

Trends from the Field: Impact of Telecommuting on Clinician Absenteeism in Primary Care

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Abstract

Provider burnout is a challenge faced by most large healthcare systems. Like many hospital systems, our system has struggled with burnout and turnover in our primary care clinician workforce. In March 2020 due to COVID, our large safety-net system had to rapidly transform from primarily in-person care to primarily telehealth visits. We sought to understand how this change in our model of healthcare delivery to enable telecommuting would affect absenteeism among primary care clinicians. We transitioned all 192 primary care nurse practitioners and physicians in the fields of Internal medicine, Family medicine, Medicine-Pediatrics, and Geriatrics across our health system to predominately a remote telehealth schedule. During March-May 2019, the percentage of telehealth visits was less than 1%. The shift to telehealth Mid-March 2020, shows an increase in telehealth by 35.9%. Telehealth visit volumes shifted to 87.4% for the month of April 2020 while leveling to 58.4% in May 2020 as patients needed services that required in person visits. Our analysis shows that the average decrease in call off rate from March- May 2019 compared to 2020 was 40.8%. Telehealth includes telecommunication through a variety of platforms. For primary care clinicians, telehealth provides an additional tool to manage panels of patients with potentially greater ease and efficiency. We know that clinicians want to provide high quality care for their patients, and they want some flexibility and autonomy to do so. Telecommuting may offer those benefits to providers.

Introduction

Telecommuting is thought to have evolved in the 1970s from the desire to move the work to workers in order to alleviate traffic problems and reduce energy consumption¹. During this time period, federal and state governments began funding demonstration projects to examine the feasibility and effectiveness of telecommuting. Private companies in the 1970s realized that telecommuting could also be used to help address workforce issues - a way to recruit and hire computer programmers who were in high demand but short supply^{1,2}. Additionally, as the number of dual-income families increased in the 1970s and 1980s, telecommuting became an option for workers to manage work and family responsibilities. By 1997, 10,000 federal government employees were working from home or from other remote locations¹. Based on the Society for Human Resources Management (SHRM) annual survey of randomly selected professionals in 2014, 59% of US employers allowed form of telecommuting. According to this survey, 54% of respondents indicated that their organizations offered telecommuting intermittently, 29% on a part-time basis, and 20% on a full-time basis³ and these percentages did not change significantly from 2010 to 2014.

Of workdays each year, excessive absences can cause increased costs to employers and other negative including decreases in productivity, decrease in morale, employee turnover, decreases in patient satisfaction, unsafe care, and decreases in quality of care⁴. Factors such as sickness, lack of childcare, and unscheduled call-offs from work contribute to absenteeism in the workplace⁵. Absenteeism can also be related to stress and employee burnout⁶. Frequent absenteeism leave is a major concern to any

organization, especially hospitals. Healthcare workers are a necessary element in the effective delivery of health services to society.

In healthcare, prior to COVID-19, there were small movements towards telecommuting or provision of clinical care via telehealth. Since the start of the pandemic, the field of telecommuting has significantly expanded, with increased adoption due to increased bandwidth, expanded Internet access, improved reimbursement models, and greater acceptance from patients.

With the COVID-19 pandemic, healthcare organizations, including ours, found themselves needing to rapidly convert from traditional in-person care to telehealth in order to meet patient needs while reducing their risk of exposure to the virus. At the same time, telecommuting became a strategy to maintain social distancing requirements, keep our workforce safe and consolidate resources. For primary care clinicians, telehealth provides an additional tool to manage panels of patients with potentially greater ease and efficiency. We sought to understand how this change in our model of healthcare delivery to enable telecommuting affected clinician absenteeism.

Methods

This study was conducted at the MetroHealth Medical System (MHMS), an academic teaching hospital in Cleveland, Ohio, affiliated with Case Western Reserve University School of Medicine. MHMS is organized into Service lines, with the Adult Health & Wellness Service line (AWSL) managing 192 Adult Primary Care (Family medicine, Medicine-Pediatrics, and Internal Medicine) and Geriatric clinicians, serving 353,776 patient visits per year. AWSL also manages clinicians in Express care, Dentistry, and Behavioral health, none of whom were included in this study. MHMS is one of the largest, most comprehensive health care providers in Northeast Ohio. As the only public safety-net hospital in Cuyahoga County, MHMS remains the health care provider that welcomes all those in need, regardless of ability to pay. Of note, 75% of MHS patients are uninsured or covered by Medicare or Medicaid. MHMS also offers the region's largest urban-based network of community health centers focused on reducing health disparities and improving community health. In the past year, MHMS has served 300,000 patients at more than 1.4 million visits in its hospitals and its 21 health centers.

