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TELEMEDICINE AS MONITORING TOOLS FOR CAESAREAN SURGICAL SITE INFECTION DIAGNOSTIC: SYSTEMATIC REVIEW

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ABSTRACT
Post-cesarean surgical site infection (SSI) is a common complication, especially in resource-limited areas. This systematic review aims to evaluate the effectiveness of telemedicine as a diagnostic and monitoring tool for post-cesarean SSI. Data were collected through a search in three electronic databases (PubMed, Scopus, and BMJ Journals) The keywords used were "Telemedicine" OR "Remote Monitoring" OR "Digital Health" OR "mHealth" OR "eHealth" AND "Caesarean Section" OR "Cesarean Delivery" OR "C-Section" AND "Surgical Site Infection" OR "SSI" OR "Postoperative Infection" AND "Diagnosis" OR "Detection" OR "Monitoring",then there are 11 met the inclusion criteria and were further analyzed.. The review results indicate that telemedicine can improve access to health services, facilitate early diagnosis, and reduce the financial burden of patients by minimizing the need for physical visits. However, several studies noted low sensitivity despite high specificity. This approach is effective in eliminating SSI cases but less than optimal in detecting positive cases. Telemedicine is helpful and offers an innovative solution for monitoring post-cesarean SSI, especially in resource-limited areas.

Keywords: caesarean wound care; postpartum infection monitoring; SSI diagnosis; telemedicine

INTRODUCTION
Surgical site infection (SSI) is one of the most common complications after cesarean section, which can lead to severe maternal morbidity, prolonged recovery time, and increased costs of care (Daniel et al., 2023). This challenge is further exacerbated in developing countries by limited access to health services and a lack of routine postoperative check-ups. SSI is often undiagnosed in the early stages, worsening its impact on maternal health (Ziogou & Kokolakis, 2023). Early identification is crucial to prevent further complications and ensure timely care. Globally, the prevalence of SSI after cesarean section ranges from 3-15%, with rates much higher in low- to middle-income settings, where it can reach 20-25% (Nkurunziza et al., 2022). In resource-limited settings, such as rural or remote areas, distance to health facilities, transportation costs, and shortage of health workers are significant barriers to postoperative care (Wloch et al., 2020). These issues have a considerable impact not only on maternal health but also on their families and the health system as a whole, which must bear the economic burden of preventable complications.

In the last decade, telemedicine technology has emerged rapidly as a potential solution to address challenges in access to healthcare (Alfouzan et al., 2019). Initially, telemedicine was used for remote consultations in chronic disease and general health management. However, with the advancement of smartphone technology and image-based health applications, this approach has begun to be applied in postoperative care, including surgical wound monitoring (Ahmed et al., 2020). Several early studies have shown promising results in detecting SSIs using telemedicine, although there are still limitations regarding clinical validation and applicability across geographic contexts (Tebeu et al., 2021). Telemedicine offers an innovative solution by allowing patients to report symptoms and send wound images directly to healthcare providers, minimizing the need for physical visits (Hirani et al., 2022). In addition, this approach allows for faster diagnosis, earlier intervention, and potentially a reduction in serious complications (Arya et al., 2021). In rural areas, this technology-based

intervention can also involve community health workers as liaisons, expanding the reach of healthcare services at a more affordable cost (Mangold et al., 2020). This solution can be integrated into health systems to improve the efficiency and effectiveness of postoperative care.

This systematic review aims to evaluate the effectiveness of telemedicine in diagnosing and monitoring post-cesarean section surgical site infections, especially in low-resource settings. By comparing the outcomes of telemedicine approaches with conventional methods, this study is expected to provide strong scientific evidence of its benefits. In addition, the results of this study can be a basis for developing guidelines for implementing telemedicine in various contexts, supporting health policies, and increasing access to quality care for mothers who give birth through cesarean section.

