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PATIENT SATISFACTION WITH VIRTUAL CARE COMPARED TO CLINIC VISITS IN DIABETIC EDUCATOR SERVICE IN DIABETES AND ENDOCRINOLOGY DEPARTMENT DURING COVID-19 PANDEMIC: SURVEY WITH QUESTIONNAIRE

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ABSTRACT

Objective: This study evaluated the level of patient satisfaction with virtual care compared to in-person clinic visits among diabetic patients in diabetic educator clinics in tertiary care hospital. **Material and Methods:** A cross sectional study was conducted in diabetic educator clinics under diabetes and endocrinology department of King Fahd Armed Forces Hospital in Jeddah. Saudi Arabia during COVID 19 pandemic period. A Questionnaire with multiple responses was developed for assessing patient satisfaction with virtual care comparing in person clinics. **Results:** Total number of 635 persons with diabetes completed the survey. When asked about preference between virtual and in person clinic almost half them preferred virtual clinic and half actual clinics. Preference for combined virtual versus virtual clinic alone high percentage (88.9%) preferred combined in person and virtual clinics. The reasons for not preferring the virtual clinic were Irregular appointments during pandemic and uncertain time of calls from virtual clinics. Regarding satisfaction with treatment plans by virtual clinic telephonic calls 543(85%) were satisfied by virtual clinic calls and 34(5%) were not satisfied. The reason for not satisfying were difficulty in understanding instructions by phone and feeling necessity to be personally present in clinic when new plans of treatment are planned. **Conclusions:** The patients with diabetes who participated in this study showed moderate satisfaction level with virtual care and high satisfaction with combination of virtual and in person clinics. Particularly among females higher satisfactory response was recorded. Future large-scale multicenter studies are required to decide continuation of virtual care as a part of outpatient in person clinic service after COVID-19 pandemic.

KEYWORDS: Patient satisfaction, diabetic educator clinic, virtual care, COVID- 19 pandemic.

INTRODUCTION

In 2019 corona virus infection (COVID-19) appeared suddenly and started to spread rapidly all over the world. it was highly infectious virus causing mortality and morbidity. World health organization (WHO) declared a global pandemic in March 2020 after confirming COVID worldwide.[1] Like many countries Saudi Arabia declared national wide lock down to contain the COVID-19 virus infection.[2] Routine appointments in the clinic were canceled and a large number of patients quickly found themselves with little and to no medical support during shut down during pandemic. 2-Diabetes is a chronic disease which needs comprehensive health care such as health education, glycemic control and evaluation of micro and macro vascular complications. People with diabetes have higher risk of severe outcomes when infected with COVID-19 virus.[3] Hence they should avoid non-essential contacts with other people including health care personal. Depriving diabetic patients regular follow ups and management lead to uncontrolled diabetes and many chronic complications.[4,5] Marinating uninterrupted health care services is essential when managing people with diabetes and become more important during pandemics.[6] to continue the routine patient care in people with diabetes during the pandemic greater reliance on virtual clinic modes like audio calls and video conferences were relied upon.[7] Diabetes care center at King Fahd Armed forces hospital started to implement virtual clinics to follow up patients during pandemic. Diabetic educators regularly ran virtual clinics to help to manage blood sugar control and deliver medications to homes if necessary. Satisfaction is an important indicator of quality of health care service.[6] Acceptance and satisfaction of health care consumers is considered to the successful implementation and adoption of telemedicine service. The present study conducted to evaluate patient satisfaction and acceptance of virtual clinic to in person clinic visits to determine continuation of virtual clinic after the pandemic as part of diabetic patient care.

The aim of the study

The aim of the study was to asses' satisfaction of diabetic patients with diabetic education service provided by virtual clinics during COVID-19 pandemic.

Tools

An Arabic language self-administered questionnaire was used in this cross sectional study. The focus of the questionnaire was on satisfaction questions with the virtual clinic.

Subjects and methods

This cross sectional observation study was conducted in diabetic educator clinics under diabetes and endocrinology department of King Fahd Armed forces hospital at Jeddah in Saudi Arabia. The study carried over for 6 months during COVID-19 pandemic. The study population was diabetic patients above the age 15 registered in diabetic educator virtual clinic during study period. The patients were contacted by phone during virtual clinic and responses to the survey questionnaire were recorded. The questionnaire was discussed with the patients in order to reach consensus of asking/explain particular question in case patient did not understand such questions. Informed consent was taken for participation in the survey.

