

Research Article

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Differences in Patient Satisfaction with Family Planning Care as a Result of the Modality of Delivery: In-Person Versus Telehealth

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SUMMARY

Family planning is known to be traditionally an in-person appointment; however, with the rise of telehealth services, many of these appointments can be conducted remotely or simultaneously with traditional in-person care. The ability to have both options for treatment methods, telehealth (video, phone, instant messaging) and in-person care, provides a well-rounded structure that can bridge gaps for patients. Therefore, the purpose of this research is to evaluate differences in patient satisfaction between individuals who received family planning services via telehealth and those who received them in person. Telehealth, also known as telemedicine, enables patients to access healthcare services remotely, often through phone or video platforms. Its adoption accelerated during the COVID-19 pandemic due to its convenience, flexibility, and reduced risk of disease exposure. While family planning services have traditionally required in-person visits, the shift toward hybrid and virtual models has broadened access, especially for underserved populations. This research explores the role of telehealth in family planning delivery within managed care organizations (MCOs), with a specific focus on satisfaction, access, and equity.

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Introduction

Family planning is known to be traditionally an in-person appointment; however, with the rise of telehealth services, many of these appointments can be conducted remotely or simultaneously with traditional in-person care. The ability to have both options for treatment methods, telehealth (video, phone, instant messaging) and in-person care, provides a well-rounded structure that can bridge gaps for patients. Even if one option is used more frequently than the other, providing patients with access has also been known to be frequently used and as a preferred option to improve the standard of care and to put patients at the center [1]. In family planning care, some procedures and diagnostic tests still require in-person visits, highlighting the importance of a care model that encompasses all options for connecting with and treating a patient. The future of telehealth is exciting as technology continues to advance, with increased bandwidth and improved interoperability between devices and healthcare facilities, thereby enhancing the continuity of care [2].

Telehealth helps in a variety of ways, especially in reproductive health. Family planning services encompass a broad range of care, including contraceptive counseling and access, pregnancy-related care, abortion services, screening and treatment for sexually transmitted infections (STIs); and efforts to improve maternal and child health outcomes according to WHO [3]. Telehealth is used to support various components of family-centered care. It can be utilized for educational sessions, accessing patient portals,

post-discharge follow-up visits, and a range of other applications (e.g., e-consults, contraceptive counseling, STI screening through mailed kits) [4]. While most telehealth research focuses on women's reproductive and family planning care, recent studies in men's sexual health suggest similar patterns: patients often value the convenience and privacy of virtual care, but older adults may prefer in-person visits, and have concerns about clinical thoroughness [5].

Telehealth requires a baseline level of technological infrastructure and literacy, including access to compatible devices, reliable internet or landline connectivity, and familiarity with or training to use secure telemedicine platforms. Both providers and patients must be willing to adopt the rapid transition to telehealth and learn the new features and uses. This rapid adoption can pose a challenge for individuals who lack the necessary infrastructure or literacy, particularly those without English proficiency [6].

There is a reasonable concern regarding a digital divide that further exacerbates the gap for underserved or marginalized communities, which is why implementation or expansion efforts must include pilot programs, training, educational sessions, and user-friendly UX/UI. Despite these challenges, telehealth can help strengthen the connection between patients and providers, reduce administrative burdens, and encourage patient self-management [7]. Telehealth can also reduce no-shows or cancellations from patients who have "functional limitations, high symptom burdens, or financial or geographic constraints," and improve patient satisfaction since people have more flexibility when receiving care. Health systems utilize telehealth services to reduce disparities

and reach underserved populations with proper deployment and investment, thereby creating a truly patient-centered system [8].

It is unclear whether there is a consensus on satisfaction across all delivery modalities (phone, video, in-person) in family planning services. found that women were more likely than men to use telemedicine, which reinforces the importance of examining telehealth specifically in the context of reproductive health and why it's important to understand if patients are satisfied with these services [9]. There is a consensus that telehealth options are reported as favorable and have many advantages; however, it is unclear if this is the consensus with family planning services because of the importance of in-person exams, procedures, and face-to-face support during this seemingly transitional period of life; however, there is a lack of sufficient research on user satisfaction in family planning services via telehealth in California [10-11].

