HOSPITAL INFECTIONS

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Cumaları serbest kıyafet.
Haberim yoktu.

HEALTHCARE ASSOCIATED INFECTIONS

- PRİMUM NON NOCERE
- FIRST DO NOT HARM
- Sir James Simpson

HEALTHCARE ASSOCIATED INFECTIONS

- Hospital infections (Hİ) show changes with each passing day

- Nosocomial Infections = Hospital Infections
  Healthcare associated infections

HI Definitions

- İnfections may occur;

✓ After patients apply to the hospital or

✓ At that time of application its not the incubation period

✓ Although the infections start , Infections may occur after discharge

HI Definitions

- Usually admitted to the hospital after 48-72 hours
- Discharge after 10 days non-operated patients
- The field of surgery within 30 days of post of
- If patients have implants, Infections may occur within 1 years

HI

- Urinary tract infection
- Surgical site infection
- Pnemoniae; VAP (VİP)
- Bacteremia
- Cardiovascular system infections
- Central nervous system infections
- Others (bones-joint, ear-nose-throat, gastrointestinal system, etc.)

HI causes to

- Elongation of hospital staying
- Increasing of morbidity ve mortality
- Deterioration in the quality of life
- Loss of labor force and productivity
- Increasing of RESİSTANCE
- Increasing of cost

HI

- The factors that determine the avarage cost of hospital infections:
  - Types of Infections, localization and resistance
  - Rate of Infections
- Cost of hospital infections in one patient → 1.500-2.000 $
- In pediatrics patients 10.000 $

HI

- In different studies ,additional hospitalization are between 4-34 days, average 10 - 20 days
  - Bacteremia 7 – 21 days
  - Surgical site 7 – 8 days
  - VİP 6-7 days
  - Urinary tract system 1-3 days

HI

- Study on the efficacy of nosocomial infection control (SENIC)
- In 250 beds capacity of hospital
  - Annually HI 524 case
  - Additional hospitalization 2000 days,
  - Additional mortality 20 case
  - Additional cost 1 million $ as envisaged

  - Approximately infection prevention spending is 60.000 $

HI

- Decreasing HI rates % 32
- Preventable of 168 HI
- Blocked additional hospitalization in 640 days
- Blocked additional mortality 6.3
- Earnings provided 260.000 $
- If we succesfull % 50 decreases
- 440.000 $ earnings

HI Turkey

- Patients which develop of hospital infections:
  - Elongation 1-35 days in hospitalization
  - Increasing %19.6 of Mortality
  - Increasing 2280 dolars of cost

Short History of HI

- 1877 - proposals of isolation measures in first published
- The emergence of the“Infections Diseases Hospitals”
- Separate place of receipt the infections diseases of the patients
- Use of aseptic technique for prevent transmission of the diseases

HI

- From the year 1910;
- Hospital staff started wear apron
- After the contact , hand hygine with antiseptic solutions between patients
- Disinfection of environment

HI

- British Medical Research Council
  - 1941 → Doctor of Infection control
  - 1944 → Committee of Infection control
  - 1959 → Nurses of Infectıon control
- 1965-1966 → The pilot study in USA
- 1970 → National Nosocomial Infections Surveillance System (NNIS)

HI

- Legal basis; In Turkey
  - 1974: The Regulation Of The Medical Expertise (Infections committee and dutys)
  - 1983:Regulations of Operating Inpatient Treatment Institutions
  - 2005: Regulation of Infections Control
- The establishment of the hospital infection control committees in Turkey
- 1984:Hacettepe Univesity Faculty of Medicine
  - 1985:İstanbul University Faculty of Medicine
  - Other university and goverment hospital, private hosp.

HI= Medical error

- The basic purpose in the approach of the patient safety providing changes in the presentation health services
- The most important steps are classification detection and reduction of the errors
- In the new situation, nosocomial infections accept as side effect , The goal of the paient safety is “zero” nosocomial infection

HI New Goals

- The main subject is **prevention**!
- Hospital Infections= **Medical Error**
- Success = Minimize the error- **“0” error**
- **2000 years !!!**

HI

- Most of these infections
  - % 10 out of hospital
  - % 90 in hospital

HI

- Endogenous
  - Self infection
- Exogenous
  - Cross infection
    - hospital staff- patient
    - Patient-patient
  - Enviromental sources
    - Food, air, dust, water
    - Medical equipments

HI

- Gram (-)
  - Pseudomanas
  - Klebsiella
  - Acinetobacter
  - E.coli
  - Others
- Gram (+)
  - Staphylococus (MRSA, MRKNS)
  - Streptococus