METHOD

This systematic review was conducted in accordance with the PRISMA guidelines. The literature search was conducted through three electronic databases: Pubmed, Scopus, and BMJ Journal. The search was conducted on December 18, 2024. These keywords were applied using Boolean Logic (AND, OR) in the search for articles. The combination of keywords and MeSH terms was then adapted to other databases. The keywords and subject titles used in the article search were "Telemedicine" OR "Remote Monitoring" OR "Digital Health" OR "mHealth" OR "eHealth" AND "Caesarean Section" OR "Cesarean Delivery" OR "C-Section" AND "Surgical Site Infection" OR "SSI" OR "Postoperative Infection" AND "Diagnosis" OR "Detection" OR "Monitoring" published from 2019 to 2024 in English.

Eligibility criterias in this systematic review have inclusion and exclusion criterias (Table S1). The selected articles are then subjected to a quality assessment using CASP.

Table 1.
Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Participants	Women undergoing cesarean section. Studies involving patients at risk or suspected of post-cesarean section surgical site infection..	Studies that are not specific to post-cesarean section patients. Studies in animals or laboratory models.
Intervention/Exposure	Telemedicine (mHealth, health apps, video or image-based communication, or digital devices) can be used to monitor and diagnose surgical site infections.	Studies that do not use telemedicine as the primary monitoring tool. Studies that focus solely on treatment without diagnostic elements..
Comparison	Studies comparing telemedicine with conventional methods (eg, in-person visits to a clinic or hospital). Studies comparing different telemedicine methods.	Studies that do not involve comparative methods or are only descriptive.
Outcome	Studies reporting diagnostic accuracy (sensitivity, specificity), efficiency, patient acceptability, or related clinical outcomes.	Studies that do not report outcomes related to diagnostics, effectiveness, or efficiency of telemedicine.
Study Design	Randomized controlled trial, cohort, Quasi experimental study	Letter to editor, Commentaries, Abstract only, Case series, case reports, reviews, Discussion papers, Case control study, Case report, Case series, Prevalence study, Qualitative study, and Systematic review. Cross sectional study, Cohort study
	Only published articles with English language restriction till January 2019	Unavailable full-text articles

RESULT

Based on the results of the article search, 298 articles were obtained from adjusting keywords with details in the BMJ Journal database (n = 112), Scopus (n = 101), and Pubmed (n = 85), and of the 298

articles found, a check or examination of duplicate articles was carried out, and 82 articles were found to be the same so they were removed and the remaining 216 articles. The reviewer then filtered based on the title that matched the theme; 105 articles that did not match were obtained, so the results obtained were 111. The reviewer then screened based on the abstract, obtaining 57 inappropriate articles so that 44 articles remained appropriate. The reviewer then conducted a screening of eligibility based on the inclusion criteria and exclusion criteria that had been set, so that 10 articles were obtained that could be used in this review. The results of this review journal selection can be seen in PRISMA. The selected 10 articles, 7 were cohort study, 4 studies were randomized controlled trial.

