Introduction and Socialization of the SMART SOP (Standard Operation Procedure) Application to Malang Community Health Center Nurses

CAFrengki Apryanto [ID]

STIKes Widyagama Husada Malang, Indonesia
CACoresponding Author

Article Information	Abstract
	Technology in health services, both in hospitals and community health centers, plays an important role in increasing the effectiveness and efficiency of nurses' performance. One of the technological supports is the use of the SMART SOP application so that nurses' tasks can be effective, and efficient and reduce the risk of errors thereby improving the quality of service. The targets for this activity were Malang Community Health Center nurses. This activity aimed to increase knowledge and skills in using the SMART SOP application. The methods used include lectures, discussions, and simulations of application use. Include The results showed an increase in knowledge from an average score of 60.2 to 96.4 and the Mann-Whitney test shows p-value=0.000, which meant there was an influence of community service program on target knowledge. Meanwhile, skills in using the SMART SOP application on average increased to 85. The knowledge and skills possessed by nurses are important factors in adopting the use of SMART SOP in the workplace. With a good understanding of the working principles of SOPs and technological skills, nurses can more easily understand and implement procedures based on smart SOPs.

INTRODUCTION

Service technology in hospitals has developed rapidly, encouraging various innovations that can increase the effectiveness and efficiency of the work of medical and non-medical staff in health services, whether hospitals, community health centers, or private medical centers.

Currently, patient safety is a globally important issue that must be implemented in every hospital and ideally placed as a top priority. This is directly related to the quality of service and reputation of the hospital. The development of science and technology in health services, especially in hospital environments, makes service procedures increasingly complex so that the potential for unexpected incidents or adverse events increases (Seminar et al., 2023).

Standard Operating Procedures (SOP) are part of nursing practice standards which include health service norms, documentation, nursing records, and service nomenclature. With the Health Services Law, the Nursing and Midwifery Law, and the Law on Improving the Quality, Safety, and Accreditation of Health Services, health institutions are required to establish, develop, and maintain safety systems and service quality. This includes the preparation and implementation of procedures for the health services provided (Galic et al., 2019).

Previous research shows that the implementation of SOPs at the Karangploso Community Health Center is in the good category at 66.7% and the evaluation of SOPs by the person in charge of inpatient care is the lowest in the not good category, namely 16.7%, so overall after evaluating the SOPs at the community health center most starting from the implementation, completeness, revision, storage of e-files and archiving by the person responsible for inpatient care regarding SOPs has not been carried out effectively with a percentage below 50% (Wonda, 2021).

The Ministry of Health will continue to strive to improve health services responsive, innovative, and efficient through the implementation of various transformation programs health. However, there must be comprehensive awareness that the six pillars of health transformation can be enforced for better change if there is close collaboration and strong synergy between the central government, regional governments, and all elements of society. The six pillars are: 1) Transformation of Primary Services; 2) Transformation of Referral Services; 3) Transformation of the Health Resilience System; 4) Transformation of the Health Financing System; 5) Transformation of Health Human Resources, and 6) Transformation of Health Technology (Kementerian Kesehatan Republik Indonesia, 2023).

Based on survey results from 10 community health center nurses, 10 people had never received socialization about SMART SOP, but they had heard of applications such as e-health, but they had not been implemented optimally.

The aim of this service activity is to increase knowledge and improve skills for using SMART SOP so that performance effectiveness and efficiency can be achieved.

METHOD

The implementation of this service activity started on August 30, 2024, and was carried out in stages, starting with a survey to find out and obtain data on community health center nurses and analyzing the possibility of using the SMART SOP application. The planning stage was to map partner problems and provide solutions through outreach activities. The activity stage started with socialization, counseling and mentoring, and evaluation for the sustainability of activities. The activity was carried out at STIKES Widyagama Husada Malang. The method used lectures, discussions, and simulations of the use of SMART SOP. The measurement of success indicators used pretest and posttest questionnaire instruments to determine the partner's level of knowledge. Changes in partner knowledge were analyzed using Mann-Whitney ($p < 0.05$). Meanwhile, skills in using the SMART SOP application were carried out only through final evaluation, because at the beginning they had never been exposed to the application.

RESULT AND DISCUSSION

Public services are community service institutions to meet people's basic needs, namely health (Amirotul Luthfiyah & Imelda Dian Rahmawati, 2024). A Public Health Center is a health service facility that carries out public health efforts and first-level individual health efforts, prioritizing promotive and preventive efforts to achieve the highest level of public health in the work area (Dianaurelia et al., 2024). Nurse performance is the actions of a nurse carried out in

accordance with their respective authority and responsibilities in accordance with law, norms, and ethics to provide satisfaction to service users (Rikwan et al., 2022). Nurses are the spearhead of health services at community health centers because they are at the front line in providing direct services to the community. Nurses have an important role in carrying out various tasks, from health checks, providing health education, and basic to advanced care measures, to supporting efforts to prevent and control disease. They are often the medical personnel most easily accessible to the public, especially in areas far from main health service centers. With the active involvement of nurses, community health centers can improve the quality of service and bring health services closer to the community, so that better access is created and efforts to improve community health can be achieved more optimally.

