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# Overview Of The Implementation Of Electronic Medical Records To Support The Effectiveness Of Outpatient Services At General Dentistry RSUD X

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***Abstract :*** This study aims to review the implementation of Electronic Medical Records (EMR) to support the effectiveness of outpatient services in the Dental Polyclinic of Hospital X. The research method used is qualitative analysis with a descriptive approach. Data were collected through observations, interviews, and literature review conducted at Hospital X. The results of the study describe the process of filling out EMR in outpatient services. Several issues were identified, including network disruptions, data input delays, and limited access to patient history and diagnostic results. In this context, the implementation of EMR in Hospital X still faces challenges that need to be addressed to enhance the effectiveness of outpatient services. This research provides insights into the use of EMR in the context of healthcare, with a specific focus on dental clinics.

***IndexTerms*** **- Electronic Medical Records, outpatient services, hospital, dental clinic effectiveness.**

## I. INTRODUCTION

In the words of Permenkes RI (2020), a hospital is a type of medical facility that offers complete inpatient, outpatient, and emergency personal health services.While health is an important component of life, hospitals play a crucial role in promoting public health.

Electronic or paper copies of medical records are provided. But as time goes on and information and technology improves, a growing number of hospitals and other healthcare facilities are beginning to use computerized medical records (Yohana Eryanan et al., 2022).

Based on Permenkes RI (2022), Electronic Medical Records (RME) are medical records generated by means of an electronic system created with the purpose of handling medical records. These records comprise annotations, declarations, or explanations provided by a physician or other medical professionals concerning diagnosis and treatment. a patient, entered via a computerized system and kept in the form of electronic (digital) storage.

The ease of use, faster data search and processing, improved file storage efficiency with clearer integrity, more storage capacity without requiring a lot of storage space, fell paper use, fewer duplicate identities being recorded, less file buildup, and easier information sharing with other hospitals are all advantages of implementing RME (Rosalinda et al., 2021).

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RME is being used by hospitals all around the world in place of paper-based medical records. Since the advent of e-health, hospitals in Indonesia have been implementing RME and converting them into computerized information centers. This policy is anticipated to assist health service organizations improve a deficient medical record management system beginning on September 12, 2022. The Minister of Health Regulation Number 24 of 2022 (Permenkes RI, 2022) has a number of intriguing features, one of which is its promise to completely abolish RME. In order to enhance the standard of medical care, ensure the privacy and security of databases, and establish digital medical record administration, the Ministry of Health has filed an appeal to regulate information system-based medical record management

In a study that was done (Utama et al., 2024). When compared to using traditional medical records, hospitals can experience cost, time, and energy savings by implementing an electronic medical record system. The general polyclinic at Hospital X's electronic medical record features have been confirmed to function properly and be user-friendly. help to save labor costs and improve the effectiveness of data processing and health services. The inadequate completeness of outpatient medical record filling is one of the problems found in the implementation of electronic medical records.

is one of the Indonesian hospitals that switched to an electronic medical record system for outpatient services, particularly in dental clinics, from a manual system in the past. This hospital is a Type C hospital and has implemented an electronic medical record system since 2022 using an application called HIS (Hospital management system). When switching to an electronic system, problems arose in maintaining electronic patient records in hospitals. Based on the results of initial observations at the hospital, one of the problems in implementing an electronic medical record system is problems (errors) in the network system, network system failures can occur three to four times per month. If a network system is impaired, patients who have received treatment will experience a temporary halt to their services since physicians are unable to view the patient's medical history or current course of therapy. The next issue is the polyclinic's delay in providing input, which hinders the polyclinic receiving the consultancy's input process. The patient's history is also not yet available, and supporting documentation like X-ray results, lab photos, and permission for the procedure cannot be seen.

For this explanation, "Overview of the Implementation of Electronic Medical Records to Support the Effectiveness of Outpatient Services at the Dental Polytechnic of RSUD X" is the research title that interests me to pursue further.

## II. RESEARCH METHODOLOGY

This study takes a descriptive approach while utilizing qualitative methods of analysis. Studies known as qualitative methods take a closer look at a subject than an expansive one. Data for this study has been collected at RSUD X through observation, interviews, and a review of the literature. Words and images make up the data obtained in the descriptive technique. The subjects of this research were nurses, medical records officers, and outpatient registration officers (RJ), and the data collected was in the form of words, images, or actions. The data collection method included field surveys, interviews, and photographs.

