood pressure in adults: 80-89 mm of Hg
Normal range for temperature in adults: 97.8-99 degree Fahrenheit
Normal range for respiratory rate in adults: 12-16 breaths per minute

GRAPH 1:



GRAPH 2:



DISCUSSION

Recording of vital signs in medical practice is an essential pre requisite to medical examination. However; it has remained a dominantly neglected practice especially in our settings. Although each modality that comes under the heading of vital signs is important, however blood pressure is something which should never be neglected under any circumstances because its negligence comes with a high price[8,9].In our clinical practice vital signs are not being checked regularly. A large proportion of patient's majority being females have high blood pressure i.e. systolic blood pressure ?120mmHg and diastolic blood pressure ?80mmHg when checked by the volunteers at Civil Hospital Karachi.

Prevalence of hypertension is increasing and developing countries are being affected more than the developed ones[10]. Hypertension has been designated as silent killer because of the very reason that there are no obvious signs of it and thus in a country like Pakistan where every one in three individual over the age of 45 years is hypertensive [11]and where awareness and access to resources is very poor, noting down of vitals by the physicians at each visit is the only applicable means of stopping the high rise in the incidence of hypertension and also of stopping the development of vast serious complications associated with it like stroke and heart disease which significantly hamper quality of life. We can easily decrease the burden of hypertension by preventive measures, careful monitoring and by spreading awareness.

Among various contributors to the development and progression of the disease the most important and avoidable factors are negligence, lack of awareness and missed cases. If all those patients who are visiting clinicians undergo regular blood pressure checkup at each visit then not only this phenomenon can be diagnosed at an appropriate time but also its progression from prehypertensive to hypertensive stage can be halted and dire consequences and complications associated with uncontrolled hypertension can easily be prevented to a significant extent[12].

In our settings the two applicable methods of blood pressure monitoring are either home monitoring or visit to health service. Since majority of our population is uneducated and belong to lower socioeconomic class access to and use of related apparatus does not seem very possible. The only leftover option for such patient is their visit to and subsequent monitoring of blood pressure at health services but sadly this modality is being neglected there as well which has led to a significant rise in incidence of hypertension as well as related complication.

Heart rate monitoring is an another significant vital which cannot be afforded to be neglected by the clinicians as it is the single most sign that can give an important clue for the underlying illness[13]which was unfortunately abnormal in 10% of patients included in second phase of the conducted study.

Decompensated respiratory and cardiovascular can be very easily picked up by looking at respiratory rate, thus mortality rate can be dropped down significantly with this[14]

There are a number of reasons that contribute to the negligence of vital sign taking practice in Civil Hospital Karachi. It is partly because of patient overload and majorly due to negligence by health care practitioners. Patient overload is a problem in every society and every country; it cannot be blamed much. However negligence by doctors should be reviewed

and a health care practitioner should ensure recording of vitals to monitor the progress of disease and avoid development of complications and also the good counseling of patient so that the patient returns regularly for follow up. Patient satisfaction is also very important because if patient is satisfied with the services he will follow the given instructions and will return for follow up regularly this significant contribution of a physician can bring a drastic change and deceleration in the number of cases being reported and also development of complications[15].

.

CONCLUSION

The negligence by doctors should be reviewed and a health care practitioner should ensure recording of vitals to monitor the progress of disease and avoid development of complications and also the good counseling of patient so that the patient returns regularly for follow up. We would like to suggest that vital signs must be taken at Out Patient Department (OPD) regularly because it is very helpful in decreasing the burden of disease and preventing development of complications and improving quality of life of patients and not only this it will also decrease patient burden at hospitals.

LIMITATIONS

Study is limited in its approach as data from only Medical Outpatient Departments were gathered and thus the study is not indicative of vital sign taking practice is in entire Civil Hospital Karachi. Patients were believed for their verbal statements before recruiting them for the second phase of the study.