Standard operating procedures (SOPs) are important elements of a rigorous quality management system (Drake et al., 2021). One effort to achieve quality service is that every nurse must apply Standard Operating Procedures (SOP) in every nurse's actions. Patient safety aims to improve service and avoid malpractice claims. Standard Operational Procedures (SOP) are standards that must be used as a reference in providing every service. These performance standards can also be used to assess the performance of government agencies internally and externally.

Another study showed that nurses' compliance with SOPs was still not optimal. This is shown by the low level of compliance of emergency room nurses with SOPs in implementing every nursing action which can have an impact on reducing the quality of hospital services and can create obstacles to the development of the nursing profession. The research results showed that of the 12 informants, the majority of the interviews with the main informants on average had implemented Standard Operating Procedures (SOP) in carrying out nursing actions, while the key informant, namely the Head of the Emergency Room, said that the implementation of SOP in the Emergency Room had been running smoothly. Good, but if there is an emergency patient the SOP is not fully operational. Meanwhile, the Head of Nursing said that 90% of the staff in the ER (Emergency Room) already have emergency certificates, so on that basis, it is very easy for us to convey the SOP socialization. The conclusion is that the average informant already

knows about SOP and the results of direct observation with observations regarding Nurse Compliance with the Use of Nursing Standard Operating Procedures (SOP) are obtained from 12 actions, there are 8 actions carried out by SOP (Usman Kombih, 2018). Based on these results, it shows that SMART SOP has enormous potential in supporting the effectiveness and efficiency of nurse performance which can ultimately improve the quality of service.

Barriers to implementing nursing SOPs are influenced by the condition of the unit and the effectiveness of supervision. When the room is busy or full of patients, nurses do not always ensure that the actions they take are in accordance with the SOP, especially for frequently performed actions, which tend to be followed based on daily habits without referring directly to the SOP. Nurses rarely check SOPs to ensure the suitability of the care provided. For actions that are rarely or have never been done, nurses generally ask experienced colleagues. However, if no colleague has ever carried out this action, the nurse will refer back to the SOP. Lack of supervision from supervisors or coordinators is an inhibiting factor in implementing SOPs, especially in inpatient rooms. The results of evaluating SOPs through interviews show that without supervision from supervisors or unit coordinators, SOPs tend not to be implemented, and nurses more often rely on habits rather than ensuring compliance with applicable SOPs (Wonda, 2021). By using SMART SOP, these obstacles can be overcome properly.

Other research through the application of information technology shows that knowledge about nursing SOPs before the application of a nursing SIM is in the good category 43.7% (7 people), in the sufficient category 50% (8 people), and 6.25% (1 person) in the poor category while the knowledge SOP after driving license application in good category 62.5% (10 people), fair category 37.5% (6 people). In the Wilcoxon ranks test analysis with SPSS 16 at the significance level ($\alpha = 0.05$), the p-value = 0.001 (p-value < 0.05). In conclusion, the nursing SIM application has a significant influence on knowledge of SOPs in the children's room at Saiful Anwar Hospital Malang (Indari, 2015). Other research shows that the development of other Android-based applications allows doctors and nurses to access patient medical records online and obtain the necessary information about the patient's condition, medical history, and drug prescriptions.

This can simplify the patient care process and improve coordination between doctors and nurses (Sumarno et al., 2023). Recent studies have underscored the significant positive impacts that innovative educational methods, such as mobile applications, have on nursing students' learning outcomes (Alkhazali et al., 2024).

SMART SOP application socialization activities play an important role in increasing the knowledge and skills of nurses in community health centers regarding the use of this application. This socialization has proven to be effective, as can be seen from the increase in nurses' knowledge and ability scores in operating SMART SOP. With a better understanding, nurses can apply SOPs more precisely and consistently, which ultimately contributes to improving the quality of health services. In addition, implementing appropriate SOPs helps minimize the risk of errors in services, so that the quality of services at community health centers can continue to be maintained and improved.

Successful Implementation of Activities

In its implementation, participant attendance reached 80% in each activity. All resource persons have presented all the material and its explanations in an interesting way so that it is easy for partners to accept and digest. Every stage of the ongoing activity ran smoothly.

Several indicators serve as benchmarks for the success of this PKM activity, including Increased knowledge of SMART SOP, and skills in using the SMART SOP application.
Measurable indicators of success are changes in the understanding of knowledge, after the activity stages take place, all knowledge increases. The results of the pre-test and post-test using a questionnaire become an instrument for the success of the activity to measure indicators of partner knowledge.

Table 1. Knowledge Level

Mean		
N	Pre-Test	Post Test
30	60,2	96,4
		P=0,000

The results show an increase in knowledge from an average score of 60.2 (Poor level of knowledge) to 96.4 (Good level of knowledge),

which means there is an influence of community service programs on target knowledge. Meanwhile, skills in using the SMART SOP application on average increased to 85. The results show that there is an effect of treatment on nurses' knowledge. Changes in the level of knowledge are an indicator of the success of activities.

