DRG
(Diagnosis-related groups)

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What is DRG?

- **<u>Diagnosis Related Groups </u>**(DRG) is the output of a research project developed by the Yale University in the 1970's to understand the applicability and adaptability of industrial cost and quality management methods to the hospital "industry".

Diagnosis Related Groups (DRG)

An inpatient classification method that consists of patients being grouped using thier clinical and financial data and of similar ailments being assigned to similar groups.
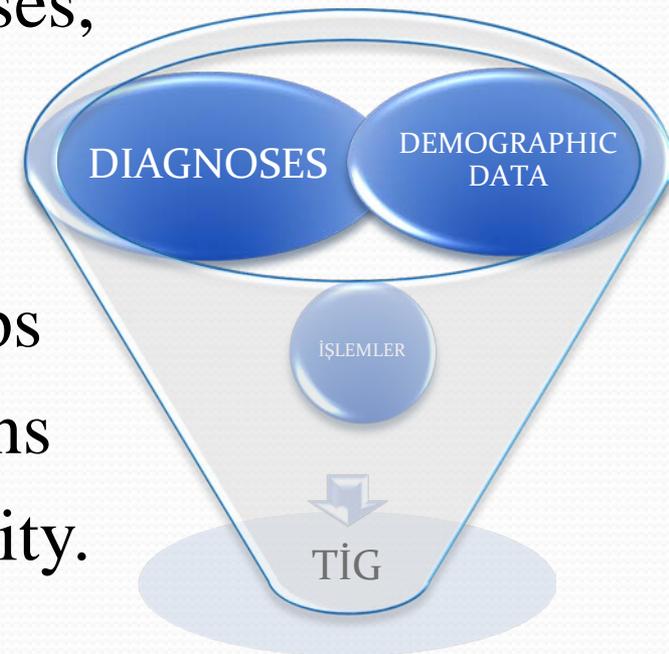
The Objective of DRG;

- ✓ To distribute limited resources **<u>fairly</u>** based on the types and intensities of cases
- ✓ To encourage the hospital's **<u>productivity and efficiency</u>**
- ✓ To collect **<u>meaningful clinical data.</u>**.

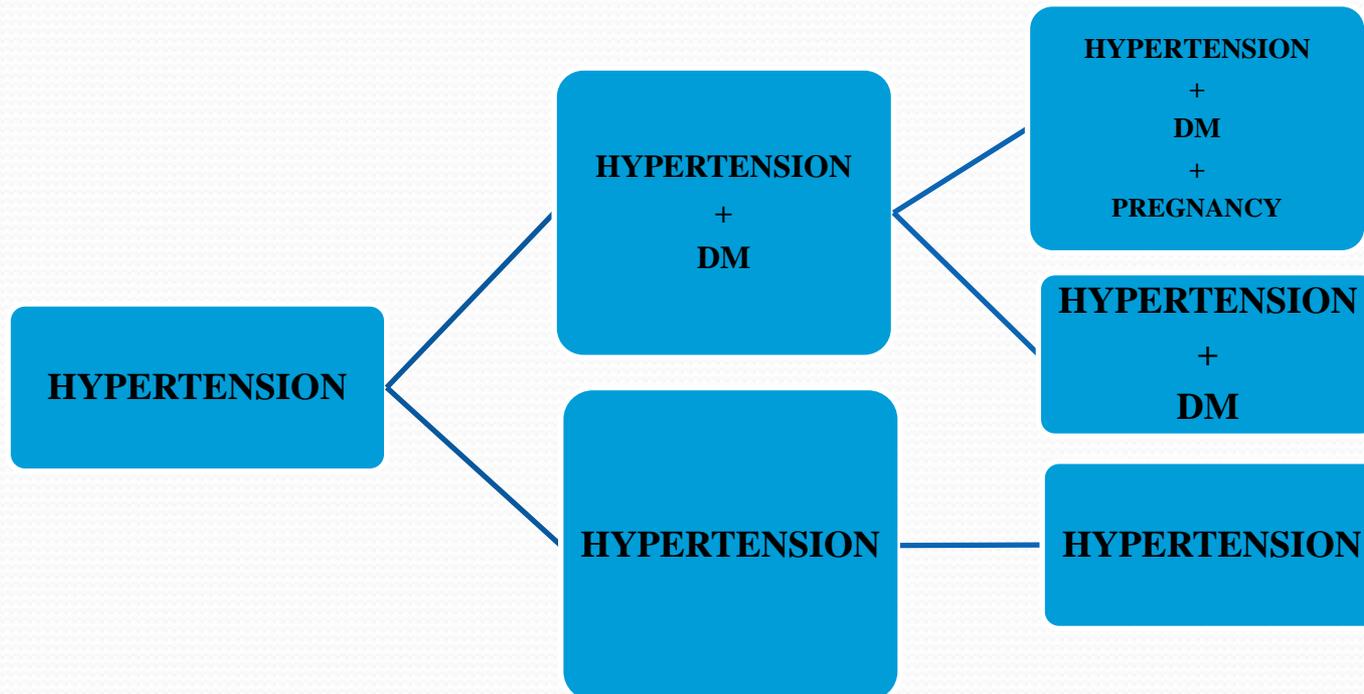# The DRG Logic?

