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Risk Analysis – A Tool for IT Development and Patient Safety A Comparative Study of Weaknesses Before and After Implementation of a Health Care System in the County Council of Ostergotland, Sweden

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Abstract

There is a lack of tools to secure patient safety considering information security and health care systems. Risk analysis can be used as a systematic method for identifying risks before a medical error occurs. In healthcare is this type of analysis uncommon use. An indicator for this need of systematic proactive work is the amount of adverse advents that are reported in the deviation system .In this comparative study of a health care system during 2004 and 2006, one of the results is an reduction in the numbers of risks due to technique & equipment and in the area of training & competence. This study gives an indication of that risk analysis helps the health care organisation to develop and manage routines for reducing possible risks.

Keywords:

information system, safety management, risk management/methods, medical errors, systems analysis, quality of health care

Introduction

In the county council in Ostergotland, Sweden has a supporting system for requests and laboratory reports, called LR, and been implemented during the last year and a half. A risk analysis has been performed before and after implementation and is planned to continue regulary for the coming years. The aim of this study was to perform a comparative risk analysis for a recently implemented health care system.

Methods

Risk analysis has been performed before and after the implementation of the system. Risk analysis is a systematic tool, including: process mapping, risk identification, determination of the severity and probability of each risks and action plans. The analysis has a patient safety perspective and has been performed with a trained risk analysis team including members from different roles/specialities. The risks were categorised in areas of six potential sources; technique & equipment, rules/policies/procedures, environment, training & competence, barriers and communications & information.

Results

The risk analysis shows that the total risk points are lower during 2006 for the areas technical solutions and procedures compared to the points of the same areas during 2004.

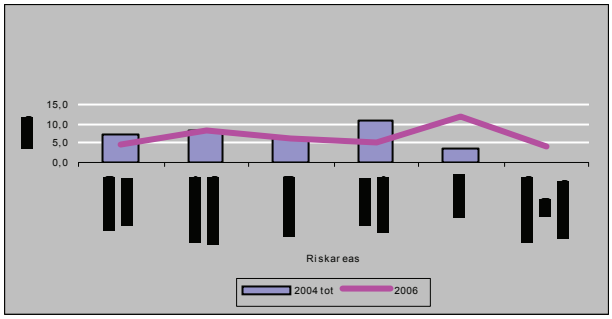

Figure 1 – Risk profile, comparison 2004-2006 LR

Discussions

The risk analysis performed demonstrated differences between the results obtained prior and after the implementation. This was especially true within the sources; technique & equipment, training & competence as well as for barriers. The risk profile within technique & equipment demonstrated that most of the risks prior to the implementation have been dealt with. Training of the personal drastically decreased the risk profile within training & competence. However, increased risks were found for the source barriers as a consequence of the introduction of new barriers, which reduced the accessibility of laboratory results. This was a consequence of the Swedish legislation for patient related information in medical records, which prevents full access of a patient's laboratory test data without the patient consent.

The risk profile for the source; rules/policies/procedures is unchanged. The numbers of risks have decreased but the

risks with a high score, which were identified prior to the implementation, were never dealt with.

Conclusion

Risk analysis is a useful method for identifying and managing possible patient safety risks and also a method for proactive work in health care organisations. Systematic and regular risk analysis is preventive of managing new routines. This may be a constructive tool for the patient safety work.

References

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