In response to the COVID pandemic, on March 16, 2020 we transitioned all 192 primary care nurse practitioners and physicians in the fields of Internal medicine, Family medicine, Medicine-Pediatrics, and Geriatrics across our health system (main campus and satellite clinics) to predominately a remote telehealth (TH) schedule over a 48 hour period. Clinicians spend at least half of their scheduled clinic time performing TH visits and the remaining time performing in-person visits. Some dedicated TH sessions were allowed to be conducted at home, with the amount of sessions each clinician was assigned to be at home doing TH sessions pro-rated based on their full-time or part-time status, such that about $\frac{1}{2}$ of a given clinician's clinical sessions were eligible to be performed off-site. We compared call-off rates from March 1, 2020 – May 30, 2020 to the same time period in 2019.

Results

All Primary Care Physicians, Nurse Practitioners and Physician Assistants, who work clinically throughout our 18 outpatient satellite locations were included in the evaluation (Table 2). In 2019, the provider distribution was 57 Nurse Practitioners, 1 Physician Assistant, and 143 Physicians. In 2020 the distribution was 58 Nurse Practitioners, 1 Physician Assistant, and 133 Physicians. In 2019, 49% of total providers had >80% clinical full-time equivalents. In 2020, that decreased to 47% clinical full-time equivalents. 46.8% reside within the Department of Family Medicine, 30.4% Internal Medicine, 14.9% Geriatric Medicine and 8% Medicine-Pediatrics.

Of the 201 clinicians, 69.5% were female and 30.5% were male. This remained consistent for 2020. The average age range of clinicians spans from 29-80. The age distribution was as follows: 2.99% were ages 29-30, 24.4% were ages 31-40, 20.9% were ages 41-50, 31.8% were ages 51-60, 18.9% ages 61-70, and 1% was over the age of 70.

The COVID pandemic created a need to change our delivery of care. On March 16, 2020, MHMS made the decision to deliver quality care through telehealth visits by telephone and permitted providers to remain safe at home in the process. While many other systems across the country invested millions of dollars to change their infrastructure, MHMS remained consistent to their mission; delivering high quality care, regardless of the ability to pay. The three months visit volume variance (March-May) 2019 to 2020 was (6.40%). Geriatrics observed a slight increase in visit volume from 2019 to 2020 at 2.52%.

Despite the unknown risk of reimbursement for telephone visits during the COVID pandemic, MHMS dramatically changed care delivery. Visit distribution from March 1, 2020 – May 30, 2020 to the same time period in 2019 shows a complete shift in in person versus telehealth visits. During March-May 2019, the percentage of telehealth visits was less than 1%. The shift to telehealth Mid-March 2020, shows an increase in telehealth by 35.9%. Telehealth visit volumes shifted to 87.4% for the month of April 2020 while leveling to 58.4% in May 2020 as patients needed services that required in person visits (Table 1). During this time period, providers were primarily performing telehealth remotely and were available for in-person care at least one day of the business week.

Table 1

Visit Distribution Combined	In Person	Telehealth
2019		
March	99.83%	0.17%
April	99.78%	0.22%
May	99.75%	0.25%
2020		
March	64.1%	35.9%
April	12.6%	87.4%
May	41.6%	58.4%

On average, Primary Care and Geriatrics had between 140-162 unplanned monthly call-offs in 2019. In the same three-month period in 2019, Primary Care and Geriatric providers tallied up 147 call offs, compared to 87 call offs during the same time period in 2020. Call off rate is number of call-offs divided by total number of providers by month.

The physician group showed a 24% decrease in call off rates for March, 52.1% decrease in April and 32.00% decrease in May when comparing 2019 to 2020 call off data. Similarly, the Nurse Practitioner group decreased call off rates by 30.30%, 63.13% and 60.00% respectively. This analysis shows that the average decrease in call off rate from March- May 2019 compared to 2020 was 40.81%, and the decrease in overall visit volume in 2020 was only 6.40% lower than the same time period in 2019 (Table 2).

