DRG Toolkit

Workshop for
Resource allocation of inpatient budget

Steps of approach

- Overview (Supasit)
- Classification (Chairoj/Chaiyot)
- Calibration (Orathai)
- Base rate setting (Supasit)
- Audit (Pradit)
- Management issues (Tasanee)
- Summary

Overview

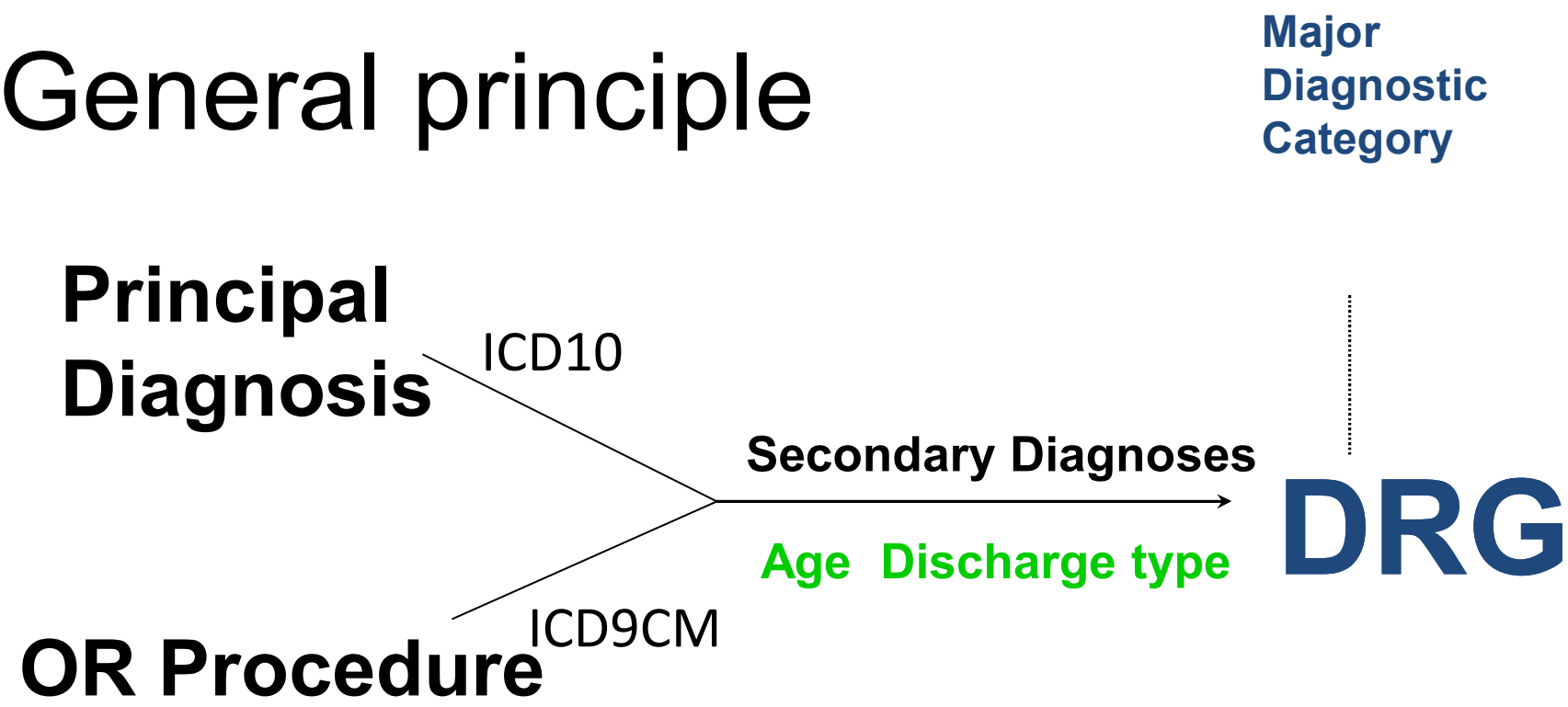
- Definition of DRG
- International and Thai DRGs
- Opportunity for developments
- Key success factors
- Discussion

What is DRG?

Diagnosis Related Group is a patient classification system for acute inpatients to measure hospital output. Patients in the same DRGs will have the same lengths of stay and the same level of hospital resource uses. (Fetter et al 1980).

