DRGs Symposium in Korea,16 Dec., 2011

Introduction and design of DRGs and DRG-based Payment System in Taiwan

Yue-Chune Lee, Dr. P.H.
National Yang-Ming University, Taiwan

Outline of Presentation

1. Overview of NHI payment system
2. Development of TwDRGs
3. Design of DRGs-based payment system
4. Implication and Conclusion

Overview of the NHI payment system and Case-Payment Initiatives

Yue-Chune Lee
Taiwan

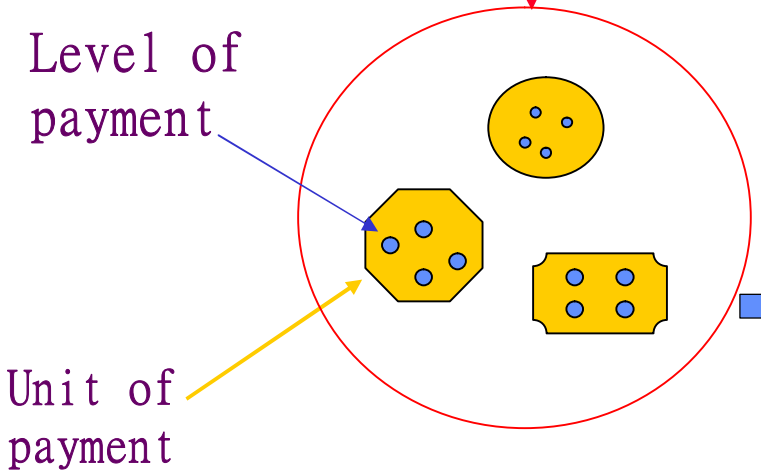
Overview of NHI payment system

- **Unit of Payment:**
  - Fee for Services: major unit of payment
  - Case Payment :54 cases (until 2009)
  - Per diem payment: chronic mental beds, day care
  - Capitation: ventilator-dependent patients (1998-), Family Physician Initiatives(2004-),capitation Initiatives (2011-)
  - Pay-for-performance(2001-)
- **Global Budget:**
  - Expenditure cap: dental care(1998-), traditional medicine(2000-), clinics(2001), hospitals (outpatient ESRD) (2002-)
  - Expenditure target: all others (home care, mental community rehab. center, payment initiatives) (2002-)

Payment system reform strategies

Macro Strategies
（Σ PiQi）

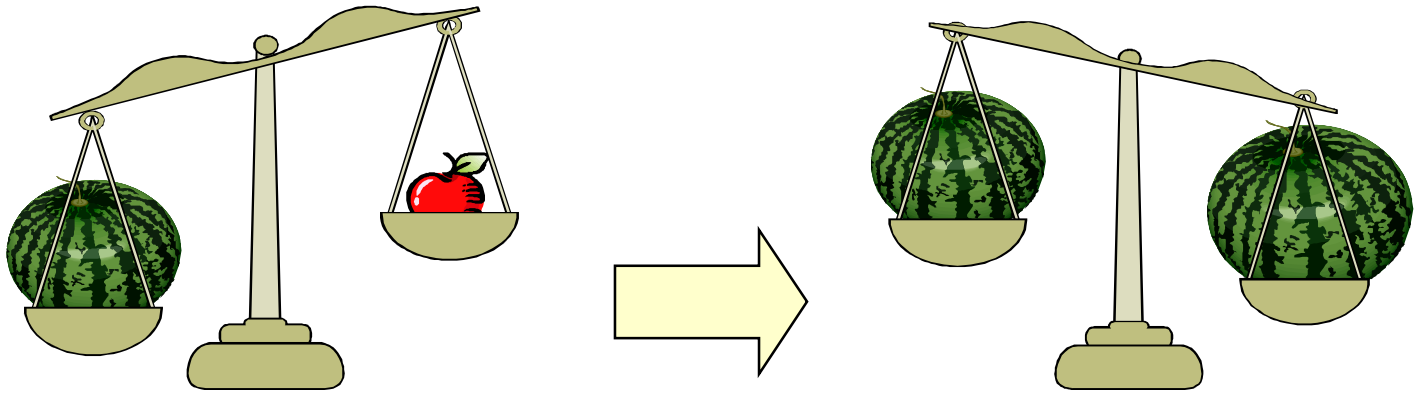
Global budget
- **Control cost**
- **Motivation for reform**



