Research Article

Self-reported unmet healthcare needs during coronavirus disease-19 pandemic lockdown

Feroz Ahmad Wani[1], Rouf Hussain Rather[1], Mudasir Ahmad[2]

[1]Department of Community Medicine, Government Medical College Srinagar, Srinagar, Jammu and Kashmir, India, [2]Department of Pediatric Cardiology, Fortis Escorts Heart Institute, New Delhi, India

Correspondence to: Feroz Ahmad Wani, E-mail: drferoz47@gmail.com

Received: September 01, 2020; **Accepted:** September 17, 2020

ABSTRACT

Background: Equitable access to health care is an important issue and cannot be ignored during any pandemic. Although affordability is the most common barrier to healthcare, in a coronavirus disease (COVID)-19 pandemic lockdown people may not get necessary healthcare due to non-availability of transport, cancellation of appointments, and fear of getting infected by a coronavirus (severe acute respiratory syndrome coronavirus 2) in the hospitals besides disruption of the healthcare services. Due to this millions of people could lose access to essential healthcare services. **Objectives:** The study was conducted with the objective to assess the level of unmet healthcare needs and to identify major barriers to healthcare during the COVID-19 pandemic. **Materials and Methods:** This was an online survey conducted at the household level during the COVID-19 pandemic on a self-designed questionnaire which was based on European Union Statistics on Income and Living Conditions, European Health Interview Survey, and Commonwealth Fund International Health Policy Survey approaches to measure unmet healthcare needs. **Results:** Among 171 families, 40 (23.4%) of the families experienced delay/or did not receive necessary healthcare, 33 (19.3%) of the families could not get necessary medicine, 55 (32.2%) skipped or delayed a medical test, 75 (43.9%) skipped or delayed a follow-up, 56 (32.7%) did not receive necessary dental care, 30 (17.5%) skipped or delayed routine vaccination of the child, and 14 (8.2%) skipped or delayed antenatal checkup for pregnant women. The main barriers to healthcare were fear of COVID-19 infection, non-availability of the services, and non-availability of transport. **Conclusion:** The reality of unmet needs of healthcare during COVID-19 pandemic could be much worse and the scale of the impact could be many times greater in the areas where there is already the vast pre-existing need for healthcare.

KEY WORDS: Pandemic; Coronavirus Disease-19; Unmet Needs

INTRODUCTION

The pandemic of coronavirus (coronavirus disease [COVID]-19) has shown that how naïve the idea of conquering the infectious diseases is. This pandemic has turned the major threat not only for the developing countries with limited tools and strategies but also has turned nightmare for the most developed countries of the world. The overwhelming response to COVID-19 pandemic lockdown has precipitated unanticipated disturbances to the routine health care system. All the interventions done during COVID-19 pandemic lead to disruption of the routine and emergency healthcare services besides vaccination of the children against preventable diseases. One of the most important aspects of the pandemic is that a large amount of healthcare needs not related to the coronavirus infection itself may be left unmet due to fear of infection. The unmet need of healthcare may rise further where health resources and personnel have been massively reassigned or deputed for the management of COVID-19 pandemic.[1-3]

Access this article online	
Website: http://www.ijmsph.com	Quick Response code
DOI: 10.5455/ijmsph.2020.09151202017092020	

Key to mitigating these health-related issues is ethical frameworks that will protect all from immediate and longer-term consequences. Further, there is no reason or excuse to jeopardize routine healthcare services and allow people to suffer due to common communicable and non-communicable diseases. If the measure of success is the overall number of lives saved while dealing with the pandemic, then we believe that a well-coordinated response will prevent further increase in unmet needs of healthcare in a developing country and hence morbidity and mortality due to most common diseases.

While large number of studies on the impact of the COVID-19 pandemic have been published so far, to the best of our knowledge, we are the first to address the issue of unmet healthcare needs in such a public health crisis. Through this study, we wanted to know how the COVID-19 pandemic lockdown has led to disturbances in providing routine and emergency healthcare services to the people in a developing country so that the measures are taken at the higher level to decrease the adverse effects of lockdown in providing routine healthcare services.

