

# “Patient centered care in medical disinformation era” among patients attending tertiary care hospital: A cross sectional study

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## ABSTRACT

**Background and Objectives:** Patient-centered care refers to the provision of care for patients’ comprehensive needs, perspectives, and preferences. In health security, communication between patient and physician is the main key through which we plan and implement to threats that can affect huge population. **Aim:** The aim of this study was to assess the patient-centered care in medical disinformation era among patients attending tertiary care teaching hospital, Rishikesh. **Materials and Methods:** A descriptive cross-sectional study was planned by enrolling 240 patients attending tertiary care teaching hospital. Total consecutive sampling technique was chosen to recruit the patients for the study. **Tools:** Tools used were case reporting form and components of primary care index (CPCI). **Results:** The results show statistically significant association between chronic history of illness of patient ( $P = 0.02$ ), education of patient ( $P = 0.008$ ), and habitat of patient ( $P = 0.05$ ) with interpersonal communication between patient and physician, and the results also show statistically significant association between accumulated knowledge ( $P = 0.000$ ), coordination of care ( $P = 0.001$ ), continuity belief ( $P = 0.000$ ), comprehensiveness of care ( $P = 0.001$ ), and first contact ( $P = 0.001$ ) with interpersonal communication between patient and physician. The lowest mean percentage of patient-centered care score was observed for accumulated knowledge (65.70%) and the highest mean percentage (85.15%) score of patient-centered care was observed for interpersonal communication. **Conclusions:** This study concluded that patient-centered care improves interpersonal communication between patient and physician. Threats arising due to present medical disinformation era can be combat by patient-centered care.

**Keywords:** Comprehensive care, continuity, interpersonal communication, medical disinformation, patient-centered care

## Introduction

Patient-centered care refers to the provision of care for patients’ comprehensive needs, perspectives, and preferences.<sup>[1]</sup>

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Definition of patient-centered care by the Institute of Medicine as follows: “Providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions.”<sup>[2]</sup> American College of Physician has described principles that are necessary for patients for fulfilling health care and give significant track for implementing these ideas.<sup>[3]</sup> The term “patient-centered care” was first created by the Institute of Medicine in 2001 and characterized as guaranteeing patients manage their very own clinical decisions, and has turned out to be normal place in human care. It incorporates guaranteeing

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patients access to services, care is composed and patients are given educating materials and resources.<sup>[4]</sup> The principles of patient-centered care explains that patients and patient's families should be treated with respect and dignity along with that they should be active partners in all aspects of health care, which may contribute to the improvement of health-care systems. Patient and family should be partners in the education of health-care personnels.<sup>[5]</sup> In this disinformation era, health-related misinterpretations spread over online networking, representing a risk to general wellbeing.<sup>[6]</sup> Most of patients and caregivers searched for information sources other than health-care system. The most frequently checked source was Internet; patients and caregivers understand what they want to know and this source forces them to make precise decision. Health professionals should be aware and help patients and caregivers to better sort out and interpret the news they found.<sup>[7]</sup> In the broadest origination, communication is a system that enables health professionals to impart information to patient and care givers. In health security, communication between patient and physician is the main key through which we plan and implement to threats that can affect huge population.<sup>[8]</sup> Primary care focuses on communication between the primary care physician and other health-care providers with the aim of comprehensive care of all patients<sup>[9]</sup> because primary care physician is first contact of patient and has the opportunity to take care of patient's health for long-term, through multiple visits at different stages of the patient's life.<sup>[10]</sup>

### Need and scope of the study

This study assesses the need of patient-centered care among patients attending tertiary care hospital in the medical disinformation era. Hence, it highlights the importance of implications of patient-centered care guidelines among the patients and health-care practioners globally.

### Assumptions

- Patient needs patient-centered care for comprehensive management of disease
- Medical disinformation affects the health of the patients and health resources
- The subjects were honest in giving answer to each item in tool.