Micro strategies

Reform unit/level of payment (e.g. DRGs)
- **efficiency/quality**

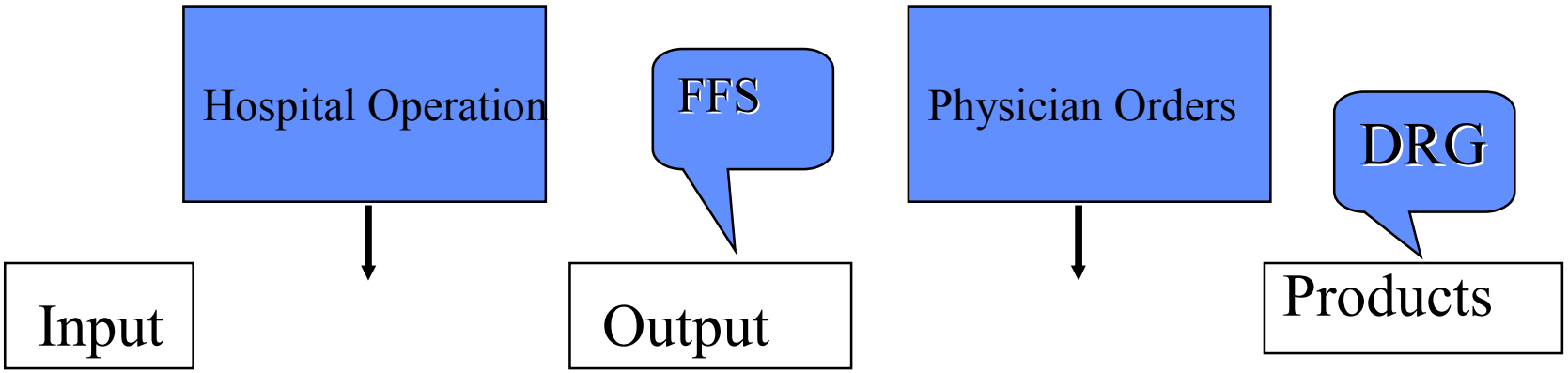
Why DRGs?



not comparable comparable

- **It's difficult to make meaningful comparison on resources consumption among hospital patients with different levels of severity under fee-for- services (FFS).**
- **DRGs enable making meaningful comparison, thus will facilitate better hospital management by improving the effectiveness/efficiency of health care**

Defining the Products of a Hospital (Fetter,1991)



人力Labor
醫材Materials
設備Equipment
管理Management

住院天數Patient days
伙食Meals
檢查Lab procedures
手術Surgical procedures
藥品Medications…….

Natural delivery without complication

Appendectomy without complicated Dx

Hernia repairment

Efficiency

Effectiveness

Case Payment Initiatives(CPI)

- First-stage (1995-2009)

- 1995-1998 :22 cases
  - defined by procedures of DRGs without CC (FFS if with CC*)
- 1999: 28 new cases
  - defined by APDRGs(ALL-Patient DRGs)
- Total 54 inpatient DRGs, 5 outpatient DRGs by 2009

*CC: co-morbidity and complication

Diagnosis-related Groups, DRGs

Define hospital products based on patients' rather than hospitals' characteristics

Patients with similar clinical conditions and resource use were classified into the same DRGs based on their diagnoses, procedures, age, gender, co-morbidity, complication, discharge status, etc.

In 1983, DRGs were adopted by US Medicare program as basis of Prospective Payment System (DRGs-based PPS).

First-stage Case Payment Initiatives payment rule,1995-2009

1. **Case definition: by procedures or AP-DRGs**
2. **Payment: lump-sum payment per admission, including physician fees.**
3. **Payment price set based on historical costs with appropriate adjustment**

4 Outlier payment(FFS) : threshold varied by cases

5. **Quality assurance : should meet minimal required services guideline**
6. **Readmission within 2 weeks: providers' responsibility**

First-stage CPI yielded promising results*

Cost:

- roughly the same or slightly increase due to the payment adjustment (for under-paid surgical procedures
- Resource consumption significantly decreased

Length of stay reduced 10% (max 40%)

Cost of pharmaceutical products decrease 15%

Cost of elective ancillary services decreased

*Lee, YC & Yang, MC , Li, CC. Health Care Financing System in Taiwan: Before and After Introduction of Case-Mix. Malaysian J. Public Health 5 (supp 2), 19-32, 2005

First-stage CPI yielded promising results

Quality

- Comparable or even better than before
- % admissions follow guideline sig. increased (provide standard care)

Access: shifting and dumping:

- Code creep to FFS cases (paid by FFS)
- Incentive to claim outliers (on FFS bases)
- Patient transfer sig reduce 40%,according to analysis of claim data.

*Lee, YC & Yang, MC , Li, CC. Health Care Financing System in Taiwan: Before and After Introduction of Case-Mix. Malaysian J. Public Health 5 (supp 2), 19-32, 2005

Development and application of DRGs and DRGs-based payment system

Yue-Chune Lee
Taiwan

Why Taiwan still need DRGs-based payment system under GB

Global budget (GB) system do control costs yet may or may not change providers' behavior, low conversion factors (of Fee Schedules) trigger providers to ask for more budgets.

Incentive of FFS is against the objective of GB.

The development of a national DRGs system will facilitate faster implementation of case payment system and improve the efficiency of health care provision.

Development and application of Taiwan DRG (Tw-DRGs)

Case definition: Tw-DRGs (modified from CMS DRG)