MATERIALS AND METHODS

This cross-sectional study was conducted online at household level using Google forms app. The study was conducted at Govt. Medical College Srinagar in May 2020–June 2020 in Kashmir Division of Jammu and Kashmir, India. The citizens aged 18 years and above were invited to participate in this online survey through the link:

https://docs.google.com/forms/d/e/1FAIpQLSfEBwtDaKIi3735hdlp9gFfweGxOAJmsUA_hLnXSCJfhAe2mQ/viewform?usp=sf_link

A self-designed questionnaire was used based on three approaches used to assess the unmet needs of healthcare. The three approaches considered for developing the questionnaire were European Union Statistics on Income and Living Conditions, European Health Interview Survey, and Commonwealth Fund International Health Policy Survey. The questionnaire was pretested for any modification before the main survey. The main questions included in the questionnaire were about the experience of receiving necessary healthcare, necessary medicines, advised medical test, an advised follow-up, necessary dental care, routine vaccination of the child, and antenatal checkup for pregnant women during the COVID-19 pandemic lockdown. The reasons for the unmet needs of healthcare included in the questionnaire were fear of COVID-19 infection, non-availability of the services, and non-availability of transport and non-affordability. In total of 171 responded to the request and participated in the survey. A written consent in the first section of online survey was given to all the participants before filling the questionnaire.

Data Analysis

Data were entered in an excel sheet and analyzed using SPSS (v: 20.0) software using standard statistical tests.

Ethical Issues

Participation in this observational study was voluntary and informed consent was taken before participation in the study.

RESULTS

Table 1 shows the demographic characteristics of the respondents. Out of a total of 171 respondents majority of the respondents, 144 (84.2%) were males and only 27 (15.8%) were females. One hundred twenty-nine (75.4%) were from the rural area and only 42 (24.6%) were from the urban area. Majority 159 (93.0%) of the respondents were from non-red zones and only 12 (7%) were from red zones.

The prevalence of unmet needs of healthcare is shown in Table 2. Forty (23.4%) of the families experienced delay/or did not receive necessary healthcare, 33 (19.3%) of the families could not get necessary medicine, 55 (32.2%) skipped or delayed a medical test, 75 (43.9%) skipped or delayed a follow-up, 56 (32.7%) did not receive necessary dental care, 30 (17.5%) skipped or delayed routine vaccination of the child, and 14 (8.2%) skipped or delayed antenatal checkup for pregnant women.

The impact of residential area on unmet needs of healthcare is shown in Table 3. About 35.7% of the families from urban area witnessed delay or did not receive necessary healthcare as compared to 19.4% of the families living in rural areas. However, 20.9% of the families living in rural areas could not get necessary medicines due to lockdown as compared to 14.3% of the families living in urban areas. Among the families living in urban areas and rural areas, 45.2% and 27.9% skipped or delayed a medical test, 52.4% and 41.1% skipped or delayed a medical follow-up, 59.5% and 24.0% did not receive necessary dental care/checkup, and 19.0% and 17.1% skipped or delayed routine vaccination of the child, respectively. However, the difference in percentage

Table 1: Demographic characteristics of the respondents

Characteristics	Frequency	Percent
Gender		
Male	144	84.2
Female	27	15.8
Current residence		
Rural	129	75.4
Urban	42	24.6
Residential area was declared red zone		
Yes	12	7.0
No	159	93.0

was statistically significant only in receiving dental care. The delay in health checkup of pregnant woman was more (9.3%) among rural families than those in urban families (4.8%).

The impact of the declaration of an area as red zone has been shown in Table 4. Among the families living in red zone areas and non-red zone areas, 41.7% and 22.0% delayed or did not receive necessary health care, 41.7% and 17.6% could not get necessary medicines, 66.7% and 29.6% skipped or delayed a medical test, 66.7% and 42.1% skipped or delayed a medical follow-up, 41.7% and 32.1% did not receive necessary dental care/checkup, and 50.0% and 15.1% skipped or delayed routine vaccination of the child, respectively. However, the difference was found to be statistically significant ($P = 0.048$) only with respect to skipping/delaying a medical test with an odds ratio of 4.851 (95% CI=0.982–23.953). None skipped/delayed health checkup of a pregnant woman from red zone while 8.8% families observed such delay from non-red zones.

