



May 26 to 29, 2021



اولین کنگره مجازی ایمنی بیمار و آموزش پزشکی
First Virtual Congress of
Patient Safety and Medical Education

Webinar Link : www.RoxanWebinar.ir



۵ تا ۸ خرداد ۱۴۰۰

به نام آنکه جان را شکر آفرین

Incidence and financial burden of medical errors and policy interventions to address them



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OUTLINE

- Definitions Related to Medical Errors
- Factors Result in Medical Errors
- Prevention of the Medical Errors
- Estimating the incidence of medical errors
- Economic Burden of the Medical Errors



Medical error

- Providing safe, efficient, and quality services to all people is critical for achieving effective UHC and SDGs.
- Medical error is one of the most critical challenges facing medical services, primarily in hospital settings.
- A substantial threat to patient safety, and their costs.
 - Mental and physical problems
 - Wide range of injuries
 - Prolonged length of stay in hospitals
 - Lead to death



Medical error definition

- A medical error is a “*failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim*”
 - a) Failure to do the right thing or doing the wrong
 - b) Planning error or implementation error
 - c) Errors with potential or actual damage



What is the problem

In many health systems

Despite increasing attention to patient safety issues and the improvement of service quality, the rates of medical errors have been increasing.

Although medical errors are still common, they also remain underreported.



What is the problem

The reasons for underreporting

- Personal blame instead of a systems approach
- Possible consequences of reporting medical errors

The lack of a :

- System for reporting medical errors
- Proper report forms
- Support from a head nurse and colleagues
- Personal attention to the importance of medical errors
- Qualification
- Enough power to establish related rules to reduce medical errors



Prevalence rate of medical errors in Iran

- Prevalence rate of medical errors in Iran ranges from 0.06% to 42% (2020)
- Rate of medication errors was 58% (West Azerbaijan province)
- 44% of nurses in pediatric wards of hospitals, make once or twice over the six months (Yazd)



Methods



Study phases

■ *Phase 1*

- Systematic review of systematic reviews about medical errors and its cost reduction
- Overview and meta-analysis of systematic reviews to determine medical error incidence rate

■ *Phase 2*

- Estimating the incidence of medical errors in 41 hospitals supervised by the East Azerbaijan University in Azerbaijan Province in Iran
- **Done in five steps**

$$I = \frac{A}{(1 - Pn) \times Pc \times Pr \times Pa}$$



Study phases

■ *Phase 3*

- Investigating the relationship between several factors associated with the medical error incidence in the studied hospitals.
 - Hypothesis 1: There is a relationship between hospital types, different seasons, medical error types with incidence of medical error.
 - Hypothesis 2: There is a relationship between hospital types, different seasons, work shifts with incidence of medical error.
 - Hypothesis 3: There is a relationship between hospital types, different seasons, medical error intensity with incidence of medical error.

■ *Phase 4*

- Determining the medical error costs in selected hospitals



Findings of Recent Conducted Study



Interventions reducing medical errors

- Medication error
- Patients falls
- Health care-associated infections
- Diagnostic error
- Transfusion and testing errors
- Surgical errors
- Patients' suicide



Incidence of medical errors

- 10 systematic reviews and meta analysis included
 - MNM: 0.02
 - Health acquired infection: 0.04
 - Pediatrics medication error: 0.08
 - Medication error: 0.004



Incidence of medical errors

- Registered rate
- Estimated rate
 - Public educational hospital: 14.07%
 - Public non-educational: 15.14%
 - Private: 18.11%
 - Charity: 27.12%
 - Social security: 14%
 - Military: 21.35%



Factors associated with incidence of medical error in Iran

- Medical error intensity
- Medical error type
- Hospital type
- Work shift
- Seasons



Relationship between factors associated with incidence of medical error in Iran

- Significant relationship between incidence of medical error and studied factors.
- Morning work shifts, hospitals and No harm errors have an increasing impact on incidence rate.
- Evening work shifts and spring season have a decreasing impact on incidence rate.



Medical errors expenditures

□ Claims costs

□ Average cost

- Hospital infections, sores, treatment failures and complications
- Surgical
- Documentation, CPR and other errors
- Falls
- Blood transfusion and tests
- Medication



Conclusion

- To make a realistic estimation of medical error incidence and related costs.
- To identify factors influencing this incidence in Iranian hospitals.



Thanks for your attention



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