Problem Statement

Although telehealth helps people access services they might not otherwise get, like those in rural areas or states with fewer providers, it's still unclear whether virtual visits provide the same level of emotional support, communication, or responsiveness as in-person care [6]. As managed care organizations expand their use of telehealth, understanding how patients experience this type of care can help ensure that access doesn't come at the cost of quality. As telehealth has become more common, there's still not enough research that compares patient satisfaction between virtual and in-person care, especially for family planning services [12].

This is important because family planning visits often involve deep personal conversations, and how patients feel during these appointments plays a big role in whether they trust their providers and feel their needs are being met [10]. There is a continued struggle within the healthcare system to improve equitable high-quality healthcare for millions of Americans that would promote improved chronic health care management. Per the Health Resources and Services Administration 80 million United States citizens live in areas where they do not have accessible primary care due to shortage. This is even more pronounced in rural areas and impoverished areas. The CDC states that people from rural areas are 20% more likely to die from chronic diseases [13].

Purpose of the Study

Patient satisfaction is often used as a measure of healthcare quality. It reflects not just how care is delivered, but also how providers listen, communicate, and respond to patient concerns. While Donabedian's work in the 1980s laid the groundwork for evaluating quality based on structure, process, and outcomes, more recent research has highlighted how satisfaction is now considered a key part of health system performance. Patient satisfaction is being used more often in digital care settings to evaluate how well healthcare systems are to meet patient needs, particularly in virtual formats. This matters because many systems are relying more on telehealth, and satisfaction data helps identify where care might be falling short [14].

Therefore, the purpose of this research is to determine the association in patient satisfaction between individuals who received family planning services via telehealth versus those who received them in person. Telehealth, also known as telemedicine, enables patients to access healthcare services remotely, often through phone or video platforms. Its adoption accelerated during the COVID-19 pandemic due to its convenience, flexibility, and

reduced risk of disease exposure. While family planning services have traditionally required in-person visits, the shift toward hybrid and virtual models has broadened access, especially for underserved populations. This research explores the role of telehealth in family planning delivery within managed care organizations (MCOs), with a specific focus on satisfaction, access, and equity.

This inquiry is grounded in prior research indicating that telehealth improves patient satisfaction by offering greater convenience, flexibility, and access, particularly for underserved populations [15]. Telehealth has the potential to improve access to care for adults facing barriers such as geographic distance, transportation, personal obligations, or mobility limitations. Existing research has highlighted several contributing factors to the underutilization of telehealth, including limited digital literacy, concerns about privacy and the quality of care, a lack of provider encouragement, and inconsistent reimbursement policies [16].

Significance of the Research

In California, patients still face barriers related to transportation, appointment availability, and clinic shortages, especially in rural areas or under-resourced communities [6]. Telehealth has been proposed as one solution to expand access by removing some of these geographical barriers. Further, found that among a wide range of services, telehealth effectiveness is equal to or greater than traditional care, showing that quality of care is not reduced despite the change in the delivery model [15]. However, while telehealth may improve convenience, it is crucial to understand whether patients are satisfied with this method of care for family planning services.

Understanding patient satisfaction is critical for evaluating whether telehealth can be a sustainable and effective option for delivering family planning care. While telehealth offers convenience and wider access, especially for those with geographic or mobility barriers, its success ultimately depends on how patients experience the quality and comfort of care delivered through these platforms [12]. This study is significant because it offers insight into how patients receiving care through telehealth compare their experiences to in-person visits. By examining satisfaction levels between these two groups, this research evaluates whether telehealth is genuinely meeting the needs of patients or if adjustments are necessary.

Conceptual Framework

This research proposal follows Donabedian's model of quality of care, linking attributes of structure, process, and outcomes in evaluating quality. The model supports linking delivery methods to care experience and perceived patient satisfaction [1]. To specify, the structure and setting refer to how care is accessed, which is the comparison of telehealth vs. in-person services. The process includes overall operation, ranging from communication and service delivery to follow-up efforts [17]. Lastly, the outcome is the patient's satisfaction with the modality of care. If healthcare is to be truly

patient-centered, then the care delivery model must be structured, designed, and delivered in multiple modalities that can fit patients' varying needs. This also includes using telemedicine as a complementary means in a patient's treatment plan, and not necessarily a replacement due to the nature of family planning services and procedures.