RESULTS

A total number of 635 patients completed the survey questionnaire by telephonic calls in virtual clinics of diabetic educator in 6 months period of survey.

Patient's socio-demographics

Data from 635 patients responded to survey were analyzed. The age of almost 245(%) ranged above 55yrs and lowest age range 73(%) was in 36-45 years. (Fig:1) The male to female patient ratio was 316(%) male to 319(%) females.(Fig:2). Regarding type of diabetes, 457(%) were having type 2 diabetes and 177(%) were having type 1 diabetes(Fig :3). Out of total 635 patients surveyed 564(%) were having follow up and 71(%) were having first visit to the clinic (FIG: 4).

Patient related factors

322(50.8%) patients preferred actual clinics compared to 312(49%) preferring virtual clinic (Fig: 5).38% patients gave irregular appointments, and 22% patients gave unsuitable contact times as cause for not preferring virtual clinics (Fig: 6). Rest of the patients did not mention any reason.543 (85.5%) patients were satisfied with explanation and treatment plans discussed by virtual clinics.34 (5%) were not satisfied with virtual clinic treatment strategy explanations.55 (9.5%) did not respond to satisfaction with virtual clinic treatment explanations.(Fig:7). Out of 34 patient not satisfied with virtual clinic treatment explanations 21(62%) expressed difficulty in understanding on phone and 13(38%) felt that their presence in clinic was essential when explanation of strategies for treatment plan are changed.(Fig:8) Out of 634 patients 472(88.9%) preferred combinations of virtual clinics with in-person clinics and 59(11.9%) preferred virtual clinic alone(Fig:10)

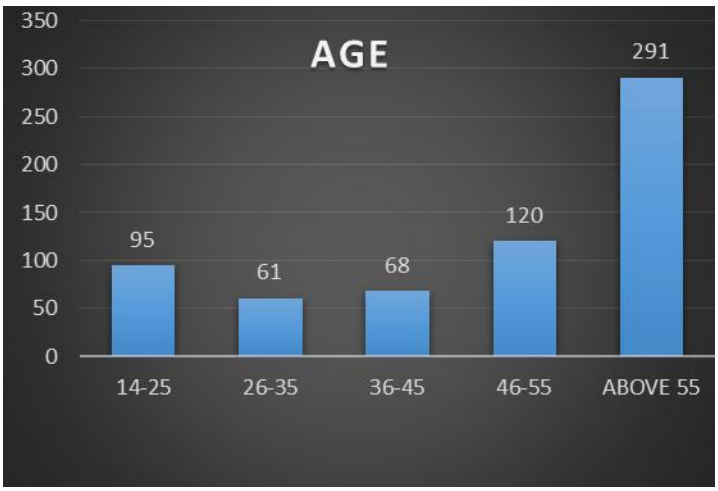
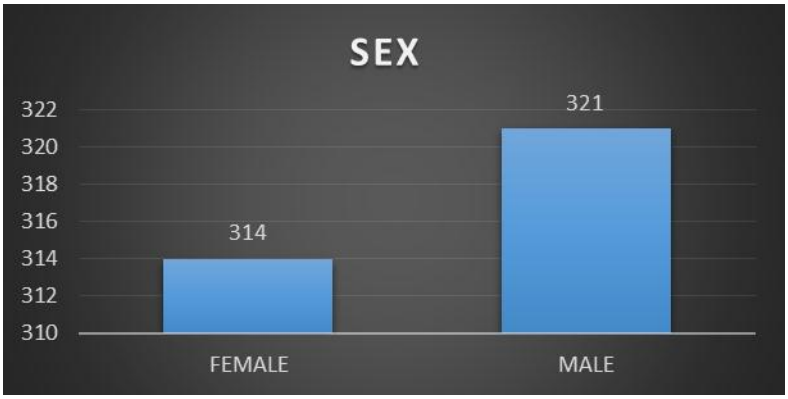