### Aim

The aim of this study was to assess the patient-centered care in medical disinformation era among patients attending tertiary care hospital, Rishikesh.

### Research approach

This was a quantitative research approach.

### Study design

This was a descriptive cross sectional study.

### Sample

Sample of the study will be the patients attending selected outpatient departments (OPDs) at tertiary care hospital.

### Sample size

240 sample size calculated with the following formula:

$$n = N/1 + N d^2,$$

Where  $N$  is the total population (600) attending the selected OPDs at tertiary care hospital.

### Sampling technique

Total consecutive sampling technique has been adopted to recruit the sample in the study.

### Study setting

Gynecology, medicine, surgery, and orthopedic OPDs of tertiary care hospital.

### Inclusion criteria

The inclusion criteria of the study included the following:

- Patients aged above 18 years
- Patients attending tertiary care hospital.

### Exclusion criteria

The exclusion criteria of the study included the following:

- Those who are not willing to participate/providing informed written consent in the study
- Patients in need of emergency treatment
- Those who are attending the OPD at first time.

### Study duration

Data were collected in the month of January 2020.

### Study tools

1. Case reporting form
2. Component of primary care (CPCI).

### Data collection

After obtaining informed consent from the participants, data were collected through case reporting form and CPCI tool from patients attending selected OPDs at tertiary care hospital.

### Tools

1. *Case reporting form*: It consists of demographic characteristics and clinical variables of the participants
2. *Component of primary care (CPCI)*: This tool has been developed by Susan A Flocke, Ph D, Cleaveland, Oregon Health and Science University in 2016. This is the Likert scale to measure the key aspects of delivery of care based on definition of institute of medicine from perspective of patients visiting to physician. The components of primary

care are associated with patient satisfaction with visits to family physicians

The factors were named as follows:

*Interpersonal communication:* It reports whether a physician listens and explains during interaction with patient.

*Accumulated knowledge:* Patient's perception that physician knows his or her medical issues and physician has accumulated knowledge of the patient.

*Coordination of care:* Patient's perception of physician knowledge of other visits, follow-up, and visit to specialists.

*First contact:* It measures as patient's perspective of seeking care from first contact. *Continuity of belief:* It measures as continuous care by physician or team. *Longitudinality:* It measures as length of relationship between patient and physician. The response format of tool is Likert scale varying from 1 strongly disagree to 5 strongly agree and 0 at center option. Negatively worded items have been reverse scored.<sup>[11]</sup>

### Validity and reliability of tools

A panel of skilled experts was involved to evaluate the content validity of this tool. The panel evaluated the relevance of item to the component they proposed to measure. Internal consistency of each scale score was measured by Cronbach  $\alpha$  internal consistency reliability of tool was 0.68–0.79. This level of internal consistency is considered good.

### Statistical analysis

The data were collected, coded, and summarized from 240 patients with the help of subject data sheet and CPCI tool in MS Excel datasheet 2013 window and analyzed on the basis of objectives of the study using Statistical Package for the Social Sciences (SPSS) software program, version 23.0, IBM 1911, Armonk, New York. Appropriate descriptive and inferential statistics was applied to analyze the data considering  $P$  value significant as  $<0.05$ .

## Results

### Descriptive data

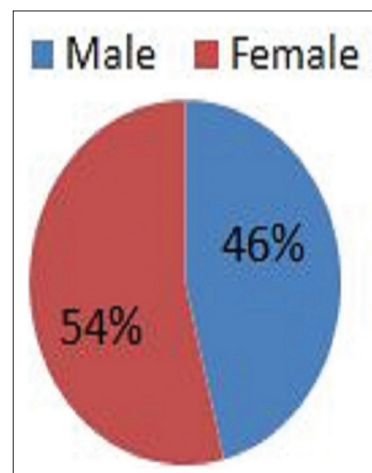
Mean age of patients was  $46.58 \pm 1.47$  [Table 1]. Among the participants, 134 (54%) were female [Figure 1]. In total, 158 (66%) participants were from rural background and 82 (34%) were from urban region [Figure 2]. 41 (17%), 41 (17%), and 53 (22%) of participants were consuming tobacco, smoking, and alcohol, respectively [Figure 3]. 163 (68%) were suffering from chronic illness [Figure 4]. 120 (50%) had family income less than Rs. 20,000 and only 10% of the participants had income more than Rs. 60,000.