Dataset and Research Methods

Using data from the 2023 California Health Interview Survey

this research aims to assess whether the mode of service delivery (telehealth vs. in-person) is significantly associated with satisfaction levels among patients seeking family planning care [18]. Understanding this relationship can inform managed care organizations as they consider expanding and standardizing telehealth models to support equitable, patient-centered reproductive health services.

Administered by the UCLA Center for Health Policy Research, the California Health Interview Survey (CHIS) provides comprehensive, population-based data on a wide range of health topics from households across California. This research uses secondary data from the 2023 CHIS Adult dataset to explore patient satisfaction with telehealth in the context of family planning services. The first variable asks respondents about the type of family planning care appointment they have had within the past 12 months. Response options include telephone visit, video visit, both, or none. This variable is used to understand the modality of care, whether services were delivered virtually or not. The second variable measures satisfaction with the availability of phone or video care from their medical provider. Respondents rated their satisfaction on a 5-point scale ranging from "very satisfied" to "very dissatisfied." This variable allows for comparison between those who accessed family planning via telehealth and their reported satisfaction with that access.

Statistical Analysis

This research used quantitative methods to evaluate satisfaction with telehealth-based family planning services using data from the 2023 California Health Interview Survey (CHIS). Statistical Package for the Social Sciences (SPSS) was used to conduct descriptive and inferential analyses, including chi-square and independent samples t-tests. All variables were weighed using CHIS's population weight variable (RAKEDW0) to adjust for complex sampling and ensure findings were representative of the broader California population.

Two primary CHIS variables were used in this analysis. The first measures the type of family planning appointment received in the past 12 months. Responses were re-coded into a binary independent variable identifying appointment modality: (1) telehealth (phone or video) and (2) in-person. The second, asks respondents to rate their satisfaction with the availability of phone or video appointments from their provider on a 5-point Likert scale, ranging from "very satisfied" to "very dissatisfied." This was re-coded into a binary dependent variable:

(1) satisfied and (0) not satisfied, to facilitate statistical comparison. The research hypothesis posits that individuals who received family planning care via telehealth would report higher satisfaction with the availability of those services compared to those who received care in person. A chi-square test was used to examine the association between appointment modality and satisfaction. An independent samples t-test was then conducted to compare mean satisfaction scores between the two groups, using as a continuous variable. The statistical tests used are summarized in Table 1 below.

Table 1: Summary of Primary Statistical Analysis

Hypothesis	Dependent Variable	Independent Variable	Statistical Test
Patients who receive family planning services via telehealth are more likely to report satisfaction with the availability of telehealth care than those who receive in-person care	Satisfaction with the availability of telehealth services (modality)	Modality of the family planning appointment (SAT_Binary)	Descriptive Chi-Square Test

Findings and Analysis of Results

Descriptive analyses were conducted to examine differences in satisfaction by appointment modality. The mean satisfaction score was higher among patients who received family planning services via telehealth ($M = 0.9445$, $SD = 0.22891$) compared to those who received services in person ($M = 0.8612$, $SD = 0.34572$). Median satisfaction was 1.00 for both groups, indicating that most respondents in both modalities reported being satisfied. The total valid sample size for this analysis was 168,918 respondents, with 135,095 individuals in the telehealth group and 33,824 in the in-person group.

To further explore the association between appointment modality and satisfaction, a chi-square test of independence was conducted using the recoded binary satisfaction variable. The results revealed a statistically significant association between appointment type and satisfaction, $\chi^2(1, N = 168,919) = 2803.42$, $df = 1$, $p < .001$. The Likelihood Ratio Chi-Square was also significant, $\chi^2(1) = 2405.60$, $p < .001$ (Table 2). Among patients who had telehealth appointments, 94.5% were satisfied with the availability of telehealth services, compared to 86.1% of those who had in-person appointments. Even though there is a small effect size, it's still a statistically significant and a positive association between the variables.