HI

- Extensive studies showed
  - % 35 preventable
  - % 65 unpreventable

HI

- Common infections
  - % 37 urinary infections
  - % 18 lower respiratory tract
  - % 17 surgical wounds
  - %12 upper respiratory tract
  - % 8 mucous membrans
  - % 8 bacteremia

Important causes of HI

- Urinary tract
  - E.coli
  - Others gram (-) rods
  - Enterococci
  - Staph
  - Candida
- Lower respiratory tract
  - Pseudomanas and other gram (-) rods
  - Staph

Important causes of HI

- Surgical wound
  - Staph
  - Enterococci
  - E.coli, Pseudomanas and other gram (-) rods
- Bacteremia
  - Staph
  - Entereococci
  - Candida
  - E.coli and other gram(-) rods

HI

- Many of these microorganism are opportunistic
  - In compromised
  - In patients invasive procedures applied

HI

- Host factors play a main role in the infectious diseases
- Very young people susceptible
- Old patients
  - Underlying diseases
  - İmmobility
  - Decreased blood supply

Predispose factors to HI

- Age
- Specific immunity
- Underlying diseases
- Other infections
- Specific medicaments
- Trauma

Risk factors postop HI

- Lenght of preoperative stay
- Presence of intercurrent infection
- Lenght of operation
- Nature of operation
- Presence of foreign bodies
- State of tissues

Prevention of HI

- Excluding source of infection
- Breaking the chain of infection
- Enhancing the host resistance

Where staff contact with patients should be avoided

- Diarrhea
- Hepatitis A
- Herpes simplex on hands
- S.pyogenes infection
- S.aureus infection on hands
- Measles
- Rubella
- Varicella zoster
- Upper respiratory tract infection

HI

- Using prophylactic antibiotics

- Two indications
  - Dirty surgery
  - Critical operation
- Two mistake
  - Too often or too long
  - İnappropriate drug

HI

Patient Safety

- **Patient Safety:** Prevent the errors depending on the health service and eliminate the patient injury depending on the health service or minimize it

- **Errors depending of health service(medical error):** During the health service, caused of unexpected results

Patient Safety

- In USA between 2000 and 2002 years in 37 million patient hospitalized, find the 1.14 million (%3.08) patients safety errors.

- The main factors of the patient safety
- **Do not identify the diagnosis in correct time,**
- **Do not start the treatment ,**
- **Development of decubitus ulcer and post-operatif sepsis**.
- These 3 cases enclose the % 60 of all errors patients safety.

Patient Safety

T.C.
SAĞLIK BAKANLIĞI
Refik Saydam Hıfzıssıhha Merkezi Başkanlığı

DEĞERLENDİRME RAPORU

TÜRKİYE
SAĞLIKTA DÖNÜŞÜM PROGRAMI
EKİM 2010

TÜRKİYE'DE
HASTANE ENFEKSİYONLARININ ÖNLENMESİ
VE KONTROLÜ ÇALIŞMALARI

HASTANE ENFEKSİYONLARI BİLİMSEL DANIŞMA KURULU
REFİK SAYDAM HIFZISSIHHA MERKEZİ BAŞKANLIĞI

APIC

APIC published the guideline for eliminate these infections: 2009

- Ventilator-associated pneumonia, (VAP/VİP)
- Catheter-associated urinary tract infections (CA-UTI)
- Catheter-related blood infections (CLABSI)
- MRSA infections, long-term care units
- Acinetobacter baumannii
- APIC (Association for professionals in infection control and epidemiology)

Zero Infection

- After a large accelerated of Quality improvement and infection control programmes , It has been showen that HI is decreased serious way
- It is an important role of the published guidelines and infection control.
- However, some of the coercive measures speed up the development

Reach the Zero

- Concept of the “Reach the zero’’ is accepted by the quality improvement programs
- If it’s accepted , infections depends on the health services infections may be reduced “zero”, so all HI are prevent infections
- That’s why, development of the HI are may be errors of the someone else

Concept of the Zero Risk

- Prevent of the infections depending of Health Care needs “zero risk”
- But in this infections, İt ‘s hard to reach “zero risk”
- İnfection risk change depends on the ,clinical stiuation of the patients, the severity of the disease and hospitalization of the period.
- It is not possible ‘’zero’’ of these multi-factors risk.

Stimulates factors of the Zero İnfections

- Health İnsurance explain that they do not pay the hospital infections depends in the health services
- Patients and patient relatives, civil society organizations request transparent ,
- It must be explained the hospital infections by the health services

Effects of the Concept of the Zero Infections

With the increased awareness on the importance of reporting the HI cases with full honesty; it has been easier to focus on the problems raised by the subject.

- Planed education,
- Appling evidence based policy with right timing,
- “Checklist” applications,
- Talent Evaluation.