Data: based on NHI claim data

Weight: calculated based on historical claim data

Weight adjustment: adjust for fee schedule change within 3 years

Development of Tw-DRGs

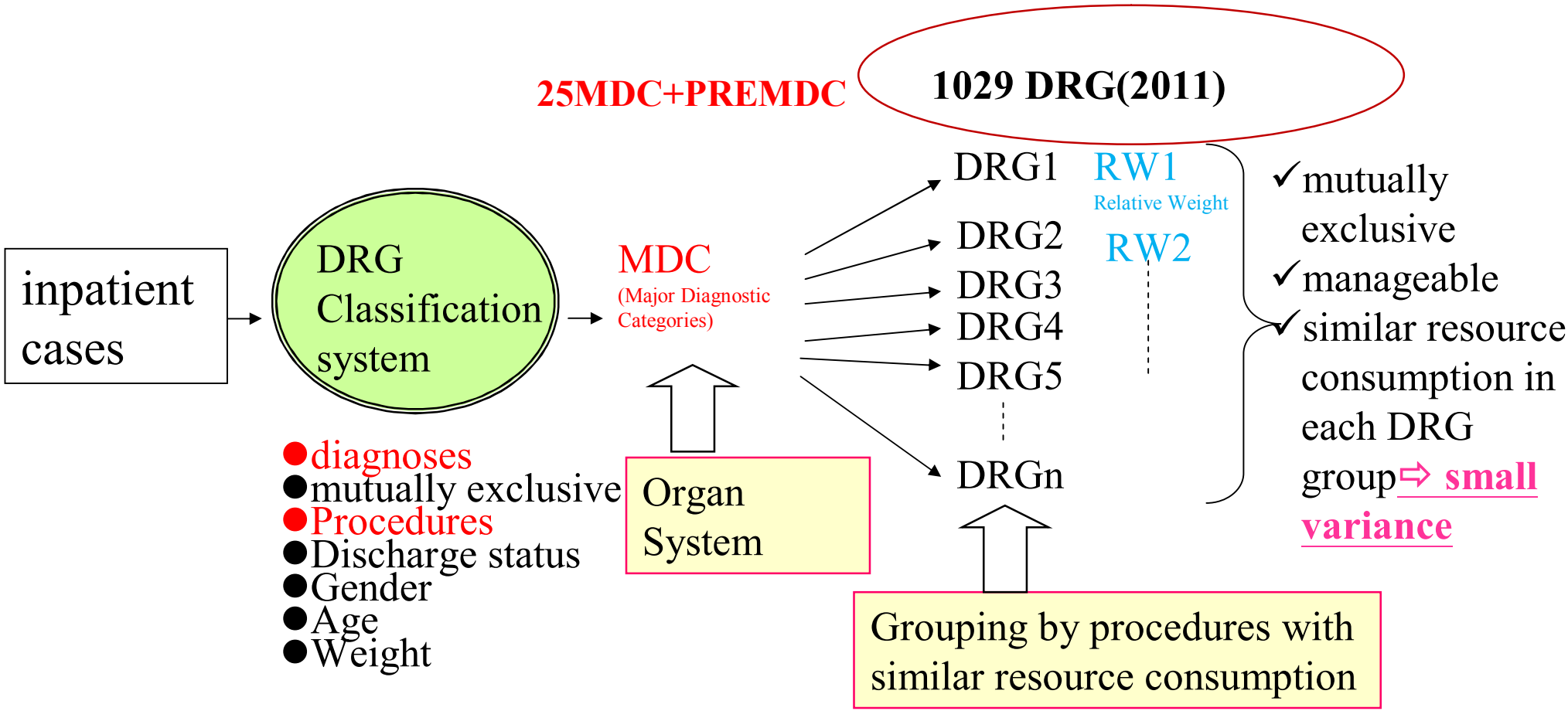
- First version :based on CMS DRGs (499 groups),2001
- Second version , 2002-2004

  modify DRGs structure based on local clinical practice

  Modify DRGs based on statistic principle

  Cost/LOS of at least 75% pts exceed 1 day
- Third version: 2005-2010
  - Modify DRG based on providers' recommendation

DRGs Grouping Diagram



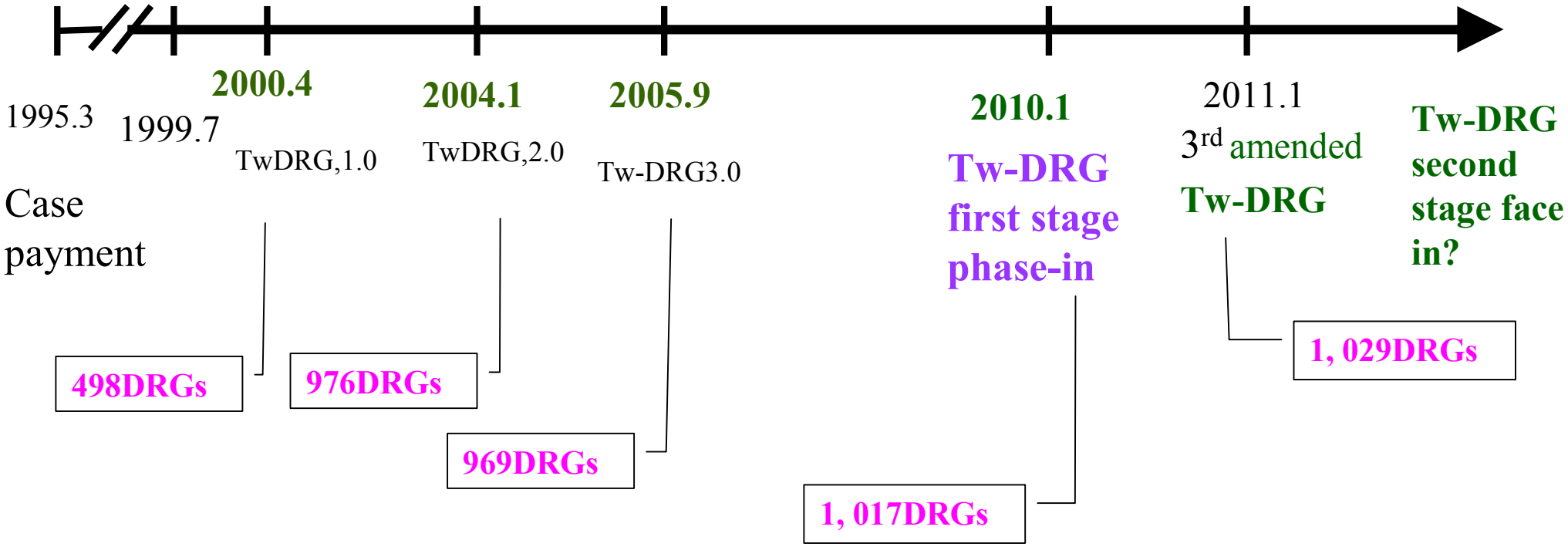
The performance of Tw-DRGs -better than CMS DRG, APDRG