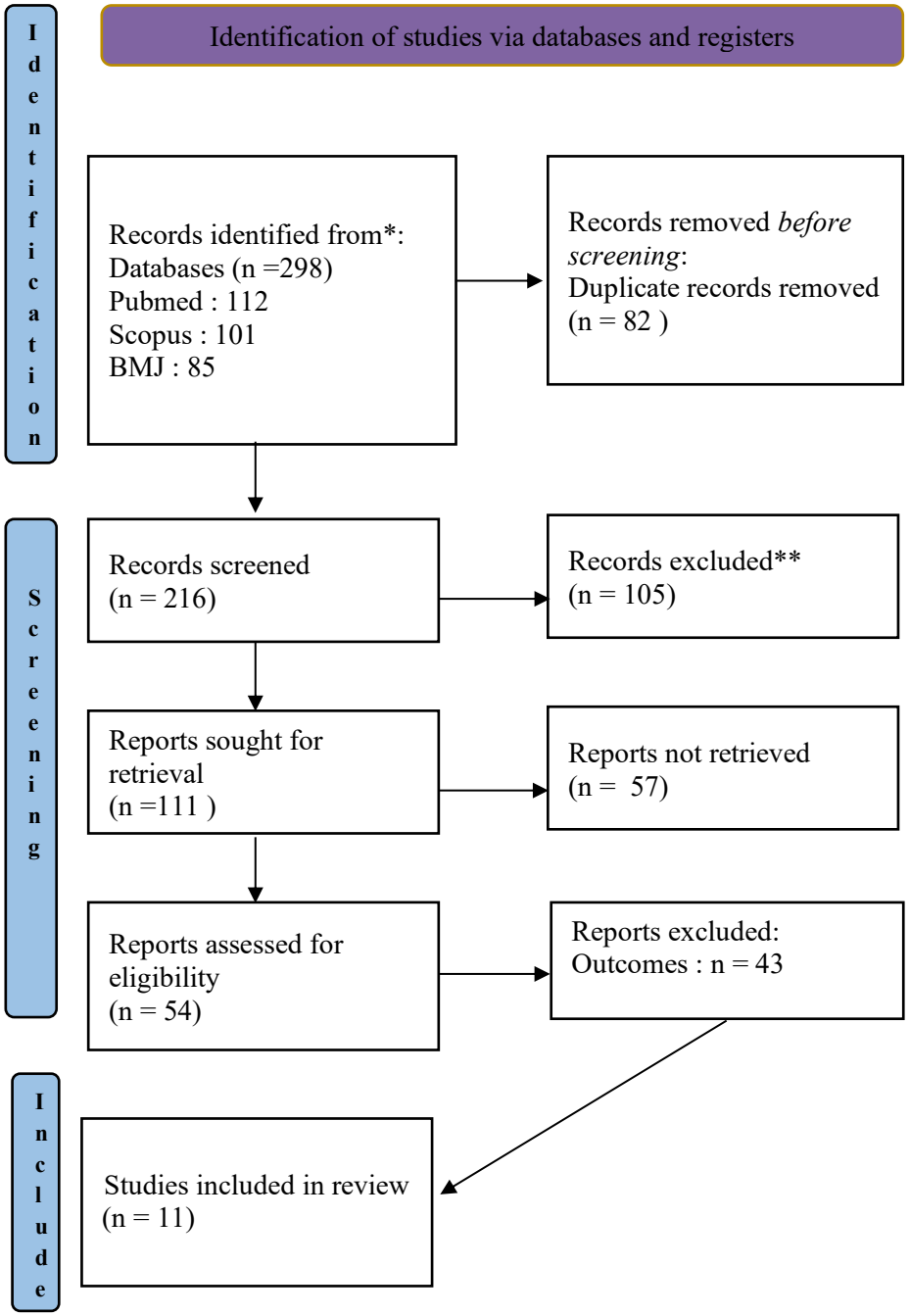

Figure 1. PRISMA

Table 2.
The adjusted search terms as per searched electronic databases

Database	Search Query	Results
PubMed	"Telemedicine" OR "Remote Monitoring" OR "Digital Health" OR "mHealth" OR "eHealth" AND "Caesarean Section" OR "Cesarean Delivery" OR "C-Section" AND "Surgical Site Infection" OR "SSI" OR "Postoperative Infection" AND "Diagnosis" OR "Detection" OR "Monitoring"	85
Scopus	"Telemedicine" OR "Remote Monitoring" OR "Digital Health" OR "mHealth" OR "eHealth" AND "Caesarean Section" OR "Cesarean Delivery" OR "C-Section" AND "Surgical Site Infection" OR "SSI" OR "Postoperative Infection" AND "Diagnosis" OR "Detection" OR "Monitoring"	101
BMJ Journale	"Telemedicine" OR "Remote Monitoring" OR "Digital Health" OR "mHealth" OR "eHealth" AND "Caesarean Section" OR "Cesarean Delivery" OR "C-Section" AND "Surgical Site Infection" OR "SSI" OR "Postoperative Infection" AND "Diagnosis" OR "Detection" OR "Monitoring"	112

Code	Question
D1	Did the study address a clearly focused research question?
D2	Was the assignment of participants to interventions randomised?
D3	Were all participants who entered the study accounted for at its conclusion?
D4	Were the participants 'blind' to intervention they were given?
D5	Were the investigators 'blind' to the intervention they were giving to participants?
D6	Were the people assessing/analysing outcome/s 'blinded'?
D7	Were the study groups similar at the start of the randomised controlled trial?
D8	Apart from the experimental intervention, did each study group receive the same level of care (that is, were they treated equally)?
D9	Were the effects of intervention reported comprehensively?
D10	Was the precision of the estimate of the intervention or treatment effect reported?
D11	Do the benefits of the experimental intervention outweigh the harms and costs?
D12	Can the results be applied to your local population/in your context?
D13	Would the experimental intervention provide greater value to the people in your care than any of the existing interventions?