Table 5 depicts the impact of familial worries on the unmet needs of healthcare. Among the worried families, 34.2% had delayed or did not receive necessary health care, 34.2% could not get necessary medicines, 49.3% skipped/delayed a medical test, 61.6% skipped/delayed a medical follow-up, and 45.2% did not receive necessary dental care/checkup while as the same figures among the families without any worries were only 15.3%, 8.2%, 19.4%, 30.6%, and 23.5%, respectively. Moreover, all these differences were found to be statistically significant, with an odds ratio of 3.148 (95% CI=1.335–7.425), 6.696 (95% CI=2.685–16.700), 5.558 (95% CI=2.478–12.464), 4.071 (95% CI=1.890–8.770), and 3.139 (95% CI=1.416–6.956), respectively. The families without worries skipped/delayed routine vaccination of the child and health checkup of a pregnant woman more (18.4% and 10.2%, respectively) as compared to families with known worries (16.4% and 5.5%, respectively). However, the observed difference was not statistically significant.

Table 2: Unmet needs of healthcare during COVID-19 pandemic

Experience of any family member during COVID-19	*n* (%)	Reason for unmet needs of healthcare *n* (%)			
		Non-availability of transport	Fear of COVID infection	Non-availability of healthcare services	Non-affordability
Delayed or did not receive necessary health care	40 (23.4)	9 (5.3)	22 (12.9)	9 (5.3)	0 (0)
Could not get necessary medicines	33 (19.3)	25 (14.6)	2 (1.2)	4 (2.3)	2 (1.2)
Skipped/delayed a medical test.	55 (32.2)	15 (8.8)	21 (12.3)	15 (8.8)	4 (2.3)
Skipped/delayed a medical follow-up	75 (43.9)	18 (10.5)	33 (19.3)	24 (14.0)	0 (0)
Did not receive necessary dental care/checkup	56 (32.7)	4 (2.3)	27 (15.8)	25 (14.6)	0 (0)
Skipped/delayed routine vaccination of the child	30 (17.5)	6 (3.5)	12 (7.0)	12 (7.0)	0 (0)
Skipped/delayed health checkup of pregnant woman	14 (8.2)	4 (2.3)	6 (3.5)	2 (1.2)	2 (1.2)

Table 3: Unmet needs of healthcare based on residence

Experience of any family member during COVID-19	Current residence *n* (%)		Odds ratio (95% CI)	*P*-value
	Rural	Urban		
Delayed or did not receive necessary health care	25 (19.4)	15 (35.7)	0.614 (0.253–1.489)	0.366
Could not get necessary medicines	27 (20.9)	6 (14.3)	1.887 (0.697–5.110)	0.252
Skipped/delayed a medical test	36 (27.9)	19 (45.2)	0.484 (0.208–1.124)	0.097
Skipped/delayed a medical follow-up	53 (41.1)	22 (52.4)	0.438 (0.178–1.080)	0.090
Did not receive necessary dental care/checkup	31 (24.0)	25 (59.5)	0.266 (0.109–0.648)	0.004
Skipped/delayed routine vaccination of the child	22 (17.1)	8 (19.0)	0.882 (0.332–2.342)	1.000
Skipped/delayed health checkup of pregnant woman	12 (9.3)	2 (4.8)	2.400 (0.482–11.950)	0.494

Table 4: Unmet needs of healthcare based on containment zone

Experience of any family member during COVID-19	Residential area *n* (%)		Odds ratio (95% CI)	*P*-value
	Red zone	Non-red zone		
Delayed or did not receive necessary health care	5 (41.7)	35 (22.0)	3.571 (0.655–19.467)	0.233
Could not get necessary medicines	5 (41.7)	28 (17.6)	2.964 (0.799–11.003)	0.134
Skipped/delayed a medical test	8 (66.7)	47 (29.6)	4.851 (0.982–23.953)	0.048
Skipped/delayed a medical follow-up	8 (66.7)	67 (42.1)	1.433 (0.408–5.032)	0.760
Did not receive necessary dental care/checkup	5 (41.7)	51 (32.1)	1.569 (0.355–6.923)	0.718
Skipped/delayed routine vaccination of the child	6 (50.0)	24 (15.1)	4.125 (1.071–15.891)	0.062
Skipped/delayed health checkup of pregnant woman	0 (0.0)	14 (8.8)	1.098 (1.012–1.192)	0.575