Version	number of DRG	R-square
Tw3.0** (payment adj	969	0.6968
Tw3.0 *(without Waiv	969	0.6750
Tw3.0	969	0.5468
Tw2.0	976	0.5425
Tw1.0 (CMS)	499	0.5321

*exclude waivers

**exclude waivers and adjusted for level of hosptial payment

Tw-DRG: planning and implementation



Objectives of DRGs-based payment system reform (2nd stage CPI)

- **To improve the efficiency**
  - **Reduce waste**
- **To improve quality and effectiveness**

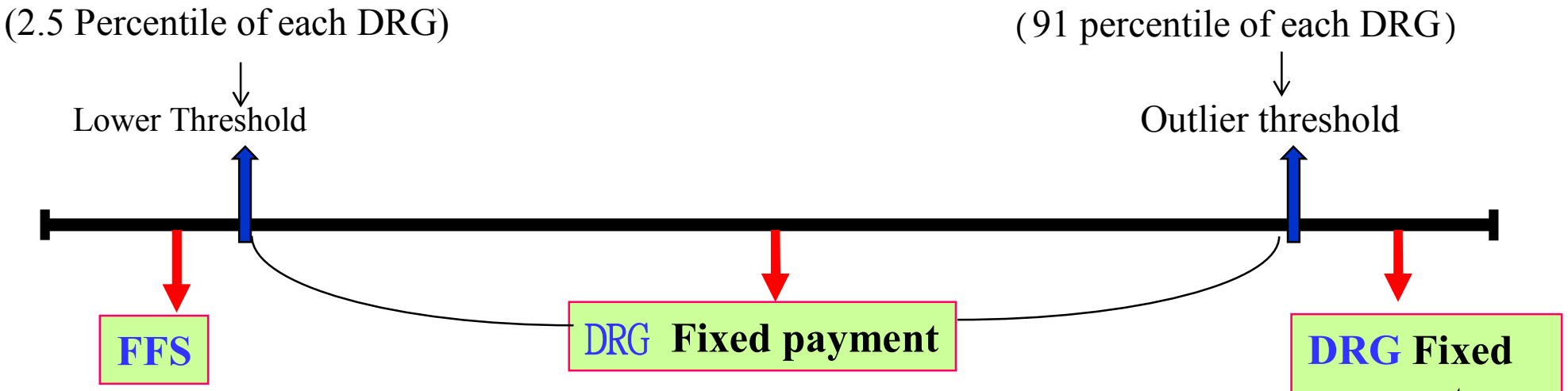
Tw-DRG-based Case Payment Initiatives

- Phased-in within 5 years, starting from 2010
- Outlier paid by marginal cost (80%)
- Payment adjustment (add on):
  - children (9-91%),levels of hospital(5-7.1%), hospital case-mix index (CMI,1-3%),remote areas(2%)
  - new technology/device w brand new function
- Conversion factor of global budget applied to all cost except procedures, anesthesia, blood, pharmacist

Waivers Tw-DRGs

- **MDC19 & 20(Mental illness)**
- **Principle diagnosis of cancer**
- **Principle and secondary diagnosis of AIDS, hemophilia or rare diseases**
- **Length of hospital stay> 30 days**
- **ECMO(procedure code 39.65)cases**
- **Pilot projects**
- **Inpatient hospice case**
- **Other cases excluded from global budget**

Tw-DRG payment rates



＝Relative weight(RW)×Standard payment amount(SPR)
×(1＋*basic treatment adjustment*＋*children adjustment*
＋*CMI Adjustment*＋ *Geographic Adjustment*)

SPR=37,230 in 2010

Outlier payment=costs exceeding outlier threshold * 80%

Tw-DRG Payment adjustment

- **Basic Fee adjustment**
  - reflect previous difference in payment rates of basic hospital service among different types of hospitals
- **Children adjustment**
  - increase 15%
- **CMI adjustment**
  - Reflect patient severity
- **Geographical adjustment：2%**

Types of hospital		Basic adjust.	Reduce difference for each type of hospital	Total
Academic medical center		7.1%		7.1%
Regional hospital		6.1%		6.1%
community hospital	community teaching hospital	3.2%	1.8%	5.0%
	Local hospital	0.0%	5.0%	5.0%