Table 3.
Quality assessment using a CASP tool for Randomised Controlled Trial studies and cohort study.

No	Study	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	Overall Quality of the study
1	(Kateera et al., 2022)	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
2	(McLean et al., 2021)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
3	(Cherian et al., 2020)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
4	(Su et al., 2020)	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High

D1	Did the study address a clearly focused issue?
D2	Was the cohort recruited in an acceptable way?
D3	Was the exposure accurately measured to minimise bias?
D4	Was the outcome accurately measured to minimise bias?
D5	Have the authors identified all important confounding factors?
D6	Have they taken account of the confounding factors in the design and/or analysis?
D7	Was the follow up of subjects complete enough?
D8	Was the follow up of subjects long enough?
D9	What are the results of this study?
D10	How precise are the results?
D11	Do you believe the results?
D12	Can the results be applied to the local population?
D13	Do the results of this study fit with other available evidence?
D14	What are the implications of this study for practice?

No	Study	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	Overall Quality of the study
1.	(Nkurunziza et al., 2022)	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
2.	(Aiken et al., 2013)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
3.	(Nguhuni et al., 2017)	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
4.	(Halwani et al., 2016)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
5.	(Ke et al., 2021)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
6.	(Castillo et al., 2017)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
7.	(Antoniou et al., 2022)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High

Table 4.
Article synthesis

No	Title and Author	Objective	Method	Results
1.	The Effect and Feasibility of mHealth-Supported Surgical Site Infection Diagnosis by Community Health Workers After Cesarean Section in Rural Rwanda: Randomized Controlled Trial (Kateera et al., 2022)	To assess whether the use of mHealth by community health workers can reduce the rate of surgical site infections (SSIs) after caesarean section in a rural district hospital in Rwanda.	- Design : Randomized controlled trial. - Sampel : 1166 patients - Dependent variable: Patient returns for care after cesarean section - Independent variables: Type of intervention received (home visit, telephone call, or standard care) and demographic factors such as education and income - Intervention : Telephone call by CHW - Analysis : Logistic regression	The results show that a home-based intervention delivered by community health workers (CHWs) supported by mHealth for diagnosing surgical site infections (SSIs) after cesarean section is feasible in rural Africa. Although there was no significant difference in return rates between the intervention and standard care groups, the intervention can potentially reduce the financial burden on patients by limiting travel to health centers when SSIs can be ruled out at home.
2.	Remote diagnosis of surgical-site infection using a mobile digital intervention: a randomised controlled trial in emergency surgery patients (McLean et al., 2021)	To investigate whether a smartphone-delivered wound assessment tool can result in earlier diagnosis and treatment of surgical site infections (SSIs) after emergency abdominal surgery.	- Design : Randomized controlled trial - Subject : 492 patients - Dependent variable: Time to diagnosis of surgical site infections (SSIs) after emergency abdominal surgery - Independent variable: Use of a smartphone-delivered wound assessment tool - Intervention : Smartphone-delivered wound assessment tool - Analysis : Pearson's chi-square test, Fisher's exact test, or McNemar's chi-square test.	This study's results indicate that using a smartphone-delivered wound assessment tool can improve the diagnosis of surgical site infections (SSIs) in the early postoperative period. However, it does not reduce the absolute time to diagnosis of SSI. The tool demonstrated highly harmful predictive discrimination, allowing SSI to be ruled out with confidence. This intervention was practical, feasible, and safe for remote postoperative wound care in patients undergoing emergency abdominal surgery.
3.	mHealth-community health worker telemedicine intervention for surgical site infection diagnosis: a prospective study among women delivering via caesarean section in rural Rwanda (Nkurunziza et al., 2022)	Assessing the feasibility and accuracy of a mHealth-CHW intervention using telemedicine to diagnose surgical site infections (SSIs) in rural Rwanda.	- Design : Cohort study. - Subject : 787 patients - Dependent variable: Diagnosis of surgical site infections (SSIs) - Independent variable: Using mHealth application - Intervention : Using mHealth-CHW to send wound images - Analysis : Sensitivity and specificity tests, as well as predictive value analysis	The results of the study showed that the use of telemedicine to diagnose surgical site infections (SSI) produced quite varied results. In the survey, telemedicine had a sensitivity of 36.8%, meaning that only about a third of the actual infection cases could be detected using this method. Although its sensitivity was relatively low, telemedicine showed a very high level of specificity, reaching 97.6%.
4.	Evaluation of surveillance for surgical site	Evaluate inter-observer consistency of	- Design : Cohort study - Subject :	The results showed that telephone calls are a practical method for detecting postoperative SSIs with