Table 5: Unmet needs of healthcare based on familial worries

Experience of any family member during COVID-19	Familial worries *n* (%)		Odds ratio (95% CI)	*P*-value
	Yes	No		
Delayed or did not receive necessary health care	25 (34.2)	15 (15.3)	3.148 (1.335–7.425)	0.011
Could not get necessary medicines	25 (34.2)	8 (8.2)	6.696 (2.685–16.700)	0.000
Skipped/delayed a medical test.	36 (49.3)	19 (19.4)	5.558 (2.478–12.464)	0.000
Skipped/delayed a medical follow-up	45 (61.6)	30 (30.6)	4.071 (1.890–8.770)	0.000
Did not receive necessary dental care/checkup	33 (45.2)	23 (23.5)	3.139 (1.416–6.956)	0.006
Skipped/delayed routine vaccination of the child	12 (16.4)	18 (18.4)	0.839 (0.352–2.001)	0.826
Skipped/delayed health checkup of pregnant woman	4 (5.5)	10 (10.2)	1.000 (0.274–3.656)	1.000

DISCUSSION

In India, like other countries, additional funds have been made available and necessary measures have been taken under the disaster act to tackle with pandemic of COVID-19. However, at the same time, the already strained healthcare system has displaced non-COVID-19 care (i.e., the routine and emergency care for all other diseases) in every part of the country which has led to an increase in unmet needs of healthcare. It is, therefore, important to understand the mechanics by which COVID-19 pandemic could reduce access to general healthcare in future. Given the importance of healthcare resource allocation during a pandemic calls for understanding the extent healthcare demand may be shifted and can be rearranged.[4,5]

Our study shows how the health care needs of the general population during COVID-19 pandemic lockdown in Kashmir Division of Jammu and Kashmir, India, are left "unmet." A total of 171 responded to our request for participation in the study. One hundred twenty-nine (75.4%) of the respondents were living in rural areas and only 42 (24.6%) were living in urban areas. At the time of the study, 159 (93.0%) of the respondents were from non-red zones and only 12 (7%) were from red zones. Out of 171 families, 98 (57.3%) had apparently no familial worries while as 73 (42.7%) families had some worries in the form of finance, food, lack of work, medicine, and others. The prevalence of unmet healthcare needs was as low as 8.2% for an antenatal checkup of pregnant women to as high as 43.9% for a recommended follow-up. The unmet needs were 23.4% for necessary healthcare, 19.3% for necessary medicines, 32.2% for an advised medical test, 32.7% for dental care, and 17.5% for routine vaccination of the child. A survey conducted by UNICEF across 77 countries during this pandemic found that nearly 68% of the countries reported at least some disruption in routine immunization services and health checkups for children and 63% of countries reported disruptions in antenatal checkups and 59% in post-natal care.[6] Similarly, in a recent WHO survey revealed that out of 105 countries, 52% reported disruptions in health services for sick children.[7] A study conducted in urban Kerala before the pandemic found that any health care need was at 39.9%.[8] The obvious reason for the high figures in our study is that we considered many aspects of healthcare need and that too in a pandemic situation. Our study focused on general unmet needs of healthcare, while as most studies from India focused on unmet needs of family planning.[9] A study from Agra reported that 29% of husbands compared to 39% of wives have an unmet need for family planning.[10] This is much higher as compared to a study wherein 20.5% had an unmet need for family planning in an urban area of south India.[11] There are many health system-related barriers to healthcare. Long waiting time, non-availability when needed, and cost are some of the main barriers as reported by Chen *et al*.[12] While as a study conducted by Shi *et al*.[13] looked at unmet health care needs owing to cost, our study looked into four different aspects of unmet needs in COVID-19 pandemic lockdown. They found out that people who are having low incomes are likely to delay the needed health care due to cost. However, in our study, the most common reasons for the unmet needs of healthcare were fear of COVID-19 infection, non-availability of transport, and non-availability of healthcare services. Chen *et al*.[12] also claim that it is important to understand the availability and accessibility besides acceptability barriers associated with unmet health care needs. In addition, the declaration of red zones, especially in vulnerable populations, may lead to additional unmet needs of healthcare. We found that unmet needs were more in urban families and among those living in containment zones (red zones) [Tables 3 and 4]. The larger proportion of unmet health care needs was seen, especially in families who had worries regarding finance, medicine, work, and food [Table 5]. This finding to some extent is consistent to a study conducted in the US where low income, no health insurance coverage, and lack of a regular source of care had a direct impact on unmet health needs.[13]