ACKNOWLEDGMENT

For granting us permission to conduct survey based study, we, authors, would like to pay regards to the honorary Research Department of Dow University of Health Sciences. Very special thanks to Dr. Anil Kumar of Civil Hospital Karachi for helping us with the preparation of data collecting tool. Moreover, paying high regards to Mr. Arif Ali was giving us his precious time. With his kind guidance for data entering and analyzing the project could not be completed. Last but not the least we would like to pay thanks to all those patients who participated as “subjects” for our research and gave us their precious time,

RECOMMENDATIONS:

- It is recommended that Vitals should be checked of each person visiting OPD.
- We need to spread awareness about importance of vitals.
- Train common people about taking vitals.

REFERENCES

1. Evans D, Hodgkinson B, Berry J. Vital signs in hospital patients: a systematic review. *IJNS.* 2001; 38(6):643-50.
2. Orth-Gomer K, Britton M, Rehnqvist N. Quality of care in an outpatient department: the patient's view. *Soc Sci Med A.* 1979; 13:347-50.
3. Stamler J, Stamler R, Neaton JD. Blood pressure, systolic and diastolic, and cardiovascular risks: US population data. *Arch Intern Med.* 1993; 153(5):598-615.
4. Nishtar S, FaruquiAM, Mattu MA, Mohamud KB, Ahmed A. The National Action Plan for the prevention and control of noncommunicable diseases and health promotion in Pakistan-Cardiovascular Diseases. *J Pak Med Assoc.* 2004; 57(8): 396-399
5. Jafar TH. Women in Pakistan have a greater burden of clinical cardiovascular risk factors than men. *Int. J. Cardiol.* 2006; 106(3):348-54.
6. Zafar SN, Gowani SA, Irani FA, Ishaq M. Awareness of the risk factors, presenting features and complications of hypertension amongst hypertensives and normotensives. *JPMA* 2008; 58(12):711-5. .
7. Bharati DR, Nandi P, Yamuna TV, Lokeshmaran A, Agarwal L,Singh JB, Basu M, Das P, Pal R. Prevalence and Covariates of Undiagnosed Hypertension in the Adult Population of Puducherry, South India. *Nepal J Epidemiol* 2012; 2(2): 191-99 .
8. Kario K, Pickering TG, Matsuo T, Hoshide S, Schwartz JE, Shimada K. Stroke prognosis and abnormal nocturnal blood pressure falls in older hypertensives. Hypertension. 2001;38(4):852-7.
9. Kario K, Pickering TG, Umeda Y, Hoshide S, Hoshide Y, Morinari M, et al. Morning surge in blood pressure as a predictor of silent and clinical cerebrovascular disease in elderly hypertensives a prospective study. *Circulation.* 2003; 107(10):1401-6.
10. Kearney PM, Whelton M, Reynolds K, Whelton PK, He J. Worldwide prevalence of hypertension: a systematic review. *J Hypertens.* 2004; 22(1):11-9.
11. Jafar TH, Levey AS, Jafary FH, White F, Gul A, Rahbar MH, et al. Ethnic subgroup differences in hypertension in Pakistan. J Hypertens. 2003;21(5):905-12.
12. Mediterranean E. Cardiovascular diseases prevention and control. 1998.
13. Weber BE, Kapoor WN. Evaluation and outcomes of patients with palpitations. *Am J Med.* 1996; 100(2):138-48.
14. Buist M, Bernard S, Nguyen TV, Moore G, Anderson J. Association between clinically abnormal observations and subsequent in-hospital mortality: *a prospective study. Resuscitation.* 2004;62(2):137-41
15. Birtwhistle RV, Godwin MS, Delva MD, Casson RI, Lam M, MacDonald SE, et al. Randomised equivalence trial comparing three month and six month follow up of patients with hypertension by family practitioners.*BMJ.* 2004; 328(7433):204.

Authors contribution:
** Write the research paper ** Supervise *** Assist in lab working ans statistics*

Conflict of interest: *The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.*