Table 2: Call-off rates during the months of March-May in 2019 compared to the same time period in 2020

PERCENT CHANGE 2019/2020 CALL OFFS BY PROVIDER				
Provider TYPE	MARCH	APRIL	MAY	TOTAL
MD	-24.00%	-52.17%	-32.00%	-35.61%
APRN	-30.30%	-63.16%	-60.00%	-47.22%
PA	100.00%	0.00%	-100.00%	0%
TOTAL % CHANGE	-25.42%	-57.14%	-45.65%	-40.81%

Discussion

More than 40% of clinicians in the United States are employed by healthcare systems⁷, reducing individual flexibility to set their own schedule. Telecommuting refers to a work practice that involves substituting a portion of typical on-site work hours to work away from a central workplace – typically from home – using technology to interact with others as needed to conduct work tasks⁸. While many papers have been written about patient and clinician satisfaction with telehealth, there is a paucity of literature around how clinical operations are impacted by telecommuting in healthcare, most likely because prior to COVID, CMS has required that telehealth visits to be performed in a hospital setting.

In order to limit exposure to COVID, practice social distancing, keep patients at home, and keep clinicians healthy, legislation for reimbursement for telehealth changed swiftly to allow for telecommuting⁹. The change in reimbursement enabled healthcare organizations such as ours to change our delivery model, moving us from performing 5% of our visits via telehealth pre-COVID to 87% telehealth in primary care. In addition, many of those telehealth visits were performed from a non-hospital setting, typically from home, during this period.

The change in our model of healthcare delivery to a work-from-home telehealth model positively-affected call-off rates. Our review of the literature reveals a study of Chinese call-center employees which found that those randomly assigned to telecommute were more productive, more satisfied, and less likely to leave the organization than those working under standard arrangements¹⁰. Another study examining telecommuting work arrangements for medical coders¹¹, found those who were able to work in the home or satellite office or those who were able to work from any location (home, satellite office, or main office) were significantly more productive (based on quantity and quality of coding over a 6-month period of time) than those who worked only in the main office and those able to work from home or in the main office. In addition, IBM Western arbitrarily assigned employees to work partially virtually or entirely in the traditional office. Based on post-implementation surveys, they found that those who worked virtually reported being more productive than did the traditional workers¹².

Our study is unique in that it shows a positive association between telecommuting and clinician absenteeism, which has not been shown previously in the healthcare setting. As we have attempted to bring clinicians back into the traditional office setting for their TH visits, we have received feedback that many would like to continue telecommuting at least part-time. The top reasons cited for telecommuting by our clinicians have included:

- decrease in travel time with associated increase in efficiency
- work-family balance, especially for those who, during the pandemic, have children old enough to be online for school and young enough to need a guardian at home.
- COVID-specific quarantine procedures that enabled clinicians who were not sick but on home quarantine to continue to work

Our findings have significant implications for managers and suggests that telecommuting options may improve clinician efficiency by reducing absenteeism and improve clinician engagement by providing the

flexibility that some clinicians may be seeking. It may be reasonable for healthcare systems to consider offering telecommuting as a “reward” for a certain level of performance or commitment to system goals, as well as a way to enable clinical productivity during times when clinicians need to be home for non-illness issues.

The duration of data collection in our study is short, and we will continue to track this data over time to see the effect is lasting. We acknowledge that other factors influence call-offs, such as family medical leave, vacations, family obligations, and provider turnover, although these tend to be stable from year-to-year within MHMS. We also acknowledge that the data for this evaluation comes from a single safety net healthcare system and the findings may not be generalizable to non-safety-net healthcare system-affiliated

Conclusion

Telecommuting for primary care services within a large academic healthcare system is a new phenomenon, pushed forward by a much-needed rapid response to the COVID pandemic. Our study showed that telecommuting produced positive effects in provider efficiency by lowering absenteeism. Our study also suggests that the option for telecommuting is appreciated by clinicians and offers them the ability to work more efficiently and attain better work-family balance. In order for telecommuting to become mainstream for healthcare clinicians, future studies are needed to understand what amount of telecommuting offers the right balance of productivity, flexibility and efficiency for clinicians while also balancing career advancement and appropriate access for patients.

Declarations

Ethics approval and consent to participate

N/A

Consent for publications

All authors consent

Availability of data and materials

N/A

Competing interests

N/A

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Author roles

KT and KB conceived idea and carried it out, KT and AC developed the manuscript, KT and AC led the analysis, KB and FR assisted with analysis, FR assisted with final manuscript development and editing, KB retrieved all of the data

No conflicts of interest for any of the authors

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