Quality improvement, risk management, back payment

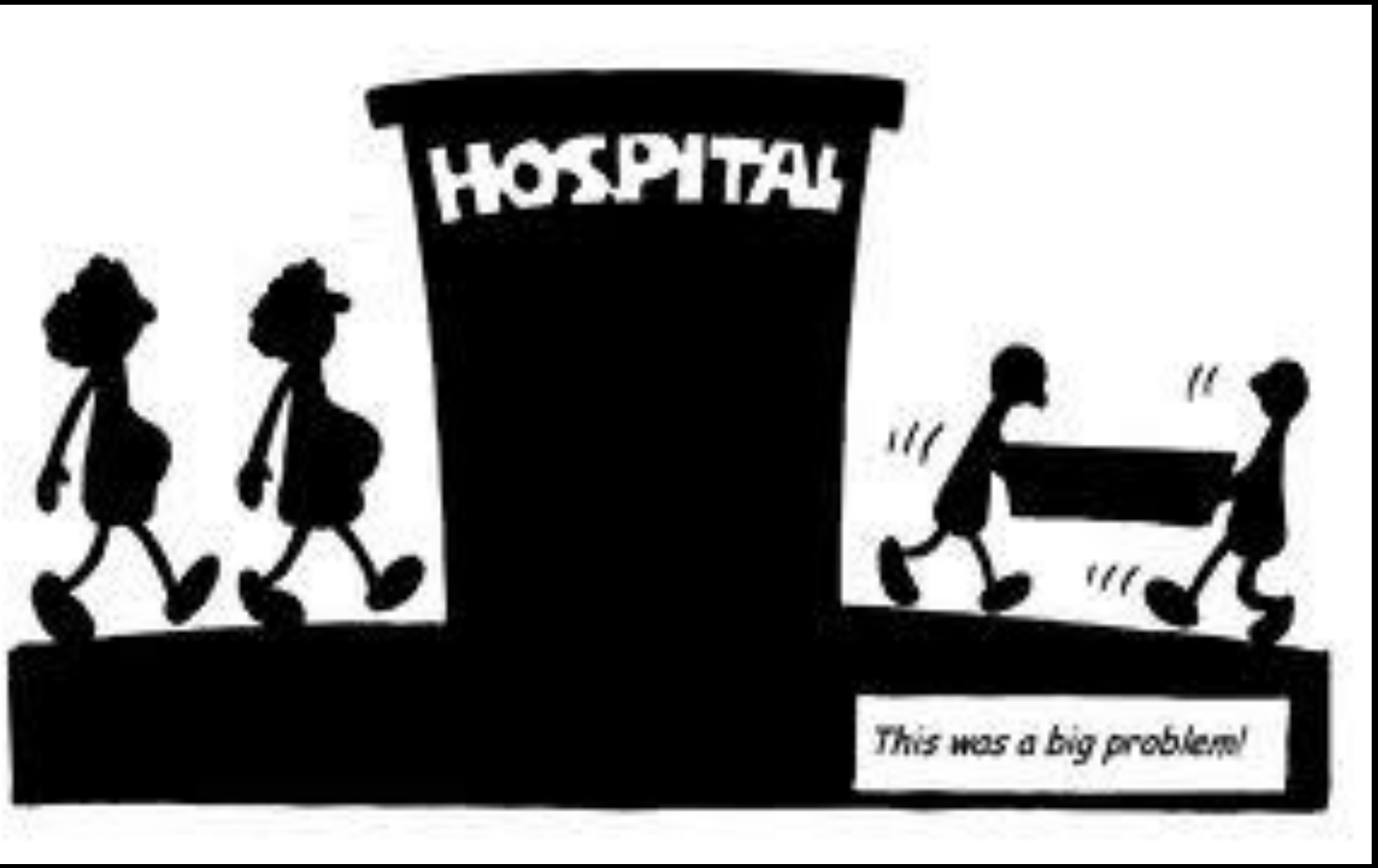
"Centers for Medicare and Medicaid Services" decide that not to pay the preventable errors , August 2007.

Desicion to pay the cost

- Objects forgetten during the surgery
- Wrong blood transfusion,
- Air Emboli,
- Fall,
- Mediastinit,
- Uriner system infections depends on the cathater,
- Decubitus ulcer,
- Bacteremia depends on the cathater

Zero Tolerance

- “Zero tolerance”is a term used against the passive standing of hospital workers.
- This term suggest that all health care workers should take action in order to prevent these HI and push their colleagues to apply as well. Therefore all health care workers can be held responsible of their own actions.
- In order to prevent HI and keep patients safety “Zero tolerance” application is very important.


HOSPITAL
This was a big problem!

Don’t forget