### Outcome data

Table 2 shows mean with standard deviation and median of components of CPCI tool. Table 3 shows statistically significant association between chronic history of illness of patient ( $P = 0.02$ ), education of patient ( $P = 0.008$ ), and habitat of patient ( $P = 0.05$ ) with interpersonal

**Table 1: Demographic variables with frequency and percentage (n=240)**

Variable	Category	Frequency	Percentage
Age	Mean $\pm$ SD		
	46.58 $\pm$ 1.47		
Gender	Male	110	46
	Female	134	54
Marital status	Unmarried	19	8
	Married	202	84
	Divorce/widowed	19	8
Education	Uneducated	48	20
	Primary school	55	23
	Secondary school	64	27
Occupation	Graduation or above	73	30
	Unemployed	132	55
	Private job	62	26
	Government job	19	8
	Farmer	22	9
Religion	Others	5	2
	Hindu	142	59
	Muslim	70	29
	Sikh	22	9
	Christian	0	0
Family income per month	Buddhists	6	3
	<20,000	120	50
	Rs. 20,000-40,000	67	28
	Rs. 40,000-60,000	29	12
	Rs. 60,000 or above	24	10



**Figure 1: Gender distribution of participants**

communication between patient and physician. Table 4 shows statistically significant association between accumulated knowledge ( $P = 0.000$ ), coordination of care ( $P = 0.001$ ), continuity belief ( $P = 0.000$ ), comprehensiveness of care ( $P = 0.001$ ), and first contact ( $P = 0.001$ ) with interpersonal communication between patient and physician. Figure 5 shows frequency % of patients who were strongly agree (score = 5) for accumulated knowledge. Figure 6 shows frequency % of patients who were strongly agree (score = 5) for interpersonal communication. Figure 7 shows frequency % of patients