## III. RESULTS AND DISCUSSION

### A. Describe the flow of filling out electronic medical records in outpatient services at the dental clinic at RSUD X

- **Observation**

Table 1: Outpatient Electronic Medical Record Filling Flow for Dental Clinic

| No | Observed Elements | Yes | No |
|---|---|---|---|
| 1 | At the outpatient desk, patients register | ✓ | |
| 2 | Examine present and past visits. | ✓ | |
| 3 | Finish the medical checkup and take the history. | ✓ | |
| 4 | Examination and medical assistance | ✓ | |
| 5 | Doctor in charging action | ✓ | |
| 6 | Completing the diagnostic | ✓ | |
| 7 | giving out prescription drugs | ✓ | |

Implementation of the use of electronic medical records at RSUD X is running smoothly. The process of recording patient medical records starts from patient registration, outpatient clinics, payment, pharmacy, and medical record management which is well integrated. facilitates the completion of patient medical records. Hospital Information System Unit X implemented the requirement for each health professional to have a user ID and password, and has enforced allowed access rights to protect the privacy of patient medical record data utilized in Hospital X's electronic medical record system. Using an electronic medical record system offers hospitals greater security and privacy, as well as a way to detect incomplete medical records and save time, money, and energy.

### B. What features of electronic health records are present in outpatient dentists services?

Table 2: Outpatient Dental Polyclinic Electronic Medical Record Features

| No | Elements that are noted | Yes | No |
|---|---|---|---|
| 1 | Does the product have a login feature? | ✓ | |
| 2 | Exist any more features for patient data? | ✓ | |
| 3 | Are the results of the initial assessment or anamnesis available? | ✓ | |
| 4 | Is it possible to include action data from doctors? | ✓ | |
| 5 | Are the results of physical examinations and features for medical support available? | ✓ | |
| 6 | Exists a filling functionality that is diagnostic? | ✓ | |
| 7 | Exists a feature for giving medication or therapy? | ✓ | |
| 8 | Is a clinical tracker or warning system accessible for drug allergies and allergic reactions? | | ✓ |