Allocation of DRG

General principle



History of the DRG systems

Country	1977	1983	1992	1993	1995	1996	1997
Sweden							SRG*****
Denmark & Finland					Nord-DRG		
Thailand				Thai DRG			
Australia			AN-DRG**		AN-SNAP*** MH-CACS****		
USA	Yale DRG	HCFA DRG*					

HCFA-DRG* = the Health Care Financing Administration Diagnosis Related Groups

AN-DRG = the Australian Diagnosis Related Group**

AN-SNAP* = The Australian National Sub-Acute and Non-Acute Patient Classification**

MH-CASC** = The Mental Health Classification and Service Costs**

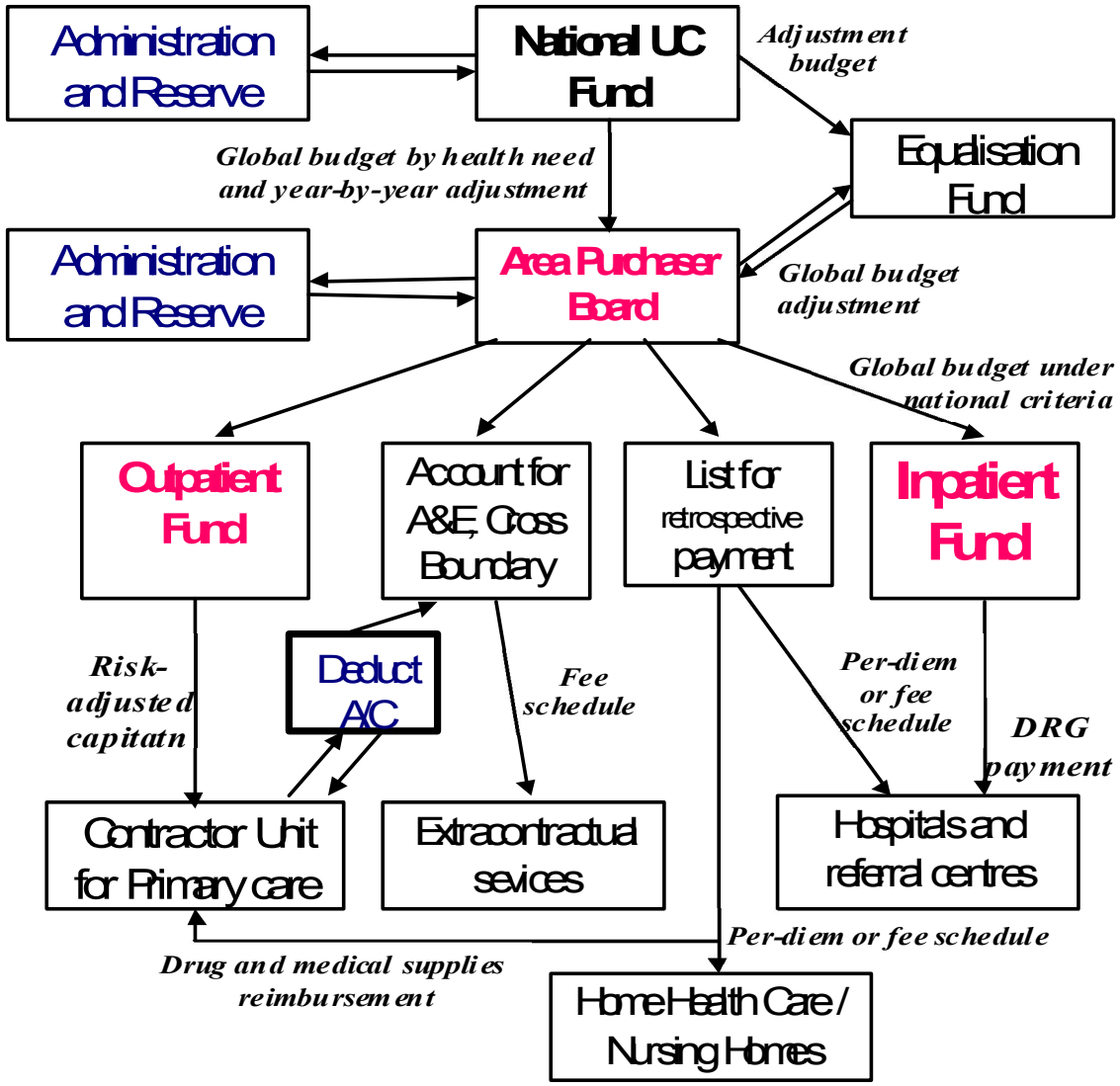
SRG*** = The State Related Group**

Source: Phuaphanprasert (2007)

Why DRG in Thailand?

- The Thai health system has moved towards the universal coverage policy since 2001, with problems related to budget allocation (Pannarunothai et al 2004).
- Despite success of capitation payment in the social security scheme (Mills et al 2000, Tangcharoensathien et al 2001).
- The Working Group of the HSRI has recommended the use of DRG as a payment mechanism for inpatient care (HSRI 2001).