Fig: 1



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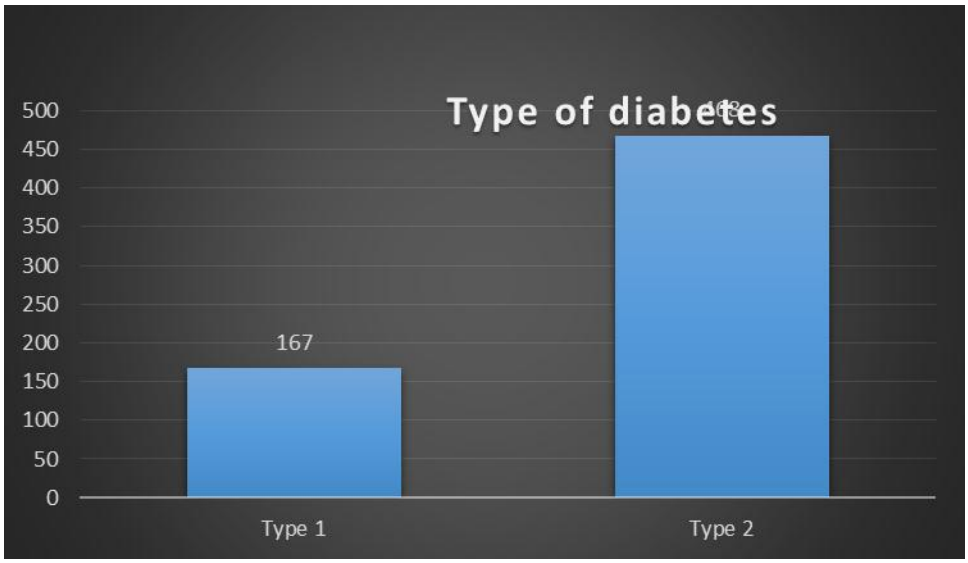

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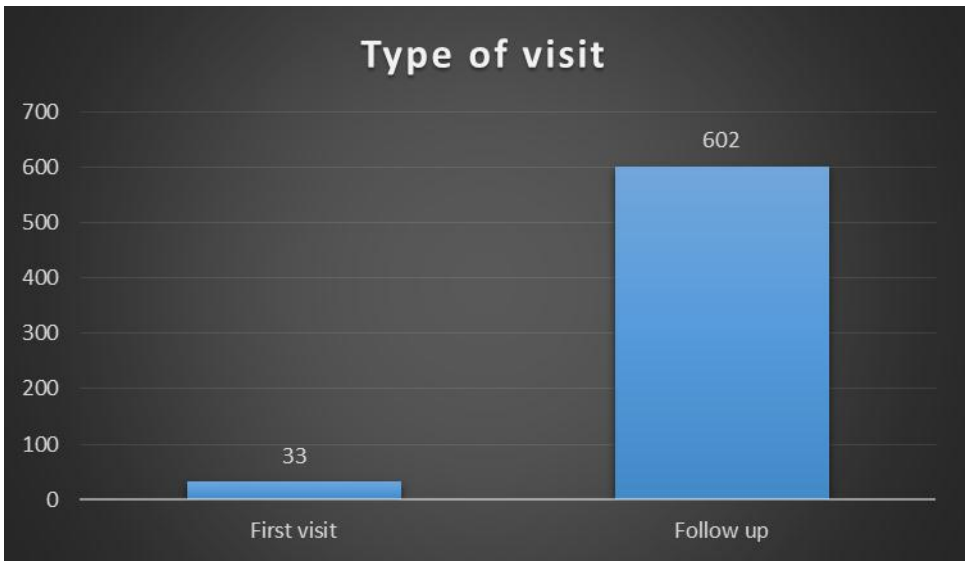