Strengths and Limitations

Our study is only a rare study that too during a pandemic that focused on seven different categories of health care need rather than asking more generally about "any health care need." Further, we examined four main barriers for the unmet needs of healthcare and the difference of these barriers across rural/urban areas and on the basis of notification of a containment zone. Limitation of this study is that it was

a self-reported online survey and the researches could not collect the data directly from the population due to lockdown.

CONCLUSION

Due to the global economic downturn, resource-limited countries may face a lot of financial issues for maintaining routine healthcare services. Besides, the pandemic may significantly disrupt the routine services and hence increase in unmet needs of healthcare due to supply chain disruptions, staff diverted for COVID care, fear of infection, and clinic closures.

REFERENCES

1. Plachouri KM, Georgiou S. How well prepared are dermatologists redeployed to COVID-19 wards? Int J Dermatol 2020;59:e247-8.
2. Bloomberg. Hospitals in China, Overwhelmed by Coronavirus, Turn Away Patients with Other Pressing Needs. Available from: https://www.time.com/5788495/china-hospital-shortage. [Last accessed on 2020 Feb 20].
3. Arnold C. New York City's Coronavirus Outbreak is Already Overwhelming Hospitals. The New Scientist. Available from: https://www.newscientist.com/article/2239247-new-york-citys-coronavirus-outbreak-is-already-overwhelming-hospitals/#ixzz6IyoM58c8. [Last accessed on 2020 Mar 31].
4. Ailawadi K, Chan T, Manchanda P, Sudhir K. Introduct+ion to the special issue on marketing science and health. Mark Sci 2020;39:459-64.
5. Yoon TJ. Quality information disclosure and patient reallocation in the healthcare industry: Evidence from cardiac surgery report cards. Mark Sci 2020;39:636-62.
6. UNICEF. Situation Tracking for COVID-19 Socioeconomic Impacts. Available from: https://www.data.unicef.org/resources/rapid-situation-tracking-covid-19-socioeconomic-impacts-data-viz; http://www.Unicef.org. [Last accessed on 2020 Jun 29].
7. World Health Organization. Pulse Survey on Continuity of Essential Health Services during the COVID-19 pandemic: Interim Report. Geneva: World Health Organization; 2020. Available from: http://www.WHO/2019-nCoV/EHS_continuity/survey/2020.1. [Last accessed on 2020 Aug 27].
8. Government of Kerala, NSS Division. Department of Economics and Statistics. Report on Health in Kerala NSS 71st Round January-June 2014, Thiruvananthapuram: NSS Division. Department of Economics and Statistics; 2016.
9. Dilip TR, Duggal R. Unmet need for public health-care services in Mumbai, India. Asia Pac Popul J 2004;19:27-40.
10. Dodoo FN. A couple analysis of micro level supply/demand factors in fertility regulation. Popul Res Policy Rev 1993;12:93-101.
11. Vasudevan K, Soundarya C. Assessment of unmet need for contraception in an urban area of Pondicherry. Natl J Res Commun Med 2016;5:223-8.
12. Chen J, Hou F. Unmet needs for health care. Health Rep 2002;13:23-34.
13. Shi L, Stevens GD. Vulnerability and unmet health care needs. The influence of multiple risk factors. J Gen Intern Med 2005;20:148-54.

How to cite this article: Wani FA, Rather RH, Ahmad M. Self-reported unmet healthcare needs during coronavirus disease-19 pandemic lockdown. Int J Med Sci Public Health 2020;9(9):503-507.

Source of Support: Nil, **Conflicts of Interest:** None declared.