Age adjustment	notMDC15		MDC15
	internal medicine	surgery	
<six months	91%	66%	23%
>six months, <2years	23%	21%	9%
>2years, <=6years	15%	10%	10%

CMI adjustment	Adjustment rate
1.1＜CMI≦1.2	1%
1.2＜CMI≦1.3	2%
CMI>1.3	3%

Comparison of case-payment initiatives (CPI) at first and second stages

	2nd stages (Tw-DRG CPI),2010-	1st stage CPI,1995-2009
Case definition	Tw-DRGs	Procedures, APDRG
Payment rule	Fixed amount	same
Outlier	80% of cost (no limit)	60% of cost (set max. Percentage)
Waivers	Selected disease, LOS>30 days	w comorbidity and complication
Payment adjustment	Level of hospital, CMI, remote area & children	Level of hospital Remote area
Minimal requirement	no	yes
Quality monitoring	Hospital and EMR Readmission rate, transfer, mortality	same

Phased-in plan of Tw-DRG payment system

Time	# of DRG (th MDC)	% of cost as all DRG-base payment	Cumulated cost	% of cost as all admissions
2010	155DRG* (now 164)	28.60%	28.60%	17.36%
2011	(5、8、12、13、14)	18.00%	46.60%	10.97%
2012	(2、3、6、7、9、10)	14.30%	60.90%	10.26%
2013	(PRE、4、11、17、23、24)	21.40%	82.30%	12.97%
2014	(1、15、16、18、21、22)	17.00%	100.00%	9.16%
total	1017 DRG (now 1029)	100%		60.72%

*49 cases which were paid by case before 2010 (22% admission，29% cost)

Implication

- **Grouper:**
  - **DRG system is never perfect, may adopt any existing system (MS-DRG, IRDRG, ARDRGs…) as starting point and modify it according to analysis of existing data as well as local practice.**
- **Separate DRGs with payment system**
  - **Application of DRGs is not limited to payment, its development should rely more on scientific research than interference of interest groups**
  - **Design of DRGs-based payment system usually reflect local practice/health care system and need more political consideration.**

Implication

- Special consideration for Payment system
  - Outlier payment
    - Standard threshold or “case by case”
  - Variation between different levels of hospitals (negotiation)
  - Application of new technology or devices.
  - Phased-in strategies
    - Gradually increase percent of cost paid by DRGs is preferred (vs. select MDCs)

Conclusions

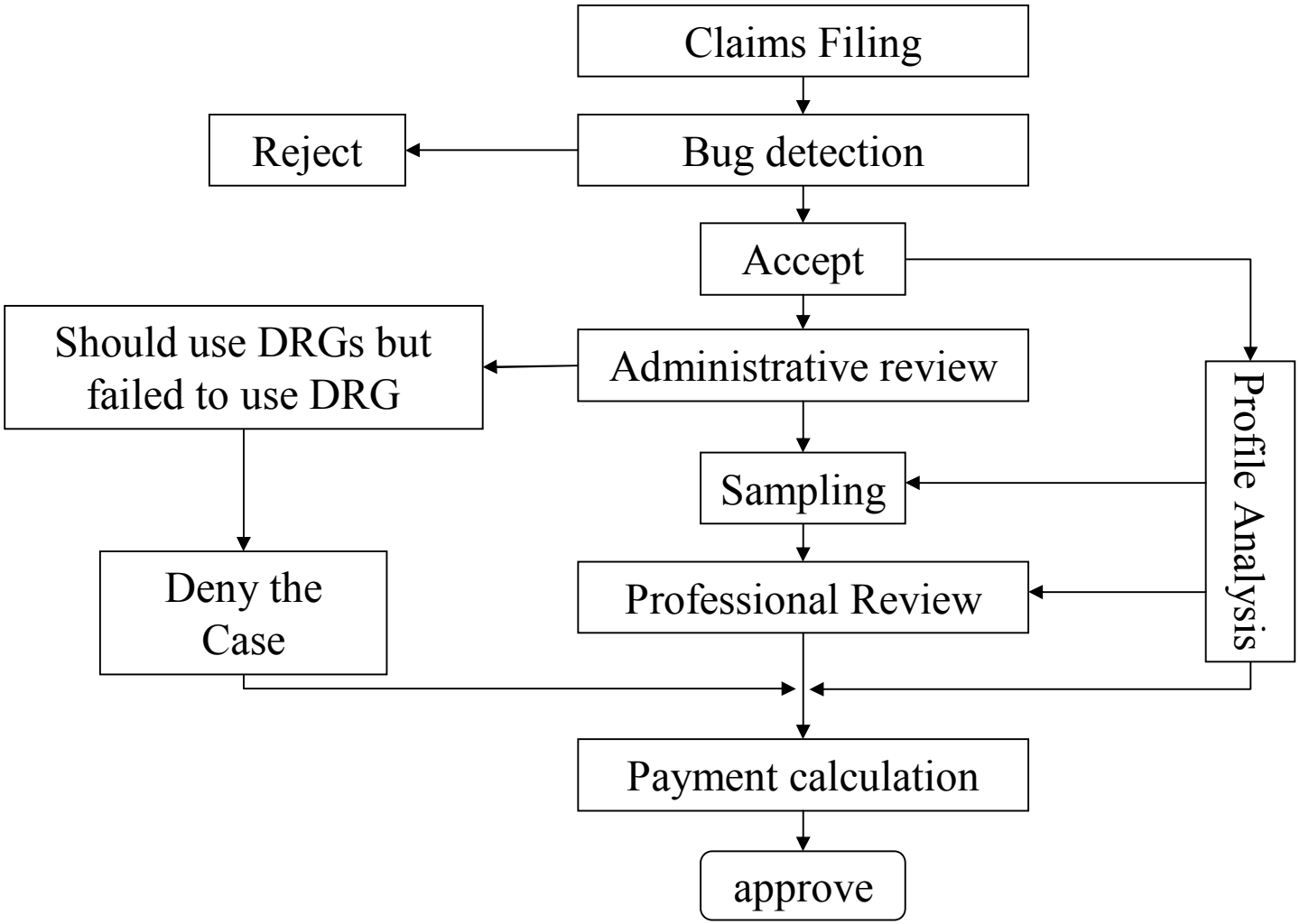
- Although global budget payment system (GB) has controlled costs, it is still necessary to reform the unit of payment system (such as DRGs) to provide incentive for hospitals to improve efficiency/effectiveness (or reduce waste)
- Preliminary results indicate reduction on the LOS, yet readmission rate also slightly increase.
- DRGs-based payment system has triggered hospitals to enhance management thru establishment of clinical pathway. Quality and effectiveness of care, though lacking of evidence now, can be improved in the long-run.
- BNHI need to monitor the quality of care and modify payment to reflect the use of new technology
- Bundle-payment may be necessary in the long-run.


