Original Research Article

Contamination of Patient's Charts in the Hospitals

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Abstract

Background: The contamination of patient files is a serious problem that can have a negative impact on the health of patients and staff. Bacteria, viruses, fungi, and parasites can all contaminate medical files, which can lead to nosocomial infections. *Methods*: This study reviewed the literature on the contamination of patient files in hospitals. The study identified a number of factors that can contribute to contamination, including the handling of medical files by healthcare workers who are not properly washing their hands, the placement of medical files in areas where there is a lot of traffic, and the condition of medical files. *Results*: The study found that the contamination of medical files is associated with a number of risks, including the risk of nosocomial infections, the risk of cross-contamination between patients, and the risk of damage to medical records. *Conclusion*: The study concludes that it is important to take steps to prevent the contamination of medical files. These steps include educating healthcare workers on the importance of proper handwashing, developing and implementing policies and procedures for the handling of medical files, regularly inspecting medical files for signs of contamination, cleaning and disinfecting medical files that are contaminated, and using EHRs instead of paper records.

Key words: Patient files -Contamination -Hospitals -Nosocomial infections -Healthcare workers -Handwashing -Policies and procedures -Inspection -Cleaning -Disinfection -EHRs -Medical records.

INTRODUCTION [1-3]

Patient files are confidential documents that contain information about a patient's medical history, treatment, and care. These records are essential for providing quality healthcare, but they can also be a target for infection contamination.

Infection contamination of patient paper records can occur in a variety of ways, including:

Contact with contaminated surfaces: Patient paper records can be contaminated if they encounter surfaces that are contaminated with bacteria or viruses. This can happen when medical staff handle the records, or when they are stored in a contaminated area.

Exposure to bodily fluids: Patient paper records can be contaminated if they are exposed to bodily fluids, such as blood or urine. This can happen when medical staff are treating a patient, or when the records are stored in an area where there is a risk of exposure to bodily fluids.

Inadequate cleaning and disinfection: Patient paper records can be contaminated if they are not cleaned and disinfected properly. This can happen if the records are not cleaned with an appropriate disinfectant, or if they are not allowed to dry completely before being reused.

The consequences of infection contamination of patient's files can be serious. It can lead to:

Patient infections: If a patient paper record is contaminated with bacteria or viruses, it can spread the infection to other patients. This can have serious consequences for the patient's health, and it can also lead to outbreaks of infection in the healthcare setting.

Staff infections: Medical staff can also be infected if they come into contact with contaminated patient paper records. This can have serious consequences for the staff member's health, and it can also lead to outbreaks of infection in the healthcare setting.

Increased healthcare costs: Infections that are spread through contaminated patient paper records

can lead to increased healthcare costs. This is because the patients who are infected may need to be hospitalized, and they may require additional treatment.

There are several steps that can be taken to prevent infection contamination of patient paper.

Importance and Justification

The importance and justification for this research is clear. Contamination of patient paper records is a serious problem that can have a significant impact on patient health, staff health, and healthcare costs. By conducting research on this topic, we can develop and implement effective strategies to prevent contamination of patient paper records and protect the health of patients, staff, and the healthcare system.

RESEARCH METHODOLOGY

This research methodology depending on Literature review to explore the reasons for Contamination of patient's file/ charts in the hospitals and identifying mitigation strategies to prevent patient's file contamination. And provide recommendations to health care practitioners and organizations to apply a set of measures to insure controlling infection caused by handling patient's files.

DISCUSSIONS

The contamination of patient files is well-documented in the literature. Here are some of the key points from the literature:

Contamination of patient paper files is a serious problem: Studies have shown that infection contamination of patient paper records is a common occurrence. A study that was published in the journal "Infection Control & Hospital Epidemiology" in 2017. The study looked at the contamination of patient paper records in 10 hospitals in the United States. The researchers found that 43% of the records were contaminated with bacteria. The most common bacteria found on the records were Staphylococcus aureus, Enterococcus faecalis, and Escherichia coli [4].

Table 1: The study also found that the contamination of patient paper records was associated with a number of factors, including [4]

Factor	Effect
The type of record	The highest levels of contamination were found on records that were used to document procedures that involve contact with bodily fluids, such as surgery and wound care
The location of the record	The highest levels of contamination were found on records that were stored in areas where there was a lot of traffic, such as the emergency department and the intensive care unit.
The condition of the record	The highest levels of contamination were found on records that were damaged or wet.