No	Title and Author	Objective	Method	Results
	infections in Thika Hospital, Kenya (Aiken et al., 2013)	SWC and ASA assessments and the sensitivity and specificity of telephone calls to identify SSIs.	1172 participants - Dependent variable : Risk or incidence of surgical site infection (SSI). - Independent variable Wound class (SWC) category, American Society of Anesthesiologists (ASA) score, duration of surgery, type of surgery, patient age, gender, and antibiotic administration. - Intervention Postoperative surveillance via telephone calls for 30 days - Analysis : Logistic regression	high specificity, although sensitivity was moderate. SWC score was the main predictor of SSI risk, while other components were less relevant in this setting. Staff training plays a vital role in improving diagnostic reliability.
5.	Reliability and validity of using telephone calls for post-discharge surveillance of surgical site infection following caesarean section at a tertiary hospital in Tanzania (Nguhuni et al., 2017)	To examine the feasibility, sensitivity, and specificity of using telephone interviews to detect postoperative surgical site infections (SSI) after cesarean section (CS).	- Design : Cohort study - Subject : 374 participants - Dependent variable : Incidence of surgical site infection (SSI), categorized as superficial, deep, or organ/space based on CDC criteria. - Independent variable Factors included preoperative antibiotic administration, type of cesarean section (elective or emergency), and wound conditions such as redness, pain, or discharge. - Intervention Structured telephone calls on days 5, 12, and 28 - Analysis : Sensitivity and specificity tests using STATA	The results of this study revealed that telephone interviews are a practical and particular method for detecting surgical site infections (SSI) after patients undergo surgery. This method is very relevant, especially in resource-limited settings, because it can reach patients without requiring direct visits to health facilities. The specificity level reaching 100% indicates that this method is very good at identifying patients without SSI, thus reducing the potential for misdiagnosis.
6.	Postdischarge surveillance for infection following cesarean section: A prospective cohort study comparing methodologies (Halwani et al., 2016)	To assess how enhanced post-discharge telephone follow-up calls can improve case finding for surgical site infection (SSI) surveillance after cesarean delivery.	- Design : Cohort study - Subject : 193 patients - Dependent variable : Surgical site infection (SSI) after cesarean delivery - Independent variable : Enhanced post-discharge telephone follow-up calls - Intervention Telephone follow-up calls were made on days 7, 14, and 30 - Analysis : STATA was used to test sensitivity and specificity.	Results showed that post-cesarean telephone follow-up calls identified 26.3% of surgical site infections (SSIs). The hospital's standard surveillance methodology identified 14 of 193 patients (7.2%) with SSIs, while telephone calls identified 5 patients (10%) who did not return to The Johns Hopkins Hospital for follow-up care. Using telephone calls as the gold standard, the sensitivity of the standard methodology for capturing SSIs was 73.3%.
7.	Diagnosing Post-Cesarean Surgical Site Infections in Rural Rwanda: Development, Validation, and Field Testing of a Screening Algorithm for Use by Community	Developing and validating a simple screening algorithm for use by Community Health Workers (CHWs) via mobile health technology to identify surgical site infections	- Design : Randomized controlled trial - Subject : 596 participants - Dependent variable : Presence or absence of surgical site infection (SSI) - Independent variable : Answers to screening questions provided by CHWs and general practitioners (GPs) - Intervention : Telephone call to provide SSI screening questions - Analysis :	This study developed and validated a screening algorithm to assist Community Health Workers (CHWs) in identifying surgical site infections (SSI) after cesarean section. The algorithm used a combination of questions about fever, pain, and colored discharge. It demonstrated good sensitivity and specificity when used by general practitioners (GPs) with a sensitivity of 96.8% and a specificity of 85.6%. However, when used by CHWs, the