Figure 1,login form

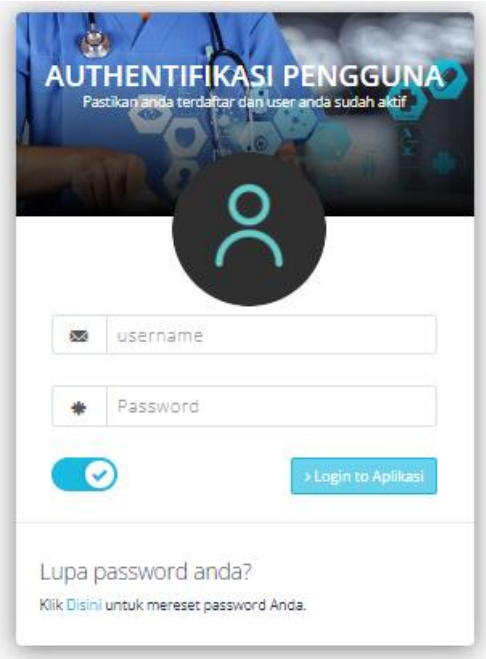



Figure 2, Add Patient Data Form

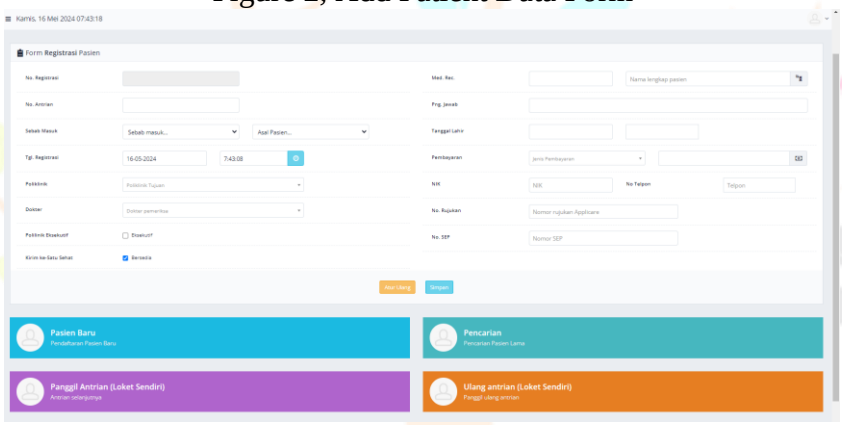
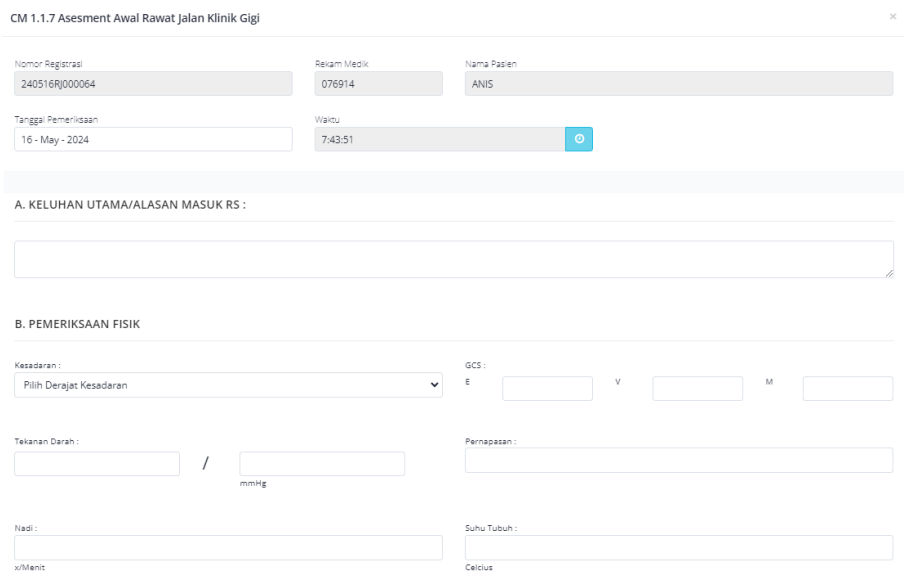