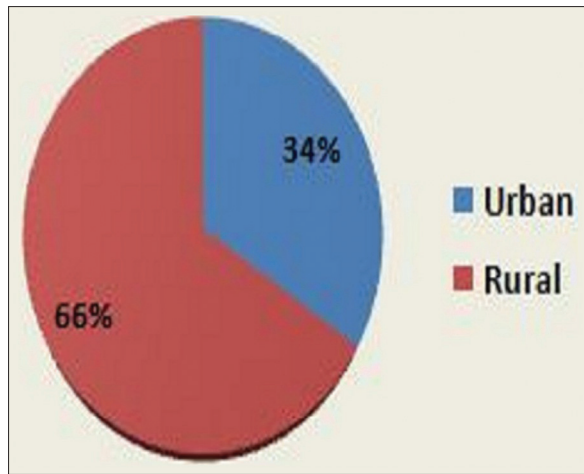


Figure 2: Habitat distribution

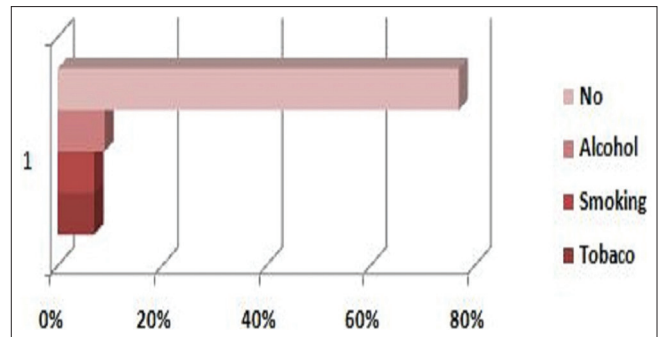


Figure 3: Pattern of substance abuse

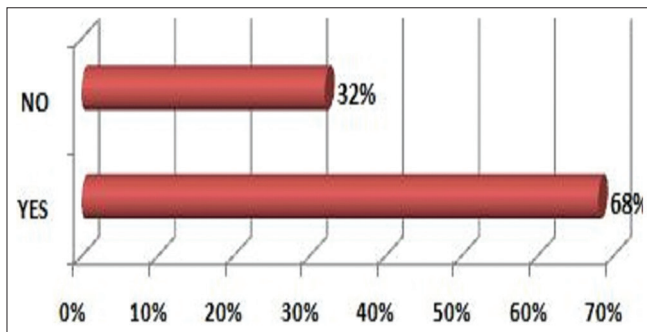


Figure 4: Presence of chronic illness

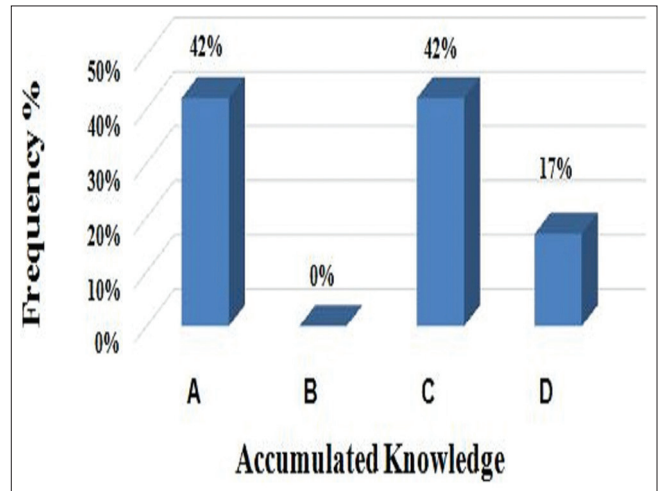


Figure 5: Accumulated knowledge

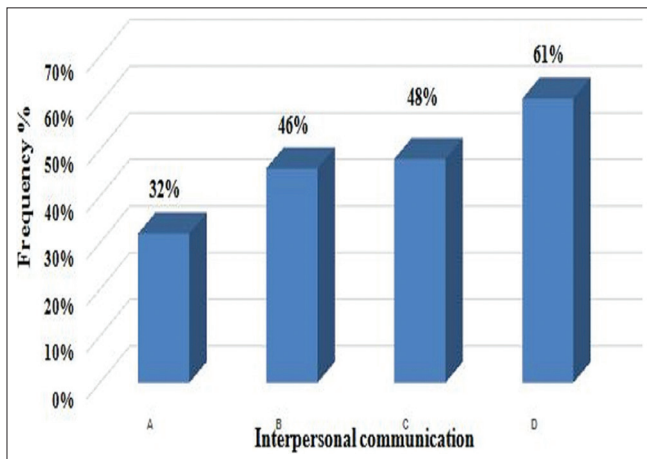


Figure 6: Interpersonal communication

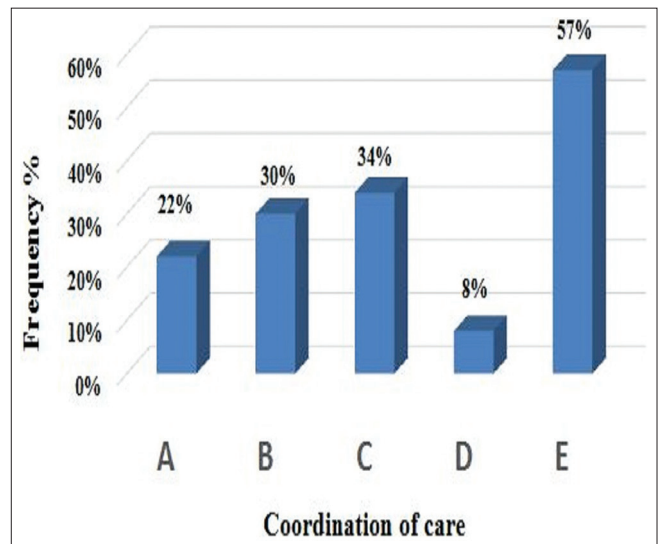


Figure 7: Coordination of care

who were strongly agree (score = 5) for coordination of care. Figure 8 shows frequency % of patients who were strongly agree (score = 5) for continuity belief. Figure 9 shows mean frequency % of all domain of CPCI scale. The lowest mean percentage of patient-centered care score was observed for accumulated knowledge (65.70%) followed by coordination of care (77.32%), first contact (80.04%), comprehensiveness of care (80.06%) and continuity belief (80.66%). The highest mean percentage (85.15%) score of patient-centered care was observed for interpersonal communication.

## Discussion

Patient-centered care involves interpersonal communication between patient and physician. Biglu *et al.*<sup>[12]</sup> explained a significant association between communication skills of physicians and patients' satisfaction. Ha and Longnecker<sup>[13]</sup> also supported that communication skill is the main consideration of clinical field

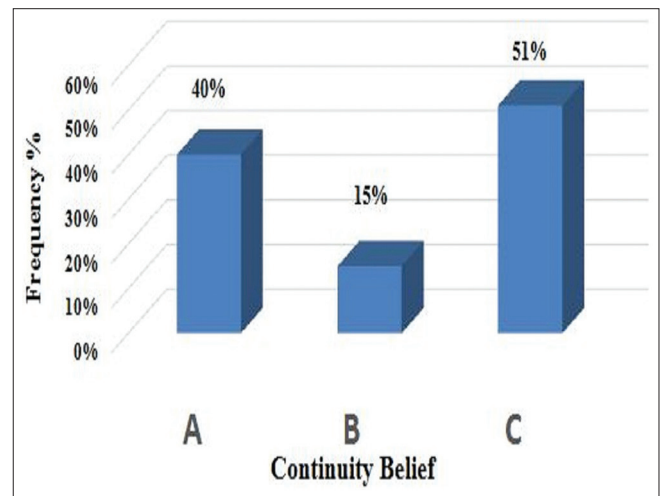
S. no.	Scale components	Mean±SD	Median
1.	Comprehensiveness of care I go to this doctor for almost all of my care.	4.03±0.77	4.00