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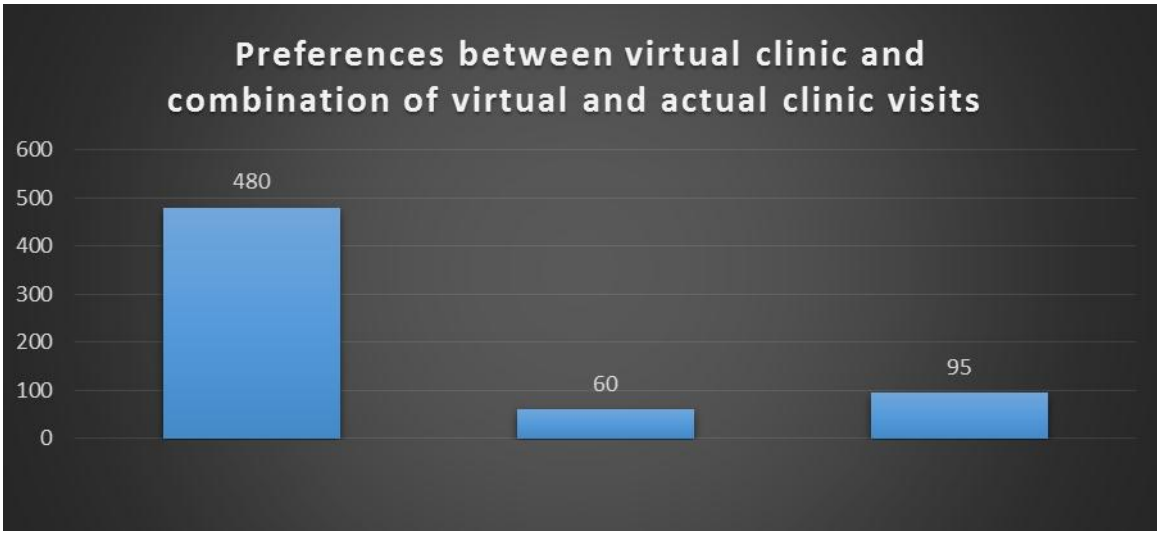

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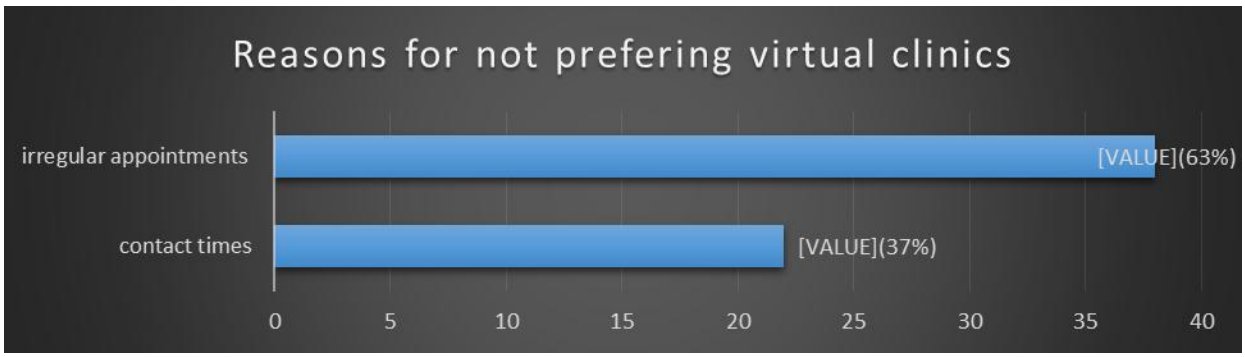

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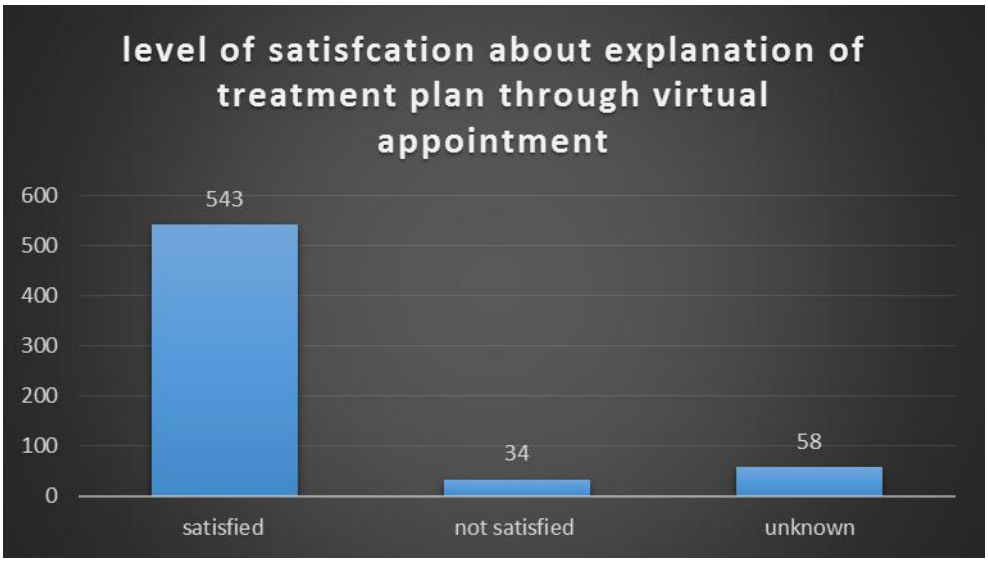