Figure 3, first come patient observation form



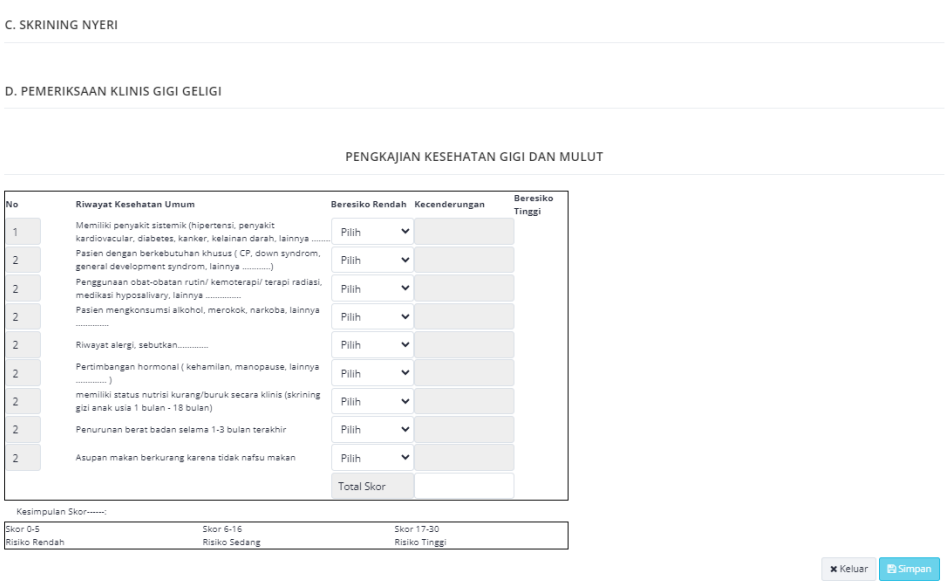



Figure 4, first come patient observation form

ZFigure 5, Add Doctor Treatment Data

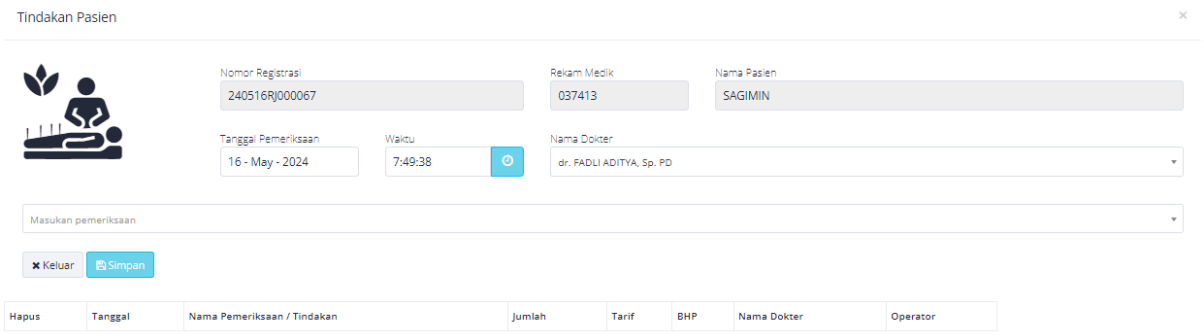



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Figure 6, Check Up Result Form

