

EFFECTS OF HOSPITALIZATION ON SLEEP

1. 1752 1st hospital opened in USA (20 beds)

1992 in USA have 6,539 registered hospitals

It is likely that hospitalized patients already have higher rates of sleep disorders than does general population...but could the hospital environment make sleep disorders even worse?

2. Sleep Quantity/Quality in a Hospital

Studies done in a **Intensive Care Unit** (ICU)

Following surgery, both **quantity & quality of sleep is very poor**

Quantity: mean average is 2 hours TST/first 48 hours in ICU

Quality: reduced deep NREM (stage 3&4) sleep, even to zero

usually zero REM/first 48 hours

increased sleep disruption, arousals, sleep stage changes

Nursing staff seriously **over**-estimates TST of pts in ICU

Multiple causes of poor sleep

Duration of sleep disruptions

REM rebound phenomenon

Note: peak rate of post-surgical complications occur 2nd-5th day...

Note: high incidence of Obstructive Sleep Apnea (OSA)

Non-ICU Studies

Also see poor quantity/quality of sleep, although generally not as bad as that seen in ICU

Use of **hypnotics**

3. **Sources of Sleep Disruption in Hospital**

a. Environmental Sources

Staff routine

Light levels

Noise levels

b. Biological Rhythm Disturbances

c. Pharmacology

Anesthesia

Hypnotic Medication

4. **Effects of Sleep Deprivation** on hospitalized patients

5. **“I.C.U. Psychosis”**