2.	Accumulated knowledge		
A	This doctor does not know my medical history very well.	4.02±1.01	4.00
B	This doctor knows a lot about the rest of my family.	2.05±0.78	2.00
C	This doctor clearly understands my health needs.	4.25±0.72	4.00
D	This doctor and I have been through a lot together.	3.05±1.25	3.00
3.	Interpersonal communication		
A	I can easily talk about personal things with this doctor.	4.11±0.72	4.00
B	I don't always feel comfortable asking question of this doctor.	4.24±0.79	4.00
C	This doctor always explains things to my satisfaction.	4.40±0.63	4.00
D	Sometimes, this doctor does not listen to me.	4.44±0.90	5.00
4.	Coordination of care		
A	This doctor does not always know about care I have received at other place.	3.35±1.06	3.00
B	This doctor communicates with the other health-care providers.	4.04±0.75	4.00
C	This doctor knows the results of my visits to other doctors.	4.01±0.82	4.00
D	This doctor always follows up on a problem I've had either at the next visit or by phone	3.52±0.75	4.00
E	I want one doctor to coordinate all of the health care I receive.	4.56±0.51	5.00
5.	First contact		
A	If I am sick, I would always contact a doctor in this office first.	4.02±1.08	4.00
6.	Continuity belief		
A	My medical care improves when I see the same doctor in this office first.	4.25±0.70	4.00
B	It is very important to me to see my regular doctor.	3.57±1.02	4.00
C	I rarely see the same doctor when I go for medical care.	4.30±1.12	4.00
7.	Longitudinality	2.1±1.1	1.9