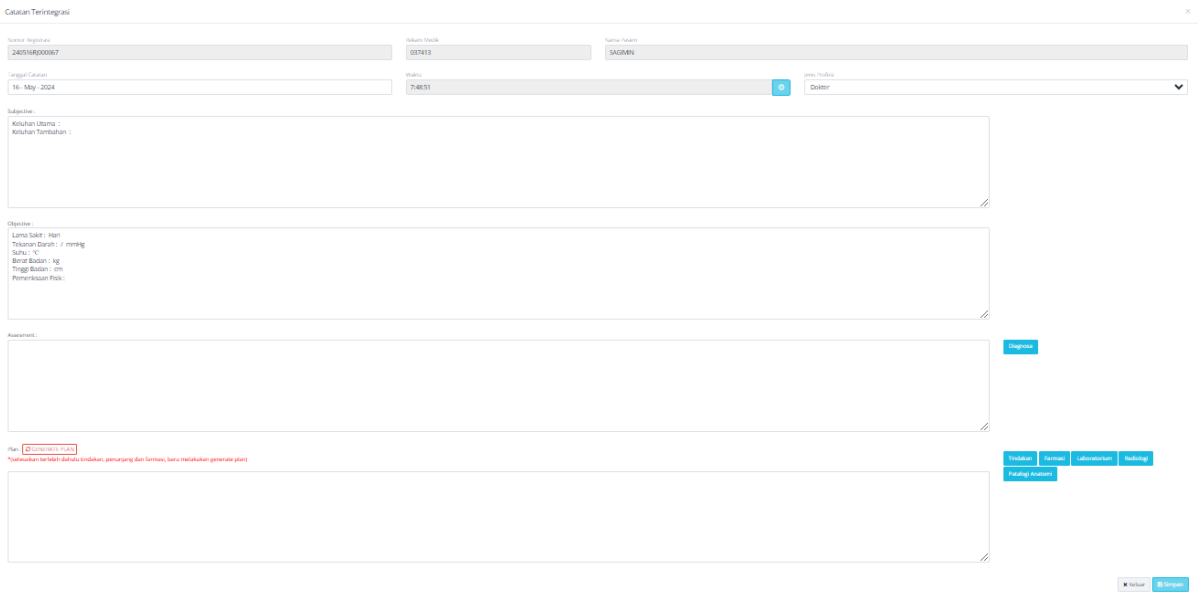


Figure 7, Diagnosis Field form

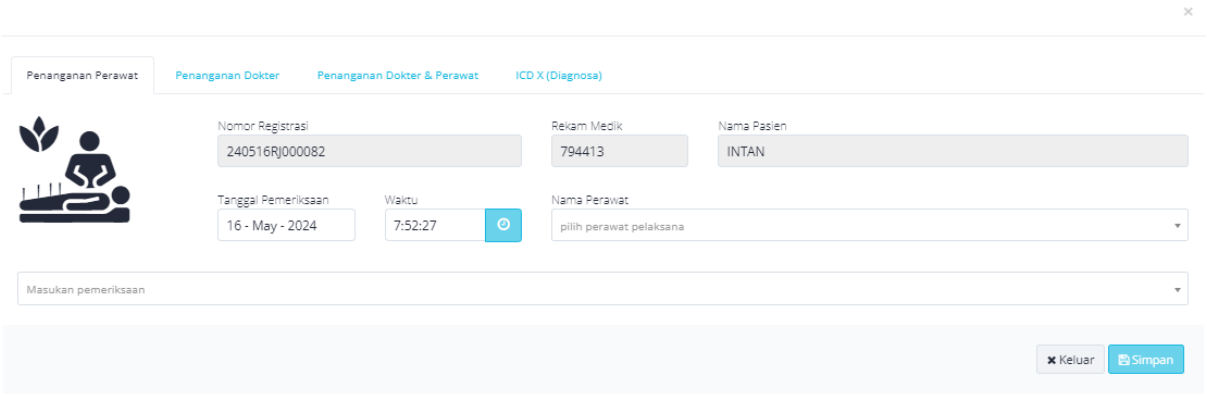
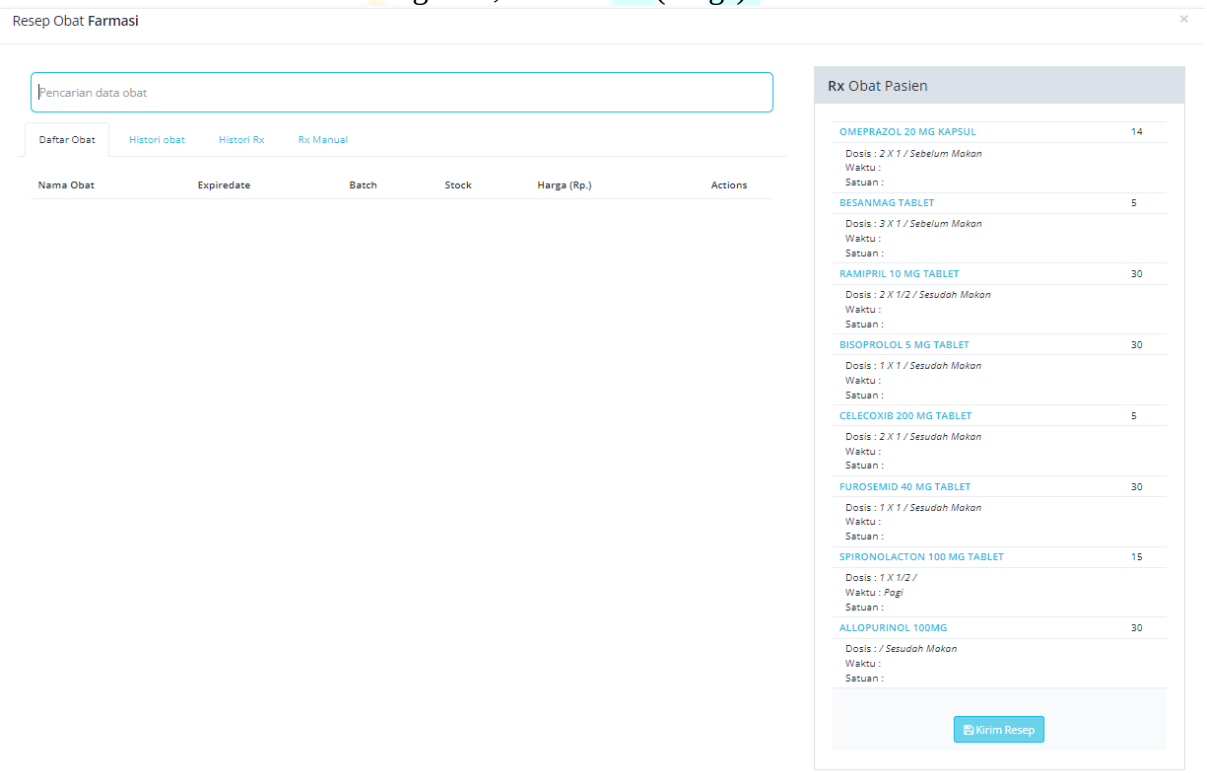



Figure 8, Medication(drugs) form




The features implemented in the dental clinic's outpatient services are suitable for usage, according to research done at RSUD X. Its qualities include ease of use in filling out and processing data, as well as meeting user needs and being structured in terms of data requirements.