CONCLUSION

Several indicators serve as benchmarks for the success of this Community service activity, including increased knowledge of SMART SOP, and skills in using the SMART SOP application. To continue the socialization of the SMART SOP application in community health centers, this activity can later be continued with a coordination meeting with the head of the community health center, the person in charge of the inpatient room, and the nursing sector and maintain communication with partners, so that if there are difficulties they can be assisted and facilitated.

SUGGESTION

Providing a well-structured manual for Community Health Center's nurses. The manual should include an introduction to the SMART SOP application, clear and practical case examples for training nurses in clinical scenarios, and straightforward troubleshooting steps to address common technical issues. This approach ensures that users can quickly understand and effectively utilize the application, enhancing their confidence and proficiency in its use. Emphasize how the app helps ensure consistent implementation of SOPs, improving the quality of patient care.

CONFLICT OF INTEREST

There is no conflict of interest in this public service activity.

REFERENCES

Alkhazali, M. A. N., Totur Dikmen, B., & Bayraktar, N. (2024). The Effectiveness of Mobile Applications in Improving Nursing Students' Knowledge Related to Pressure Injury Prevention. *Healthcare (Basel, Switzerland)*, *12*(13). https://doi.org/10.3390/healthcare12131264

Amirotul Luthfiyah, & Imelda Dian Rahmawati. (2024). Analisis Kualitas Pelayanan Kesehatan di Puskesmas Porong Kabupaten Sidoarjo. *Jembatan Hukum: Kajian Ilmu Hukum, Sosial Dan Administrasi Negara*, *1*(3), 212–220. https://doi.org/10.62383/jembatan.v1i3.533

Dianaurelia, Y., Wulandari, C. I., & Kusumaningsih, I. (2024). Pengalaman Perawat Puskesmas Menjalankan Peran Perawat di Pelayanan Kesehatan: Studi Kualitatif. *Journal of Nursing Innovation*, *3*(2), 55–69.

Drake, S. A., Pierce, M., Gumpeni, P., Giardino, E., & Wolf, D. A. (2021). Quality Assurance Through Standard Operating Procedures Development and Deviation: A Medicolegal Death Investigation Systems ReSOPnse to the COVID-19 Pandemic. *Journal of Forensic Nursing*, *17*(1), 61–64. https://doi.org/10.1097/JFN.0000000000000305

Galic, D., Franjic, I., Omanovic, S., Krtalic, P., Mahmutbegoniv, H., Blaz, S., & Viteskic, S. (2019). Standard Operating Procedu Nursing in Primary Health Care. In *Modul Manajemen Pasien Safety* (1st ed.). Fondacija fami. http://repository.uki.ac.id/2730/1/BUKUMODULMANAJEMENPASIENSAFETY.pdf

Indari. (2015). Pengaruh Aplikasi Sistem Informasi Manajemen (Sim) Asuhan Keperawatan Anak Berbasis Teknologi Terhadap Pengetahuan Tentang Standar Operasional Prosedur (Sop) Keperawatan Di Ruang Anak Rumah Sakit Saiful Anwar Malang. *Jurnal Kesehatan Hesti Wira Sakti*, *2*(3), 31–36.

Kementerian Kesehatan Republik Indonesia. (2023). *Transformasi Kesehatan Mewujudkan Masyarakat Indonesia Sehat dan Unggul* (1st ed.). Kemenkes RI.

Rikwan, Sudirman, Fajrah, S., Paundanan, M., Dafer, F., & Purwiningsih, S. (2022). Pelayanan Perawat di Puskesmas. *Jurnal Ilmiah STIKES Kendal*, *12*(3), 623–628.

Sumarno, S., Wisaksono, A., Hakim, M. L., Yulianto, R., & Hindarto, H. (2023). Optimasi Perawatan Pasien Rawat Inap Berbasis Android Untuk Pemantauan Cairan Infus. *Jurnal Media Informatika Budidarma*, *7*(3), 994. https://doi.org/10.30865/mib.v7i3.6060

Suminar, S., Rusnita, R., Wisma Sari, S., Hanung Lidiana, E., Rino Vanchapo, A., Saleh Dunggio, A. R., & Rosida, R. (2023). Nurses' Knowledge in Implementing Standard Operating Procedures on Patient Safety in Regional Public Hospitals. *International Journal of Health Sciences*, *1*(2), 85–92. https://doi.org/10.59585/ijhs.v1i2.57

Usman Kombih, S. (2018). *Analisis Kepatuhan Perawat Terhadap Penggunaan Standar Prosedur Operasional (SOP) Keperawatan Di IGD RSUD Kota Subulussalam* [Institut Kesehatan Helvetia]. https://doi.org/10.56338/mppki.v3i2.1083

Wonda, A. (2021). *SMART SOP (Standar Operasi Prosedur) Berbasis Aplikasi di Ruang Rawat Inap Puskesmas Karangploso Malang* [STIKES Widyagama Husada Malang]. https://repositori.widyagamahusada.ac.id/id/eprint/560/1/SKRIPSI ARLING WONDA FIKS CDDDD.pdf