DRG payment model for Thai UC



HSRI 2001

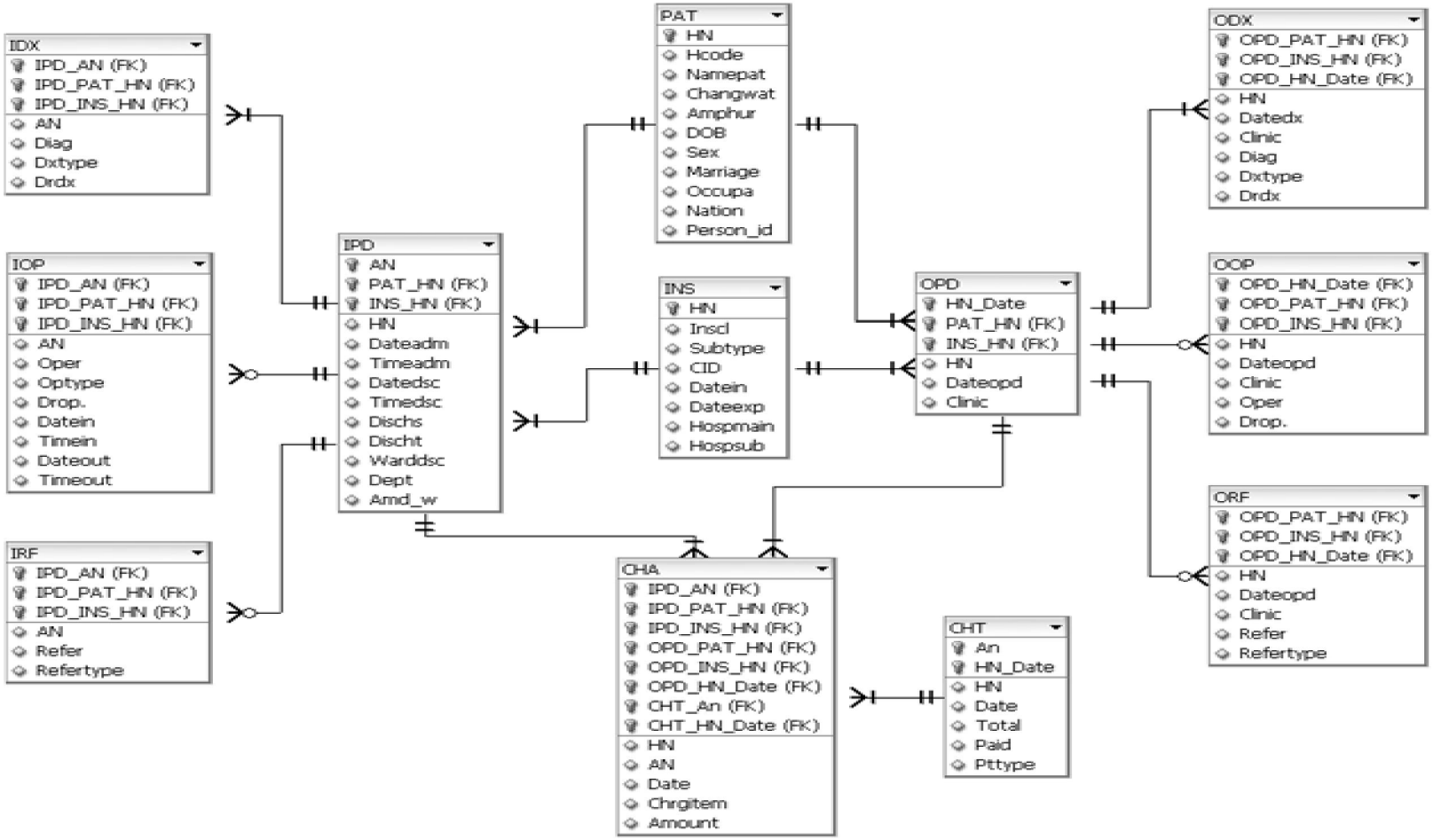
International and Thai DRGs

- DRG first developed by HCFA (Health Care Financing Administration, now Centers for Medicaid and Medicare Service, CMS) aimed to pay for elderly patients prospectively.
- International Refined DRG reflects severity.
- Thai DRG versions 3 onwards based on ARDRG with 5 levels of severity.
- TDRG v4 recognizes bilaterality & multiplicity.
- TDRG v5 splits short stays and tracheostomy.

Opportunity for developments

- ICD10/ICD10TM, modified ICD9CM with extension
- Hospital billing system
- Hospital cost system
- Hospital IT system
- Standard dataset approach at national level

Standard dataset approach



Key success factors

- Universal health coverage policy environment.
- Team work on
  - Health care finance
  - Cost accounting
  - Medical coders
  - Medical informatics
  - Auditor

Discussion

- In a resource limited country, what are important factors to make DRG development a success?