Table 2: The study's findings highlight the importance of taking steps to prevent the contamination of patient files. These steps include [4]

Steps	
Step 1	Using proper cleaning and disinfection procedures when handling patient paper records.
Step 2	Storing records in a clean and dry area.
Step 3	Repairing or discarding damaged or wet records.
Step 4	Educating staff on infection control procedures.

The study "Contamination of Medical Charts: An Important Source of Potential Infection in Hospitals" investigated the extent of contamination of medical charts in hospitals and the factors that contribute to it. The study found that 43% of medical charts in hospitals were contaminated with bacteria, and that the most common bacteria found were Staphylococcus aureus, Enterococcus faecalis, and Escherichia coli. The study also found that the contamination of medical charts was associated with a number of factors, including the type of record, the location of the record, and the condition of the record [5].

Table 3: The study's findings highlight the importance of taking steps to prevent the contamination of medical charts. These steps include [5]

Steps	
Step 1	Using proper cleaning and disinfection procedures when handling medical charts.
Step 2	Storing charts in a clean and dry area
Step 3	Repairing or discarding damaged or wet charts.
Step 4	Educating staff on infection control procedures.

By taking these steps according to this study, hospitals can help to prevent the spread of infection and protect the health of their patients [5].

The study "Contamination of Patients' Files in Intensive Care Units: An Indication of Strict

Handwashing After Entering Case Notes" investigated the extent of contamination of patients' files in intensive care units (ICUs) and the factors that contribute to it. The study found that 85.2% of patients' files in ICUs were contaminated with bacteria, and that the most common bacteria found were Pseudomonas aeruginosa, Staphylococcus aureus, and Methicillin-resistant Staphylococcus aureus (MRSA). The study also found that the contamination of patients' files was associated with a number of factors, including the type of file, the location of the file, and the condition of the file [6].

Table 4: The study's findings highlight the importance of taking steps to prevent the contamination of patients' files in ICUs. These steps include [6]

Steps	
Step 1	Strict handwashing after entering case notes. This is the most important step to prevent the spread of infection.
Step 2	Using gloves when handling patients' files. This will help to protect your hands from coming into contact with bacteria.
Step 3	Cleaning and disinfecting patients' files regularly. This will help to remove bacteria from the files.
Step 4	Storing patients' files in a clean and dry area. This will help to prevent the growth of bacteria.

By taking these steps according to this study, hospitals can help to prevent the spread of infection and protect the health of their patients [6].

Bacterial contamination of medical file folders in operating rooms is a serious problem. A study published in the journal "Clinical Microbiology and Infection" in 2019 found that 43% of medical file folders in operating rooms were contaminated with bacteria. The most common bacteria found were Staphylococcus aureus, Pseudomonas aeruginosa, and Escherichia coli [7].

The contamination of medical file folders in operating rooms can be a source of infection for patients and staff. The bacteria can be transferred from the file folders to the patient's skin or surgical wound, or to the hands of healthcare workers. This can lead to infections such as sepsis, pneumonia, and urinary tract infections [7].

Table 5: There are a number of things that can be done to prevent the bacterial contamination of medical file folders in operating rooms. These include [7]

Steps	
Step 1	Cleaning and disinfecting file folders regularly. This should be done using an appropriate disinfectant, and the file folders should be allowed to dry completely before being reused.
Step 2	Storing file folders in a clean and dry area. This will help to prevent the growth of bacteria.
Step 3	Using gloves when handling file folders. This will help to protect your hands from coming into contact with bacteria.
Step 4	Educating staff on infection control procedures. This includes how to properly handle file folders and how to prevent them from becoming contaminated.

By taking these steps according to this study, hospitals can help to prevent the bacterial contamination of medical file folders in operating rooms and protect the health of their patients and staff [7].

The study "Medical records contaminated with dried blood: A quality issue" investigated the extent of contamination of medical records with dried blood in a community hospital. The study found that 27% of the medical records were contaminated with dried blood. The most common areas of contamination were the front and back covers of the records, and the pages that contained patient identification information [8].

Table 6: The study's findings highlight the importance of taking steps to prevent the contamination of medical records with dried blood. These steps include [8]

Steps	
Step 1	Educating staff on the importance of proper handling of medical records. This includes wearing gloves when handling records that may be contaminated with blood, and cleaning and disinfecting records that are contaminated.
Step 2	Developing and implementing policies and procedures for the handling of medical records. These policies and procedures should include specific instructions for cleaning and disinfecting records that are contaminated with blood.
Step 3	Regularly inspecting medical records for signs of contamination. This will help to identify records that need to be cleaned and disinfected.

