Provider and Staff Satisfaction with Telemedicine Implementation: A Quality Improvement Project

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PROBLEM STATEMENT
• Interactive telemedicine system is an innovative way of caring for patients from a remote location in real time.
• Telemedicine allows providers to continue to evaluate and treat patients without physical interaction.
• 1 in 5 physicians are currently using interactive telemedicine to care for patients.
• Providers' satisfaction with the use of telemedicine is viewed as a major component in the success of these systems and is imperative to the sustainability of the system.

PROJECT PURPOSE
• The purpose of this quality improvement project is to assess, educate, and re-evaluate the satisfaction of providers while implementing interactive telemedicine.
• This project focused only on those who utilized the telemedicine system in practice.

MODEL/NURSING THEORY
• The Person-Centered Care Theory by Carl Rogers was utilized for this project. It involves treating people as individuals, understanding and treating the problem and not dismissing their fears. It's primary focus is developing a trusting relationship and excellent communication.

METHODS
Subjects (Participants)
• The target population of this project included the employees that have direct contact with patients during standard practice visits, as well as telemedicine visits
   • Office Managers
   • Nurse Practitioners
   • Physician Assistants
   • Physicians
   • Medical Assistants

•Setting
• The study was set in an urgent care health system in a rural town.
• The clinic was in the beginning stages of implementing an interactive telemedicine system.

•Instruments/Tools
• A survey was used to assess satisfaction before and after implementation of the telemedicine system.

•Intervention and Data Collection
• In order to execute, informed consent was obtain from all employees within the given health system about the project.
• Demographic information was obtained.
• All questions relating to the study was answered at length.
• The initial survey was then given to assess the providers initial thoughts regarding the telemedicine system.
• Education on how to implement and use the telemedicine system was provided.
• Formal use of the telemedicine system was then implemented in clinical practice.
• After one month, a second survey, identical to the first survey, was administered to assess satisfaction with the system.
• The outcomes of the surveys were were converted to a scoring system, based on a 100 pt scale, and statistical analysis was performed