Base rate setting

- What is base rate?
- Transition of base rate (phase-in & phase-out)
- Base rate within a global budget
- Capped base rate within a safety corridor
- Bundled and unbundled base rate
- Base rate adjustment by economic model
- Exercise

What is base rate?

- Base rate is a currency unit set for a relative weight.
- Provider gets according to RW x base rate (e.g. RW of 2.555 x 10,000 baht/RW = 25,550 baht)
- Base rate should be set based on cost, or reflecting cost of care.

Transition of base rate

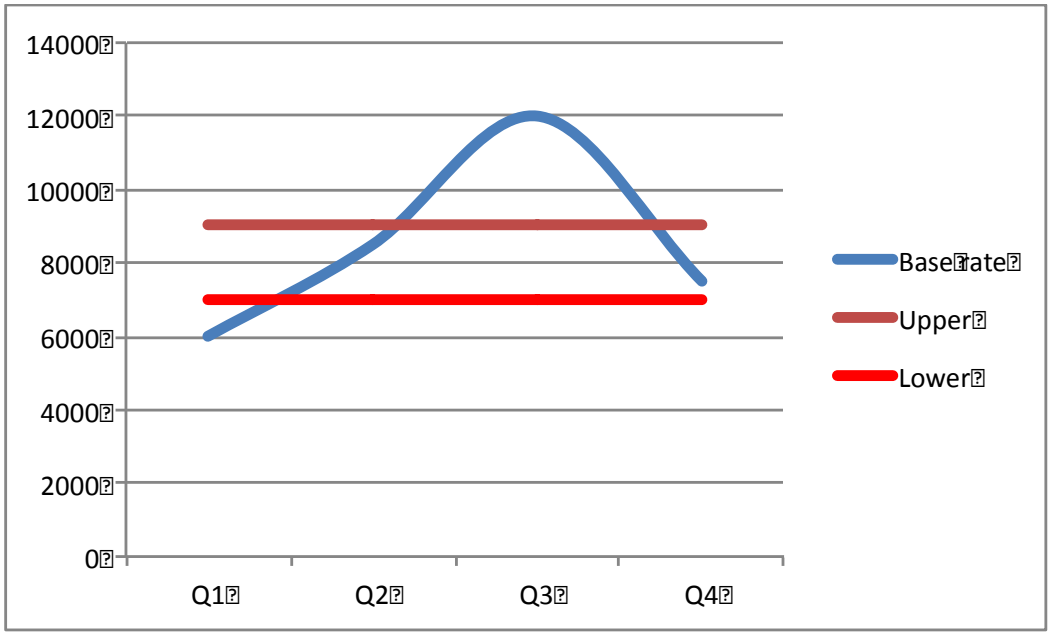
- The national base rate is based on average cost at national level.
- Forcing hospitals to accept national base rate on the first year will see many hospitals in deficit, and many hospitals in surplus.
- Many countries adopt the phase-in & phase-out policy within 5 years:
  - Own base rate: 80, 60, 40, 20, 0
  - Nat. base rate: 20, 40, 60, 80, 100

Base rate within a global budget

- Insurers protect themselves from loss by not paying hospitals higher than available budget.
- All hospitals get proportionately (lower or higher) according to submitted sum RW
  - Sum of payments = **Available budget** / ***sum (RW)***
- The submission period/available budget can be set as monthly, quarterly or annually.

Safety payment corridor

	Q1	Q2	Q3	Q4
Avail. budget	10mb	10mb	10mb	10mb
Sum RW	1,667	1,176	833	1,333
Base rate	6,000	8,500	12,000	7,500



Unbundled base rate

- Some cost items are too high to put into the relative weight
  - Labour cost
  - Drug
  - Medical device
  - Special investigation
- The solution is to unbundle these costs from payment formula

Base rate and economic adjusters

- Labour cost differential
- Disproportional share of low income patients
- Indirect medical education

$Op_{ij} = BR_i * RW_j * O a$

- BR_i is base rate
- RW_j is DRG relative weight
- $Oa_i = (PLAB_i * WAGEINDEX_i + (1-PLAB_i) * COLA_i) * (1+ DSH_i + TEACH_i)$
- $PLAB_i$ = payment rate that is labour related
- $WAGEINDEX_i$ = wage index
- $COLA_i$ = cost of living adjustment
- DSH_i = payment factor for disproportional share
- $TEACH_i$ = factors for the indirect cost of medical education
- $TEACH_i$ = 1.89*((1+ (interns + residents) /beds) **.405 - 1)).

Carter et al 1994

Exercise

- In a middle income country, the universal health coverage policy is operated through two major public insurance schemes. The first covers all public hospitals the second covers both public and private hospitals. Public hospitals receive separate budget line for salary. How do you set the base rate for public and private hospitals of the two insurance schemes?