## C. Following an evaluation of the RME implementation in the dental clinic at RSUD X, the following issues were found to be present:

The outpatient electronic medical record system at RSUD X has produced a number of benefits, including quicker service outcomes, a lower need for human resources, lower costs for medical record units, increased security and confidentiality, and the ability to identify errors in medical record completion. The obstacle found was computer network disruption 3-4 times a month. The impact that arises is that the services provided to patients will be hampered because doctors cannot see the patient's previous medical history and this can lead to a backlog of patients.

Before implementing RME, the RSUD X dental clinic used manual recording, which required storage space, was prone to human error, and was challenging to maintain and access data. In dental clinics, coordination among dentists can be challenging in the absence of an integrated RME system, particularly when it comes to information exchange and patient treatment history monitoring. Patient data cannot be accessed in a manual recording system, particularly if the patient has been a patient at the dental clinic for some time. This may reduce the efficacy of outpatient care and increase the risk of treatment errors or duplicates.

### D. Several attempts have been made to apply RME as part of the hospital's efforts to improve the efficacy of outpatient services at the RSUD X dentistry clinic.

The first step in addressing RSUD's computer network issues The patient can take a paper copy of their patient identity card to the pharmacy, cashier, and polyclinic in the interim, thanks to the registration officer. In advance of performing an examination, in the event of a network issue, the physician will inquire about the patient's regular medications and treatment history. In the event that the patient is unable to recall the name of the medication that is typically prescribed, the physician will get in touch with the pharmacy department to inquire about the medication that the patient takes. The physician will then record the examination results and prescription for the medication in the manual and on the polyclinic sheet. Medical officials must enter the data that has been captured on the manual kitir form and polyclinic sheet once the system is operating normally again. The doctor enters the results of the examination that was conducted in accordance with the polyclinic sheet into HIS, and the registration officer re-registers at HIS using the manual form. Following that, the polyclinic sheet and manual form are kept in the medical records unit.

In to electronically store, manage, and access patient information, a RSUD X dental clinic has implemented an integrated RME system. The system has functions including current medicine, electronic record keeping, and dentist-to-dentist communication. The RME system and the most recent clinical procedures have been thoroughly trained for the medical personnel at the RSUD X dental clinic. Through this instruction, their comprehension of the RME system's operation is improved, and their ability to apply it successfully in everyday practice is guaranteed.

Clinical guidelines and protocols for outpatient dental clinic services have been developed by RSUD X. This handbook clears up uncertainty, improves patient management efficiency, and assists dentists in determining the best course of action. RSUD X has made efforts to upgrade the dental clinic's IT infrastructure. They regularly monitor and assess the deployment of RME and upgrade the hardware and software needed to support it, such as a robust network and sufficient input/output devices. In order to assess the effectiveness of RME deployment and pinpoint possible areas for improvement, they gather information on patient handling times, patient satisfaction, and service efficiency. Through the application of RME, it is envisaged that these efforts will improve the efficacy of outpatient services at the dental clinic at RSUD X

## IV. CONCLUSION

The Dental Clinic's implementation of electronic medical records (RME) in outpatient services has been observed to yield benefits for patients. These benefits include clinical and administrative services, as well as support for public health management, research, education, policy development, and referral health services. Nevertheless, there are a number of issues with RME implementation at RSUD. Aside from that, service efficiency is also impacted by delays in entering data from polyclinics that offer consultations. It is not possible to obtain patient history and examination findings, including x-rays and lab photographs, correctly.

Maintaining the RME network system better is necessary to prevent frequent disruptions and boost the efficacy of outpatient services. To prevent delays, the data input procedure also has to be enhanced. The RME filling flow in outpatient services at the Dental Clinic of Hospital X was described in this study using a qualitative method and a descriptive approach. Through literature research, interviews, and observation, data was gathered. It is intended that this study's findings would further knowledge of RME deployment and serve as a foundation for enhancing hospital outpatient services.

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