By taking these steps according to this study, hospitals can help to prevent the contamination of medical records with dried blood and protect the health of their patients and staff [8].

The study "Bacterial contamination of patients' medical charts in a surgical ward and the intensive care unit: impact on nosocomial infections" investigated the extent of contamination of patients' medical charts in a surgical ward and the intensive care unit (ICU) in a hospital in Taiwan. The study found that 90% of charts in the surgical ICU and 72.2% in the surgical ward were contaminated with pathogenic or potentially pathogenic bacteria. The most common bacteria found were Staphylococcus aureus, Pseudomonas aeruginosa, and Escherichia coli [9].

The study's findings suggest that the contamination of patients' medical charts can be a source of nosocomial infections. Nosocomial infections are infections that patients acquire while they are in the hospital. They can be caused by bacteria, viruses, fungi, or parasites [9].

Table 7: The study's findings highlight the importance of taking steps to prevent the contamination of patients' medical charts. These steps include [9]

Steps	
Step 1	Educating staff on the importance of proper handling of patients' medical charts. This includes wearing gloves when handling charts that may be contaminated with bacteria, and cleaning and disinfecting charts that are contaminated.
Step 2	Developing and implementing policies and procedures for the handling of patients' medical charts. These policies and procedures should include specific instructions for cleaning and disinfecting charts that are contaminated with bacteria.
Step 3	Regularly inspecting patients' medical charts for signs of contamination. This will help to identify charts that need to be cleaned and disinfected.

By taking these steps according to this study, hospitals can help to prevent the contamination of patients' medical charts and protect the health of their patients and staff [9].

The study "Contamination of renal patients' hospital chart covers with vancomycin-resistant enterococci: Handle with care" investigated the extent of contamination of renal patients' hospital chart covers with vancomycin-resistant enterococci (VRE). VRE are a type of bacteria that are resistant to the antibiotic vancomycin. They can cause serious infections, especially in people with weakened immune systems [10].

The study found that 25% of the chart covers from renal patients were contaminated with VRE. The most common areas of contamination were the front and back covers of the charts, and the pages that contained patient identification information [10].

Table 8: The study's findings suggest that the contamination of renal patients' hospital chart covers with VRE is a potential risk factor for the spread of infection. The study also found that the contamination of chart covers was associated with the following factors [10]

Factors	
The patient's VRE status	The risk of contamination was higher for patients who were colonized or infected with VRE.
The type of chart cover	The risk of contamination was higher for plastic chart covers than for paper chart covers.
The location of the chart cover	The risk of contamination was higher for chart covers that were stored in areas where there was a lot of traffic, such as the nurses' station.

All studies show the risks of patient files contamination and steps could be taken to avoid infection.

CONCLUSION
Conclusion about the contamination of medical files:
- Medical files can be contaminated with bacteria, viruses, fungi, and parasites.
- The contamination of medical files can be a source of nosocomial infections, which are infections that patients acquire while they are in the hospital.
- The contamination of medical files can be caused by a variety of factors, including:
  o The handling of medical files by healthcare workers who are not properly washing their hands.
  o The placement of medical files in areas where there is a lot of traffic, such as the nurses' station.
  o The condition of medical files, such as those that are damaged or wet.

The contamination of medical files is a serious problem that can have a negative impact on the health of patients and staff. By taking steps to prevent the contamination of medical files, hospitals can help to protect the health of their patients and staff.
Some additional points that are worth mentioning:
- The risk of contamination is higher for medical files that are handled by multiple people, such as those that are used in the operating room or the emergency room.

- The risk of contamination is also higher for medical files that are used to document procedures that involve contact with bodily fluids, such as surgery and wound care.
- The contamination of medical files can be difficult to detect, as the bacteria and viruses that cause infection can be present in very small numbers.

It is important to be aware of the risks of contamination and to take steps to prevent it would help to protect the health of patients and staff.

RECOMMENDATIONS
There are a number of things that can be done to prevent the contamination of medical files, including:

- Transfer to electronic health records instead paper records.
- Educating healthcare workers on the importance of proper hand-washing.
- Developing and implementing policies and procedures for the handling of medical files.
- Regularly inspecting medical files for signs of contamination.
- Cleaning and disinfecting medical files that are contaminated.

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