Variables	Interpersonal communication	
	Chi-square value	P
Chronic history of illness	17.22	0.02
Education of patient	23.69	0.008
Habitat of patient	15.51	0.05

Chi-square test, P significant as <0.05

Variables	Interpersonal communication	
	Chi-square value	P
Accumulated knowledge	3.35	0.000
Coordination of care	5.24	0.001
Continuity belief	5.29	0.000
Comprehensiveness of care	5.50	0.001
First contact	3.29	0.001

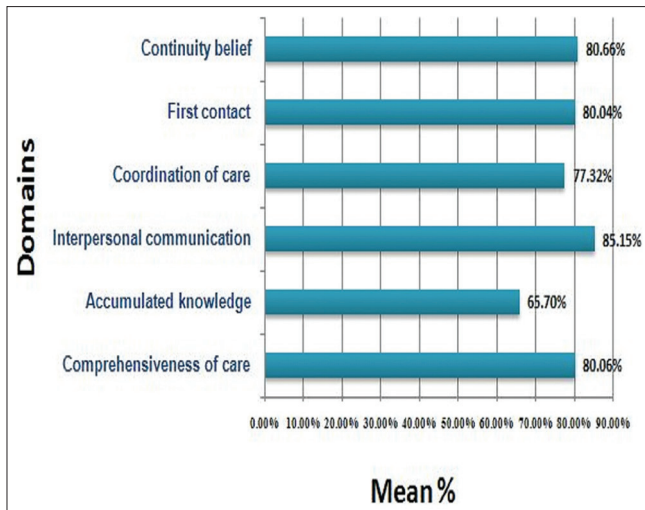
Chi-square test, P significant as <0.05



**Figure 8: Continuity belief**

and establishment of therapeutic interpersonal relationship with patient. Suh and Lee<sup>[14]</sup> also supported that interpersonal communication has significant impact on patient care. Tanveer *et al.*<sup>[15]</sup> also supported that interpersonal communication skills has significant association with patient level of satisfaction. This study reported that higher prevalence of coordination of care and continuity of care among patients which is a desirable feature of cost-effective healthcare systems. Baker *et al.*<sup>[16]</sup> also reported that

higher continuity of care is associated with a higher level of belief between patient and physician it further improve relationship between patients and physicians and quality and outcomes of care. In another study, preference for a with physician was associated with all aspects of continuity of care in this study more than 80% of respondents preferred a continuing relationship with doctors.<sup>[17]</sup> Droz *et al.*<sup>[18]</sup> also reported that items related to “communication and patient-centeredness care”, “coordination and continuity of care” are the most recurrently mentioned as “very important” in patient care. In a cross-sectional analytical study, conducted among 133 general practitioners and results