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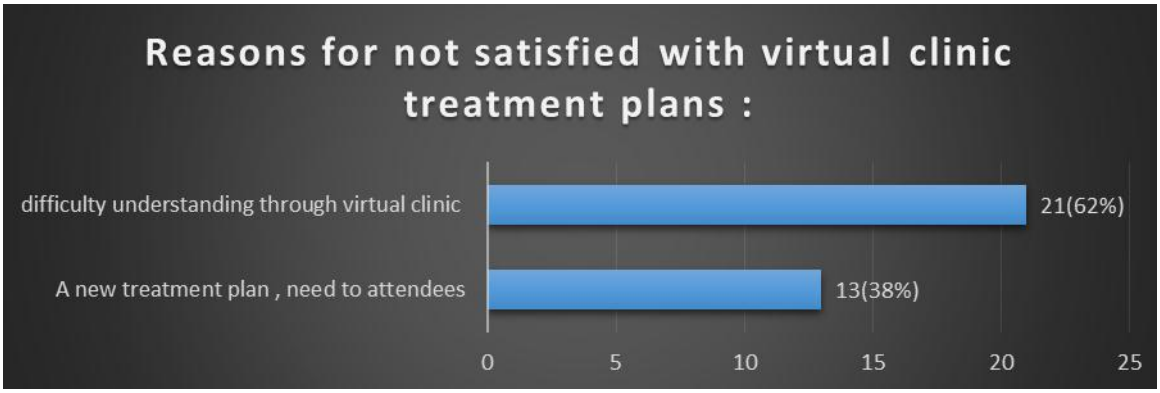