Every patient is unique and every patient has

✓ A series of different clinical diagnoses,

✓ Risk factors,

✓ Family situation.

We need to separate these into groups that define them with similar conditions in order to give meaning to this diversity.

The DRG Logic?

To group the patient based on the main diagnosis and then to subgroups according to the existence or lack of secondary illnesses.

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                                    │  HYPERTENSION   │
                                    │        +        │
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                     │ HYPERTENSION │        +        │
                     │      +       │    PREGNANCY    │
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HYPERTENSION

HYPERTENSION
+
DM

HYPERTENSION
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DM
+
PREGNANCY

HYPERTENSION
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HYPERTENSION

HYPERTENSION

Coding Illnesses

Coding is the expression of illnesses, injuries and procedures in **numerical or alphabetical** form.

Example:

- Acute posthemorrhagic anemia D62

- Or medicated related aplastic anemiaD61.1

What is ICD-10-AM?

✓ Its basic structure is comprised of ICD *(International Statisticial Classification of Diseases)*-10 (WHO).

✓ The International Statistical Classification of Diseases and Related Health Complications – **Australian modification**.

What is ICD-10-AM?

ICD-10-AM:

✓ Diagnoses

✓ Procedures

✓ Factors that effect state of health

✓ Symptoms, indications and abnormal clinical findings

✓ Australian coding standard

Countries that use DRG

- Australia
- USA
- France
- Portugal
- Canada
- Ireland
- Italy
- Spain
- Germany
- Hungary
- Czech Repub

- Bulgaria
- Romania
- Slovenia
- Switzerland
- England
- Costa Rico
- Iceland
- Norway
- Sweden
- Denmark
- Finland

- Belgium
- Holland
- Japan
- Singapore
- Malaysia
- Thailand
- Korea
- Taiwan
- China
- New Zealand
- Other....

Its Superiority Compared to Other Payment Systems

✓   It takes into account the severity of the illness,

✓   It can classify all admitted patients not just surgery cases,

✓   It makes it possible to compare hospitals and measure performance by means of a case combination index,

✓   It encourages cost control and productivity in hospitals,

✓   It make it possible to control pricing and budget by means of relative values calculated based on cost analyses.

The Data Components that are Necessary for DRG

- ICD-10-AM Codes
  - Main Diagnosis
  - Additional Diagnoses Such as Complications and Comorbidities

- Patient Age
  - Or Date of Birth

- Reason for Discharge (Type of release)
  - The National Standard contains concepts such as, "deceased-transfer,