No	Title and Author	Objective	Method	Results
	Health Workers (Cherian et al., 2020)	after cesarean section (SSIs)	Classification and Regression Tree	sensitivity decreased to 87.1% and the specificity to 73.8%
8.	Perioperative mobile application for mothers undergoing Cesarean delivery: a prospective cohort study on patient engagement (Ke et al., 2021)	Evaluated patient engagement using a perioperative mobile application for mothers undergoing cesarean delivery.	- Design : Cohort study - Subject : 92 participants - Dependent variable Percentage of self-monitoring questionnaires completed and total number of visits to the mobile application per participant in the 30 days after surgery. - Independent variable : Perioperative mobile application - Intervention Use of perioperative mobile application for mothers undergoing cesarean delivery. - Analysis : Logistic regression	This study shows the great potential of using mobile application-based technology to aid postoperative patient self-monitoring. In this study, the C-Care application was used to support patient education and early detection of complications, such as pain that affects function, which is the most frequently reported symptom. Most participants used the application actively, with a high level of engagement during the first week after surgery. This suggests that a technology-based approach can improve postoperative monitoring, especially in resource-constrained settings.
9.	Post-Caesarean Section Surgical Site Infection Surveillance Using an Online Database and Mobile Phone Technology (Castillo et al., 2017)	Demonstrates the feasibility of a patient-driven post-discharge surgical site infection monitoring system consisting of an online database and mobile phone technology	- Design : Cohort study - Subject : 105 participants - Dependent variable : Diagnosis of SSI - Independent variable Demographics, maternal diabetes, presence of premature rupture of membranes, ASA and NNIS scores, and interventions for prevention of surgical site infections - Intervention : Mobile phone for SSI monitoring - Analysis : Chi-square (X^2) test	The results of this study suggest that a post-discharge surgical site infection monitoring system using the how2trak mobile application is feasible and can be implemented in an urban Canadian setting. Of the participants who submitted photographs, the rate of detected surgical site infections (SSIs) was 2.3%, while the rate of SSIs among all participants was 0.9% [9]. This system allows for early detection of infections with active patient and provider participation and offers an attractive alternative with low data management costs.
10.	Effect of a Text Messaging–Based Educational Intervention on Cesarean Section Rates Among Pregnant Women in China: Quasirandomized Controlled Trial (Su et al., 2020)	To evaluate the effect of SMS text messaging on maternal health in China, specifically in reducing the rate of medically unnecessary cesarean deliveries.	- Design Randomized controlled trial - Subject: 2115 patients - Independent variable Rate of medically unnecessary cesarean deliveries - Dependent variable Treatment assignment to one of four text message groups: (1) good home prenatal practice messages, (2) care-seeking messages, (3) essential messages, and (4) all text - Intervention: Pengiriman pesan text messages containing advice on good home prenatal practices - Analyisis: Logistic regression analysis	This study demonstrated that a text message-based educational intervention can effectively reduce the rate of medically unnecessary cesarean deliveries among pregnant women in rural China. The group receiving all educational messages combined significantly reduced the rate of cesarean delivery, with an odds ratio (OR) of 0.67 after adjustment, compared with the control group. This reduction was mainly due to reduced medical indications for cesarean delivery.
11.	Efficacy, efficiency and safety of a cardiac telerehabilitation programme	Evaluate the efficacy, efficiency, and safety of an exercise-based telerehabilitation program using	- Design Randomized controlled trial - Subject : 124 patients, with at least 62 participants recruited in each group - Independent variable	Secondary parameters include increased physical activity, safety of the exercise intervention (number of adverse events that may occur during exercise), quality of life, exercise adherence, levels of anxiety and depression, nicotine dependence, and cost-