Fig: 8

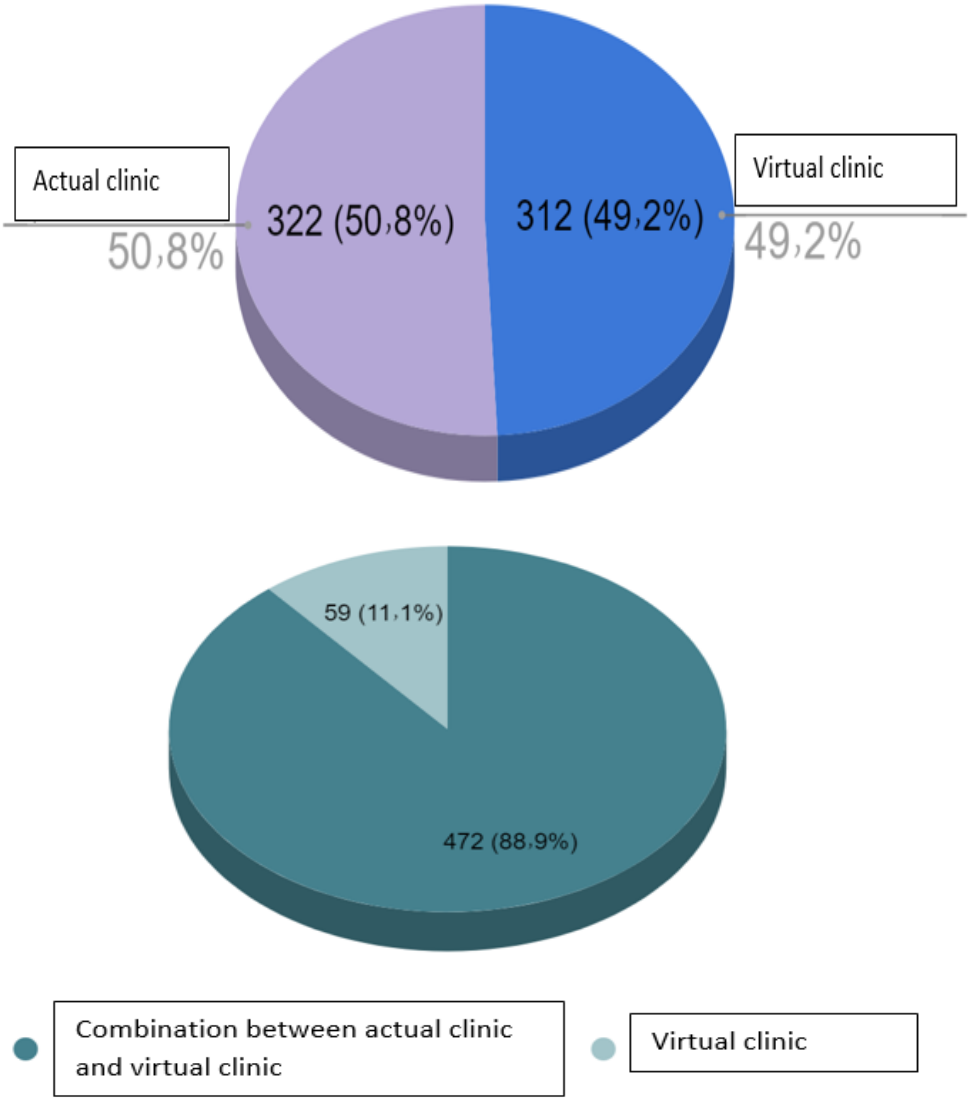

Figure:10

DISCUSSION

A global pandemic was declared by World health organization in March after Corona Virus infections (COVID-19) were identified in 2019 and rapidly spread all over the world. Routine in person appointments for non-essential services were cancelled. Persons with diabetes, cancer, chronic kidney disease were affected as they found that there was no immediate medical support

during the starting of pandemic.[7,8] Maintaining uninterrupted access to health care by Providers is essential when managing people with diabetes to prevent acute and chronic complications associated with this metabolic disease.[9,10] To maintain the continuity of care during the pandemic health care providers started transition to more technological services like telephone/ video conference calls. According emerging evidence, patients with diabetes can quickly adapt to virtual clinic visit paradigm.[11] To continue sustained diabetes care in King Fahd Armed forces Hospital in Jeddah in Saudi Arabia Quick started virtual care clinic for diabetes care. Diabetic educator clinic started to manage the diabetic patients in virtual clinic getting information about the blood sugar control, giving necessary instructions and providing medication at home if necessary. The diabetic educator virtual clinic were continued throughout the COVID-19 pandemic. Satisfaction is an important indicator of the quality of health services.[12] Despite several publications on patient satisfaction with virtual care clinics, it has been determined that this aspect of tele medicine require additional research.[13] The present cross sectional observational study was performed to determine the patients satisfaction regarding virtual diabetic educator clinic and to get into insight into further continuation of the virtual clinic even after the pandemic. A total number of 635 people with diabetes completed the survey. Male versus female ratio was almost similar. The follow up cases predominated amounting to 564, the majority of patients, 458(72%) were having TYPE2 diabetes. Preference for combined virtual and actual versus virtual clinic alone was high with percentage 472 (88.9%) preferred combined in person and virtual clinics. The reasons for not preferring the virtual clinic were Irregular appointments during pandemic and uncertain time of calls from virtual clinics. Regarding satisfaction with treatment plans by virtual clinic telephonic calls 543(85%) were satisfied by virtual clinic calls and 34(5%) were not satisfied. The reason for not satisfying were difficulty in understanding instructions by phone and feeling necessity to be personally present in clinic when new plans of treatment are planned.

CONCLUSIONS

The survey revealed that about half of the patients were satisfied with virtual clinics. Majority of them preferred combination of virtual and in person clinics. If large scale metacentric studies also show high preference to virtual clinics and combination clinics virtual clinics may be continued even after COVID-19 pandemic.

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