**Figure 9:** Mean % of all domain of CPCI

of the study also reported association between longitudinal care and accumulated knowledge.<sup>[19]</sup> Parchman *et al.*<sup>[20]</sup> also reported that continuity of care improved communication, length of relationship, accumulated knowledge of the patient by the physician, and continuity belief. In another study, conducted among 5507 adults, reported continuity with a usual primary care physician. Pandhi *et al.*<sup>[21]</sup> also reported that experiencing more first-contact access components was significantly associated with a higher rate of receiving patient care. Newell and Jordan<sup>[22]</sup> reported that patient-centered communication improve health care and quality. Paiva *et al.*<sup>[23]</sup> conducted a qualitative study and reported that patient-centered care improve communication and relationship between patient health-care providers through patients' and family participation. Nkrumah and Abekah-Nkrumah<sup>[24]</sup> conducted an exploratory research and data were collected using qualitative methods, reported that communication related challenges are one of main constraints of patient-centered care. Cruz *et al.*<sup>[25]</sup> also reported that coordination of care is associated with patient-centered care for both in women's health and children's health. This study also reported that all items of CPCI scale are quietly prevalent in tertiary care hospital and also reported statistically significant association between accumulated knowledge ( $P = 0.000$ ), coordination of care ( $P = 0.001$ ), continuity belief ( $P = 0.000$ ), comprehensiveness of care ( $P = 0.001$ ), and first contact ( $P = 0.001$ ) with interpersonal communication between patient and physician. Aelbrecht *et al.*<sup>[26]</sup> supported that patient's education had association with interaction between patient and physician. Another previous cross-sectional study observed association of race, ethnicity, age, frequent visits, and gender with interpersonal communication.<sup>[27]</sup> The results of this study suggested statistically significant association between chronic history of illness of patient ( $P = 0.02$ ), education of patient ( $P = 0.008$ ) and habitat of patient ( $P = 0.05$ ) with interpersonal communication between patient and physician. In this medical disinformation era, interpersonal communication between patient and physician plays significant role to improve the patient-centered care at tertiary care hospital.

## Limitations

It was a cross-sectional study and sample size was also limited and it was relatively small, and recruited from a single population.

## Interpretations and implications

### Administration

Development of coordination between different clinical departments will be helpful for the implication of patients centered approach to reduce the burden of patients at super specialty departments of tertiary care hospital as well as use of health-care resources and health-care costs. Health-care administrators should emphasize on training and promoting the communication skills of physicians.

### Practice

Each and every department may use patient-centered care approach to continuously enhance quality of nursing care and patient's satisfaction.

### Education

Patient-centered education may help to deliver effective patient-centered care which committed to improve quality and safety as well as life-long learning and professional formation.

### Future research direction

Further, research on patient-centered care may overcome the challenges of medical disinformation era through interpersonal communication. It requires development of tool to measure medical disinformation and further in-depth study with larger sample size at various levels of clinical practices.

## Conclusions

The interpersonal communication skills of health professionals play very important role in patient-centered care. It enhances continuity belief and first contact of patients with physician. Patient-centered care improves comprehensiveness and coordination of care among patients. Interpersonal communication can combat threats arises due to present medical disinformation era. This study suggests further improvement in the implementation of patient-centered care to continuously enhance quality of life, quality of health care, and hospital experience of patients with readiness for discharge.

## Ethical policy and institutional review board statement

Ethical approval for this study was obtained from the Institutional Ethics Committee (IEC), All India Institute of Medical Sciences (AIIMS), Rishikesh (Protocol number AIIMS/IEC/19/1272).

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Nil.

## Conflicts of interest

There are no conflicts of interest.