Thank you very much
for your attention

Claims filing, reviewing and monitoring of DRGs-based Payment system in Taiwan

Ming-Chin Yang
National Taiwan University, Taiwan

Flowchart of Filing and Reviewing



Principles of Filing and Reviewing

- To ensure the correctness of DRG coding

Correct Dx/Proc → Correct Dis. Classification → **Corr. DRG+** Med. Quality

Hosp.

- ✓MD
- ✓Diagnosis Document

→

- ✓Coding staff
- ✓ **High RW DRG** Completeness of document

→

- ✓Claims staff
- ✓ **Grouper**

→ BNHI

→

- ✓Procedural Rvw.
- ✓ **Profile analysis**

→ **Sampling** →

- ✓Prof. Rvw.
- ✓Coding Rvw.

→ Approve

Claims Review-1

- Necessity of admission and treatment

The review focused on：

- ✓ **Whether Patient can be treated in Outpatient? If so, with or without stating the reason to be hospitalized?**
- ✓ **Clinical evidence to support the necessity of surgery?**

- Appropriateness of Diagnosis and treatment

The review focused on：

- ✓ Claim filing of procedure follow the payment guideline or indications?

- Accuracy of diagnosis and coding

The review focused on： DRG Validation

- ✓ Reliability and validity of claim data
- ✓ rationality of procedure and coding? Upcoding? Creeping?

Claims Review-2

- Cost shifting of inpatient
- Appropriateness of outlier payment

The review focused on：

- ✓ Shifting? Against Tw-DRG payment rule?
- ✓ Utilization? Appropriateness of utilization, especially for outlier cases.