- Gender

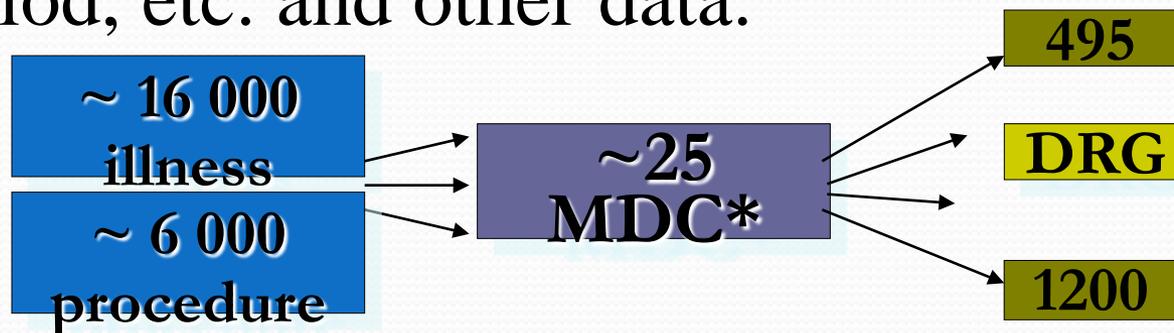- Hospitalization Period
  - Or Dates of Admittance-Discharge

- Outpatient status

- Weight of newborn at admittance
  - For 28 days and less, also for those under 2500 grams and for larger

DRG Formation

✓   The diagnosis, procedures and age of the patient,

✓   gender,

✓   manner of discharge,

✓   hospitalisation period,

✓   newborn weight, outpatient status, duration of stay in intensive care, mechanical ventilation period, etc. and other data.

~ 16 000 illness			
~ 6 000 procedure	→	~25 MDC*	→

495

DRG

1200

Relative Value and Case Mix Index (CMI)

Relative Value;

The proportion of a DRG cost to the average cost of all DRGs.

Cost data is necessary to calculate relative value!

The effect of coding on DRG transformation

- Peptic Ulcer

  Main diagnosis: K27.9 *Peptic ulcer, not accompained by perforation or bleeding*

  G63Z➜ A peptic ulcer without complications

  Relative Value: **1,01**

- **Chronic Perforated Peptic Ulcer**

  Main diagnosis: K26.5 *Peptic Ulser, Accompanied by Chronic Perforation*

  G62Z ➜Peptic Ulcer with complications

  Relative Value **1,25**

The effect of coding on DRG transformation

Papillary carcinomic thyroid ca patient has diabetes and hypertension.

Coding:

1) C73 Thyroid ca

   M8050/3 Papillary carcinoma

DRG K64B Endocrine Diseases

Relative Value 0,76 cost

2) C73 Thyroid ca

   M8050/3 Papillary carcinoma

   E11.72 Non insulin dependent diabetes mellitus, with insulin resistance

   I10 Essential (primary) hypertension

DRG K64A Endocrine Diseases Noncatastrophic Catastrophic

Relative Value : 1,26

Case Mix Index (CMI)

The rate **(measurement of complexity)** that allows us to compare the case production of one hospital with another.

The Advantages of Using the Case Mix Method

- ✓ Measurement of clinical activities

- ✓ Performance assessment between hospitals

- ✓ Financing

- ✓ In-hospital management tool

- ✓ A tool with which to start quality and use measurements

- ✓ Clinical and financial decisions made in hospital

Example;

Hospital A (1,39)

Hospital B (1,17)

Hospital A having a higher (Acmi>Bcmi) case mix index compared to Hospital B shows that it treats **cases with higher relative value (complicated/complex)**.

Payments to Hospitals Based on the DRG Model

- ✓ The relative value totals produced for each hospital in the relevant month is calculated.

- ✓ The relative value totals are calculated for all the hospitals that are in the study.

- ✓ The budget amount to be distributed in the relevant month will be distributed according to the relative values produced by the hospital and the Case Mix Index.

In the DRG System; the following do not affect the relative values!!!

✓ The treatment of patients with long hospital stays,

✓ Increasing the number of diagnostic and therapeutic procedures,

✓ Increasing the types and amounts of consumption materials that include the medications and materials given to the patient,

✓ The coding of diagnoses and procedures that need to be coded,

DGR Units in Hospitals

The **technical unit** in hospitals where data about clinical processes are,

- ✓ Prepared in accordance with the DRG system,
- ✓ Coded correctly and consistently
- ✓ And the task to send them to the system are carried out.