## References

- Boyd C, Fortin M. Future of multimorbidity research: How should understanding of multimorbidity inform health system design? *Public Health Rev* 2010;32:451-74.
- Baker A. Book: Crossing the quality chasm: A new health system for the 21<sup>st</sup> century. *BMJ* 2001;323:1192.
- Shrank W. Primary care practice transformation and the rise of consumerism. *J Gen Intern Med* 2017;32:387-91.
- Greiner A, Knebel E. Health professions education: A bridge to quality. *J Healthc Qual* 2004;26:54.
- Nickel W, Weinberger S, Guze P. Principles for patient and family partnership in care: An American college of physicians position paper. *Ann Intern Med* 2018;169:796-9.
- Kata A. Anti-vaccine activists, Web 2.0, and the postmodern paradigm - An overview of tactics and tropes used online by the anti-vaccination movement. *Vaccine* 2012;30:3778-89.
- Chiò A, Montuschi A, Cammarosano S, De Mercanti S, Cavallo E, Ilardi A, *et al.* ALS patients and caregivers communication preferences and information seeking behaviour. *Eur J Neurol*. 2008;15(1):55-60. doi:10.1111/j.1468-1331.2007.02000.x.
- Ventola CL. Social media and health care professionals: Benefits, risks, and best practices. - PubMed - NCBI [Internet]. Ncbi.nlm.nih.gov. 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/25083128>. [Last cited on 2020 Mar 08].
- Aller M, Vargas I, Coderch J, Vázquez M. Doctors' opinion on the contribution of coordination mechanisms to improving clinical coordination between primary and outpatient secondary care in the Catalan national health system. *BMC Health Serv Res* 2017;17:842.
- [Internet]. Who.int. 2020. Available from: <https://www.who.int/docs/default-source/primary-health/vision.pdf>. [Last cited on 2020 Mar 28].
- Flocke SA. Measuring attributes of primary care: Development of a new instrument. - PubMed - NCBI [Internet]. Ncbi.nlm.nih.gov. 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/9228916>. [Last cited on 2020 Mar 09].
- Biglu M, Nateqv F, Ghojazadeh M, Asgharzadeh A. Communication skills of physicians and patients' satisfaction. *Materi Socmed* 2017;29:192-5.
- Ha JF, Longnecker N. Doctor-Patient Communication: A Review [Internet]. PubMed Central (PMC). 2020. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC21603354/>. [Last cited on 2020 Mar 08].
- Suh W, Lee C. Impact of shared-decision making on patient satisfaction. *J Prev Med Public Health* 2010;43:26-34.
- Tanveer F, Shahid S, Hafeez MM. Impact of doctor's interpersonal communication skill on patient's satisfaction level. *Isra Med J* 2018;10:306-9.
- Baker R, Mainous Iii A, Gray D, Love M. Exploration of the relationship between continuity, trust in regular doctors and patient satisfaction with consultations with family doctors. *Scand J Prim Health Care* 2003;21:27-32.
- Liu C, Wu Y, Chi X. Relationship preferences and experience of primary care patients in continuity of care: A case study in Beijing, China. *BMC Health Serv Res* 2017;17:585.
- Droz M, Senn N, Cohidon C. Communication, continuity and coordination of care are the most important patients' values for family medicine in a fee-for-services health system. *BMC Fam Pract* 2019;20:19.
- Hjortdahl P. Continuity of care: General practitioners' knowledge about, and sense of responsibility toward their patients. *Fam Pract* 1992;9:3-8.
- Parchman M, Noël P, Lee S. Primary care attributes, health care system hassles, and chronic illness. *Med Care* 2005;43:1123-9.
- Pandhi N, DeVoe J, Schumacher J, Bartels C, Thorpe C, Thorpe J, *et al.* Number of first-contact access components required to improve preventive service receipt in primary care homes. *J Gen Intern Med* 2012;27:677-84.
- Newell S, Jordan Z. The patient experience of patient-centered communication with nurses in the hospital setting: A qualitative systematic review protocol. *JBI Database System Rev Implementat Rep* 2015;13:76-87.
- Paiva D, Abreu L, Azevedo A, Silva S. Patient-centered communication in type 2 diabetes: The facilitating and constraining factors in clinical encounters. *Health Serv Res* 2019;54:623-35.
- Nkrumah J, Abekah-Nkrumah G. Facilitators and barriers of patient-centered care at the organizational-level: A study of three district hospitals in the central region of Ghana. *BMC Health Serv Res* 2019;19:900.
- Cruz M, Santos A, Araújo L, Andrade E. A coordenação do cuidado na qualidade da assistência à saúde da mulher e da criança no PMAQ [Coordination of care and quality of healthcare for women and children in the PMAQ]. *Cad Saúde Pública* 2019;35:e00004019.
- Aelbrecht K, Hanssens L, Detollenaere J, Willems S, Deveugele M, Pype P. Determinants of physician-patient communication: The role of language, education and ethnicity. *Patient Educ Couns* 2019;102:776-81.
- Singh S, Evans N, Williams M, Sezginis N, Baryeh N. Influences of socio-demographic factors and health utilization factors on patient-centered provider communication. *Health Commun* 2017;33:917-23.