Claims Review-3

- Stability of discharge status
- Appropriate quality of care

The review focused on：Quality assurance

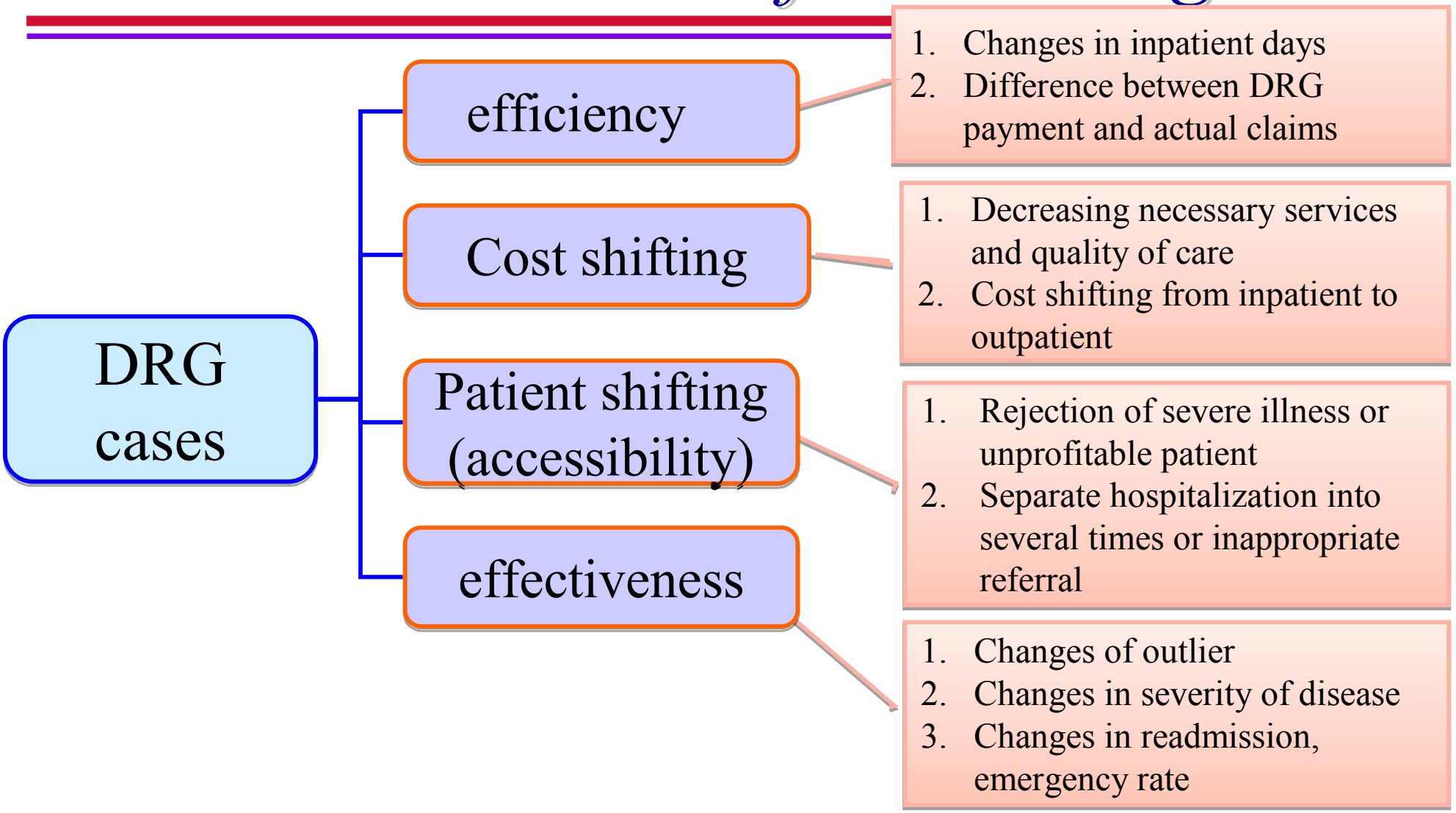
- ✓ Appropriate discharge status?
- ✓ Unnecessary referral?
- ✓ Readmission/emergency?
- ✓ Inappropriate quality of care?

such as：Serious medical complications, Serious physiological or anatomical impairment, Significant disability, death etc.

Profile Analysis

- Case-Mix Index
- CC DRG Percentage
- High-Risk DRGs
- Highest-Volume DRGs
- Problematic Diagnoses
- Problematic Procedure
- Variation in Length of stay and in Charges

Four dimensions of monitoring



Efficiency Monitoring

- Average length of stay(days)
- Average RVU per case
- Ratio of DRG RVU to actual RVU

Average length of stay

MDC		2009年 1~4季	2009年 成長率	2010年 1~4季	2010年 成長率
00	合計	4.39	-1.12%	4.19	-4.60%
02	眼之疾病與疾患	1.76	-3.34%	1.56	-11.36%
03	耳鼻喉及口腔之疾病與疾患	2.96	0.50%	2.75	-6.86%
05	循環系統之疾病與疾患	4.84	-1.43%	4.53	-6.33%
06	消化系統之疾病與疾患	3.00	-1.84%	2.85	-5.07%
07	肝、膽系統或胰臟之疾病與疾患	4.53	-0.11%	4.27	-5.63%
08	骨骼、肌肉系統及結締組織之疾病與疾患	6.40	-2.52%	5.83	-8.91%
09	皮膚、皮下組織及乳房之疾病與疾患	3.43	2.71%	3.28	-4.33%
10	內分泌、營養及新陳代謝之疾病與疾患	3.46	-1.43%	3.39	-2.12%
11	腎及尿道之疾病與疾患	10.83	-0.13%	9.64	-11.06%
12	男性生殖系統之疾病與疾患	4.59	-2.22%	4.43	-3.35%
13	女性生殖系統之疾病與疾患	4.33	-1.58%	4.18	-3.42%
14	妊娠、生產與產褥期	3.75	1.31%	3.73	-0.47%

Average RVU per case

（合計）MDC		2009年 1~4季	成長率	2010年 1~4季	成長率
00	合計	45,514	0.80%	45,803	0.63%
02	眼之疾病與疾患	27,117	0.33%	26,597	-1.92%
03	耳鼻喉及口腔之疾病與疾患	26,395	0.17%	25,329	-4.04%
05	循環系統之疾病與疾患	108,717	-1.39%	108,234	-0.44%
06	消化系統之疾病與疾患	27,193	0.28%	26,503	-2.54%
07	肝、膽系統或胰臟之疾病與疾患	48,277	2.27%	46,739	-3.19%
08	骨骼、肌肉系統及結締組織之疾病與疾患	63,214	0.90%	60,943	-3.59%
09	皮膚、皮下組織及乳房之疾病與疾患	38,499	2.13%	36,411	-5.43%
10	內分泌、營養及新陳代謝之疾病與疾患	36,944	0.63%	36,488	-1.24%
11	腎及尿道之疾病與疾患	142,509	11.22%	127,681	-10.40%
12	男性生殖系統之疾病與疾患	37,601	-0.12%	37,437	-0.44%
13	女性生殖系統之疾病與疾患	43,913	1.85%	43,969	0.13%
14	妊娠、生產與產褥期	25,328	1.46%	25,417	0.35%