Table 2: Test Statistics

Test Type	Value	df	Asymptotic Sig. (2-sided)
Pearson Chi-Square	2803.424	1	.000
Continuity Correction	2802.180	1	.000
Likelihood Ratio	2405.598	1	.000
Fisher's Exact Test	—	—	.000
Linear-by-Linear	2803.407	1	.000
Association	168919	—	—
N of Valid Cases			

This research set out to test whether people who received family planning care through telehealth were more satisfied with the availability of those services than people who went to in-person appointments. Based on the data in Table 3, the results support this idea, and the hypothesis is not rejected. An independent samples t-test was also conducted to compare satisfaction with the availability of telehealth services between patients who had telehealth appointments and those who had in-person visits. Results revealed a statistically significant difference in satisfaction

levels, $t(41,529.93) = 42.07$, $p < .001$. Patients who received telehealth care reported significantly higher satisfaction ($M = 0.9445$, $SD = 0.2289$) compared to those who had in-person appointments ($M = 0.8612$, $SD = 0.3457$) (Table 3). These findings not only reflect individual experiences but can also guide broader decisions on reimbursement, infrastructure, and hybrid care models in managed care organizations. The additional test reinforces the chi-square finding.

Table 3: Group Statistics and Effect Sizes for Satisfaction with Telehealth Availability by Appointment Modality

Modality of FP Appt.	N	Mean	Std. Deviation	Std. Error Mean	Cohen's d	Hed ges' g	Glass's Δ	95% CI (Cohen's d)
Telehealth (Phone/Video)	135,095	0.9445	0.22891	0.00062	0.325	0.325	0.241	0.313 – 0.337
In-Person	33,824	0.8612	0.34572	0.00188	—	—	—	—

Limitations

Since CHIS is a cross-sectional survey, it captures a single point in time and cannot determine cause and effect [18-19]. The survey focuses only on live telehealth (phone or video) and doesn't include other types of telehealth features like secure messaging or mobile apps, so it doesn't reflect the full range of telehealth use

Finally, the study is based on self-reported satisfaction, which may be affected by recalling bias or unrelated factors like dissatisfaction with medical outcomes [12]. It also doesn't account for personal factors such as digital literacy or provider-level differences that may influence satisfaction [6].

Discussion, Conclusion and Recommendation

The findings suggest that telehealth remains a valuable and increasingly accepted modality for delivering family planning services. Patients who used telehealth options, whether by phone or video, reported higher levels of satisfaction with the availability of care compared to those who accessed services in person. This aligns with existing literature emphasizing that satisfaction is closely tied to convenience and flexibility in healthcare access [12]. When patients can choose how they receive care, especially for sensitive services like family planning, they are more likely to feel understood and empowered, which enhances their overall satisfaction.

Moreover, telehealth appears to reduce barriers associated with geographic distance, time constraints, and mobility limitations, particularly for underserved populations. This reinforces the argument that flexible care options are not simply a convenience, but a necessary element of equitable, patient-centered care delivery [8]. The results also show statistically significant differences in satisfaction across modalities, confirmed through chi-square and t-test analyses. Those who received care through telehealth were significantly more satisfied with its availability. The effect sizes, while modest, indicate that modality meaningfully influences patient perception. This underscores the potential of telehealth to fill persistent access gaps, especially in regions where in-person services are limited or delayed. The implications of these findings are practical and timely. As reproductive healthcare access remains threatened in some states, telehealth offers a way to preserve patient autonomy and continuity of care [20].

Finally, health systems should invest in hybrid models that support both telehealth and in-person options, ensuring that care models are responsive to patients' needs and preferences. This includes expanding digital infrastructure, provider training, and consistent reimbursement policies to support telehealth availability. Looking forward, future research should examine whether patient satisfaction with telehealth varies across different demographics such as age, income level, or region. Understanding these patterns could help tailor care delivery models that better

serve specific communities. With thoughtful implementation and continued evaluation, telehealth has the potential to transform how reproductive health services are accessed and experienced, building toward a more responsive and equitable care system [21-22].

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