Results
What is your job title within the Company?
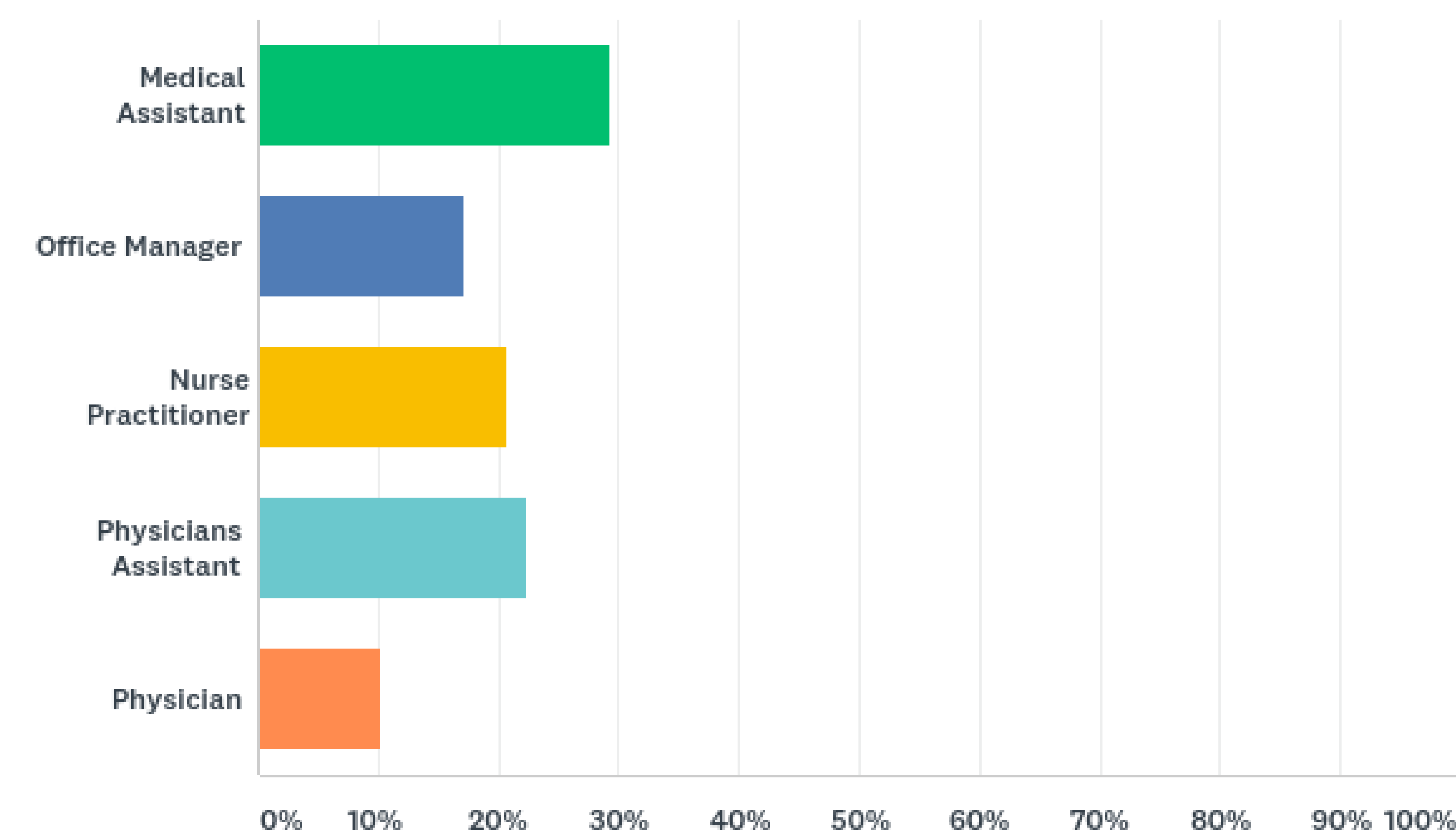
Paired Samples Correlations		N	Correlation	Sig.
Total Score	Pre & Post	53	0.121	**0.386**
Question 1	ImprovePre & Improvepost	53	-0.113	0.419
Question 2	ProducPre & ProducPost	53	0.153	0.273
Question 3	LikePre & LikePost	53	-0.118	0.400
Question 4	AblePre & AblePost	53	0.181	0.194
Question 5	ExpressPre & ExpressPost	53	-0.065	0.642
Question 6	MetPersonPre & MetPersonPost	53	0.048	0.734
Question 7	ComfortPre & ComfortPost	53	0.124	0.374
Question 8	AcceptPre & AcceptPost	53	-0.030	0.834
Question 9	DeliverPre & DeliverPost	53	0.116	0.410
Question 10	SatisfyPre & SatisfyPost	53	-0.014	0.920
Question 11	PhysicalPre & PhyiscalPost	53	0.038	0.788
Question 12	VideoPre & VideoPost	53	0.316	**0.021**
Question 13	PrivacyPre & PrivacyPost	53	-0.163	0.244

DISCUSSION
• The purpose of this study was to analyze providers preconceived notions about telemedicine, educate and have providers utilize telemedicine, and re-assess the satisfaction among the participants in its utilization.
• Overall, this study demonstrated that there was no statistically significant improvement in provider satisfaction after utilizing telemedicine in an acute care setting.
   • Although this was not statistically significant, when evaluated on gross examination, there was definitely an improvement of scores.
• When providers were asked to evaluate the statement "video visits save me time," there was a statistically significant improvement in those who agree.

IMPLICATIONS FOR ADVANCED PRACTICE NURSING
- Although not statistically significant, the gross improvement of satisfaction as demonstrated by the total score indicates that telemedicine would be well received by all providers, including APRNs. Implementation of the system definitely helps to save time, which would allow APRNs to evaluate and treat more patients.

SUSTAINABILITY
• Due to an unforeseen pandemic (COVID-19 Virus), the health system had to make major adjustments to their business.
• Overall, healthcare providers had high satisfaction with the system, therefore likelihood of sustainability is high.
• Though assessment of sustainability was difficult, this situation also raised increased reasoning to implement interactive telemedicine.

REFERENCES
Duplantie Julie, Gagnon Marie-Pierre, Fortin Jean-Paul, & Landry Rean. (2006). Implementing telehealth to support medical practice in rural/remote regions: what are the conditions for success? *Implementation Science*, (1), 18.

Satisfaction for use of telemedicine system remains high regardless of whether education was provided.

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