No	Title and Author	Objective	Method	Results
	using wearable sensors in patients with coronary heart disease: the TELEWEAR-CR study protocol (Antoniou et al., 2022)	wearable sensors and web applications compared to traditional supervised centralized cardiac rehabilitation (CR).	Cardiac rehabilitation interventions provided to participants, namely CB-CR and TELE-CR. - Dependent variable Cardiorespiratory fitness (CRF) and functional capacity, as well as secondary effects such as physical activity, exercise adherence, health-related quality of life, anxiety and depression levels, safety, nicotine dependence, and cost-effectiveness analysis - Intervention TELE-CR, an exercise-based cardiac rehabilitation program will be conducted using wearable sensors and a web application to enable real-time monitoring and supervision. - Analyisis Multivariate analysis of variance (MANOVA) test	effectiveness analysis. The success of the intervention will also be assessed based on the ability to maintain a physically active lifestyle after the intervention, supported by patient education and counseling regarding exercise, nutrition, and smoking cessation.

DISCUSSION

Based on the results in Table 4, telemedicine as a tool for monitoring post-cesarean section surgical site infections (SSI) has shown promising results, especially in areas with limited resources. A study by (Kateera et al., 2022) menemukan bahwa intervensi berbasis telemedicine melalui pekerja kesehatan found that telemedicine-based interventions through community health workers could reduce the financial burden on patients by limiting travel to health centers when SSI could be ruled out at home. Meanwhile, (McLean et al., 2021) showed that using a smartphone-based application increased the accuracy of early SSI diagnosis, although it did not accelerate the absolute time to diagnosis. A similar finding was seen in a study by (Cherian et al., 2020), where a telemedicine-based screening algorithm used by community health workers had a sensitivity of 87.1% and a specificity of 73.8%. However, several limitations were identified, such as low sensitivity in some telemedicine methods. A study by (Nkurunziza et al., 2022) recorded a sensitivity of only 36.8% but a very high specificity of 97.6%. This suggests that telemedicine is more effective in excluding SSI diagnoses than in detecting positive cases. Other studies, such as by (Nguhuni et al., 2017), reported that telephone interviews had 100% specificity, but only a tiny proportion of SSIs were detected through this method.

Telemedicine as a diagnostic approach for Surgical Site Infection (SSI) is based on the theory of technological innovation and digital interaction in health care (Sandberg et al., 2019). In this context, telemedicine allows clinical data collection, such as wound images and symptom reports, through digital applications or devices that connect patients with health workers. The basic principle of this theory is the use of technology to improve access, efficiency, and accuracy of diagnosis without geographical limitations. According to the theory of clinical decision-making (Kummerow Broman et al., 2019), telemedicine supports the SSI diagnosis process by providing visual information and descriptions of patient symptoms in real-time, which are then analyzed using data-driven algorithms or by trained health workers. This is consistent with the "Information Processing Theory" model in health, which states that providing timely and relevant data can accelerate medical decision-making and improve clinical outcomes..

The telemedicine approach has great potential to overcome limited access in rural or remote areas, especially for mothers who give birth via cesarean section. However, the implementation of telemedicine must be adjusted to the local context, including intensive training for community health workers to improve their diagnostic skills. Although the specificity of telemedicine is high, the low sensitivity in several studies suggests the need for further development regarding algorithms and technological devices used. Another opinion that needs to be considered is the importance of supporting the implementation of telemedicine with appropriate health policies. For example,

financial support for technological infrastructure in remote areas is needed so that the benefits of telemedicine can be felt evenly. In addition, active patient participation, as seen in the study by (Ke et al., 2021), is a key element for the success of this approach. Telemedicine is a technological solution and a transformational step in the health care system. This approach can become the gold standard in postoperative SSI monitoring with continued development. However, further research and investment in training and development of telemedicine-based diagnostic tools must be a priority to achieve this.

CONCLUSION

Telemedicine has proven its potential as an innovative solution in diagnosing and monitoring post-cesarean surgical site infections (SSI), especially in areas with limited resources. With the ability to improve access, efficiency, and accuracy of diagnosis, telemedicine can reduce the burden on patients and health workers while supporting crucial early intervention. Although there are still challenges such as low sensitivity in some methods, further developments in technology and health worker training can make telemedicine an essential component of modern health systems. Limitation There are no limitations to the preparation of systematic reviews

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