●Ratio of DRG RVU to actual RVU

（合計）MDC		2009年 1~4季	2010年 1~4季
00	合計	1.1454	1.2143
02	眼之疾病與疾患	1.0367	1.1199
03	耳鼻喉及口腔之疾病與疾患	1.0704	1.1513
05	循環系統之疾病與疾患	1.1324	1.2183
06	消化系統之疾病與疾患	1.0891	1.1711
07	肝、膽系統或胰臟之疾病與疾患	1.2197	1.2971
08	骨骼、肌肉系統及結締組織之疾病與疾患	1.0652	1.1431
09	皮膚、皮下組織及乳房之疾病與疾患	1.0991	1.1717
10	內分泌、營養及新陳代謝之疾病與疾患	1.0818	1.1330
11	腎及尿道之疾病與疾患	1.3248	1.4270
12	男性生殖系統之疾病與疾患	1.2637	1.3277
13	女性生殖系統之疾病與疾患	1.1950	1.2412
14	妊娠、生產與產褥期	1.3468	1.3894

Cost Shifting Monitoring

- Average outpatient utilization of lab tests or diagnostic examinations one week before hospitalization
- Average outpatient utilization one week before Hospitalization
- Percentage of patient with CC

- Average outpatient RVU of lab tests or diagnostic examinations one week before hospitalization

（合計）MDC		2009年 1~4季	2009年 成長率	2010年 1~4季	2010年 成長率
00	合計	685	7.55%	816	19.23%
02	眼之疾病與疾患	225	7.49%	247	9.80%
03	耳鼻喉及口腔之疾病與疾患	406	0.64%	431	6.16%
05	循環系統之疾病與疾患	1,101	2.03%	1,336	21.32%
06	消化系統之疾病與疾患	993	10.32%	1,171	17.93%
07	肝、膽系統或胰臟之疾病與疾患	1,635	6.59%	1,921	17.49%
08	骨骼、肌肉系統及結締組織之疾病與疾患	952	7.25%	1,080	13.38%
09	皮膚、皮下組織及乳房之疾病與疾患	1,148	14.95%	1,116	-2.79%
10	內分泌、營養及新陳代謝之疾病與疾患	307	-4.06%	345	12.31%
11	腎及尿道之疾病與疾患	1,613	0.32%	1,681	4.24%
12	男性生殖系統之疾病與疾患	778	6.42%	772	-0.76%
13	女性生殖系統之疾病與疾患	597	0.29%	645	8.15%
14	妊娠、生產與產褥期	117	5.60%	143	21.51%

Average outpatient utilization one week before hospitalization

單位：點/次、%

（合計）MDC		2009年 1~4季	2009年 成長率	2010年 1~4季	2010年 成長率
00	合計	1,174	5.11%	1,213	3.30%
02	眼之疾病與疾患	1,547	-2.05%	1,654	6.90%
03	耳鼻喉及口腔之疾病與疾患	998	2.89%	992	-0.60%
05	循環系統之疾病與疾患	3,011	6.20%	3,010	-0.01%
06	消化系統之疾病與疾患	994	0.33%	990	-0.32%
07	肝、膽系統或胰臟之疾病與疾患	1,247	15.14%	1,225	-1.73%
08	骨骼、肌肉系統及結締組織之疾病與疾患	1,591	5.42%	1,570	-1.36%
09	皮膚、皮下組織及乳房之疾病與疾患	1,692	-8.53%	2,212	30.73%
10	內分泌、營養及新陳代謝之疾病與疾患	1,024	7.21%	1,028	0.38%
11	腎及尿道之疾病與疾患	7,697	4.40%	7,910	2.77%
12	男性生殖系統之疾病與疾患	1,607	8.13%	1,552	-3.41%
13	女性生殖系統之疾病與疾患	723	2.95%	724	0.18%
14	妊娠、生產與產褥期	393	5.17%	404	2.98%

Percentage of Patient with CC

單位：%

(合計) MDC		2009年 1~4季	2009年 成長率	2010年 1~4季	2010年 成長率
00	合計	11.98%	6.68%	16.40%	36.89%
02	眼之疾病與疾患	0.00%	--	0.00%	--
03	耳鼻喉及口腔之疾病與疾患	3.90%	15.73%	4.77%	22.31%
05	循環系統之疾病與疾患	64.53%	5.68%	69.30%	7.39%
06	消化系統之疾病與疾患	12.12%	7.93%	15.10%	24.59%
07	肝、膽系統或胰臟之疾病與疾患	19.78%	6.00%	21.85%	10.47%
08	骨骼、肌肉系統及結締組織之疾病與疾患	18.89%	6.54%	24.11%	27.63%
09	皮膚、皮下組織及乳房之疾病與疾患	6.14%	-21.78%	6.13%	-0.16%
10	內分泌、營養及新陳代謝之疾病與疾患	0.00%	--	0.00%	--
11	腎及尿道之疾病與疾患	52.20%	2.82%	69.23%	32.62%
12	男性生殖系統之疾病與疾患	26.68%	8.06%	29.20%	9.45%
13	女性生殖系統之疾病與疾患	9.75%	4.17%	17.72%	81.74%
14	妊娠、生產與產褥期	6.25%	3.48%	9.99%	59.84%

Accessibility Monitoring-Referral

- DRG Case Referral

單位：%

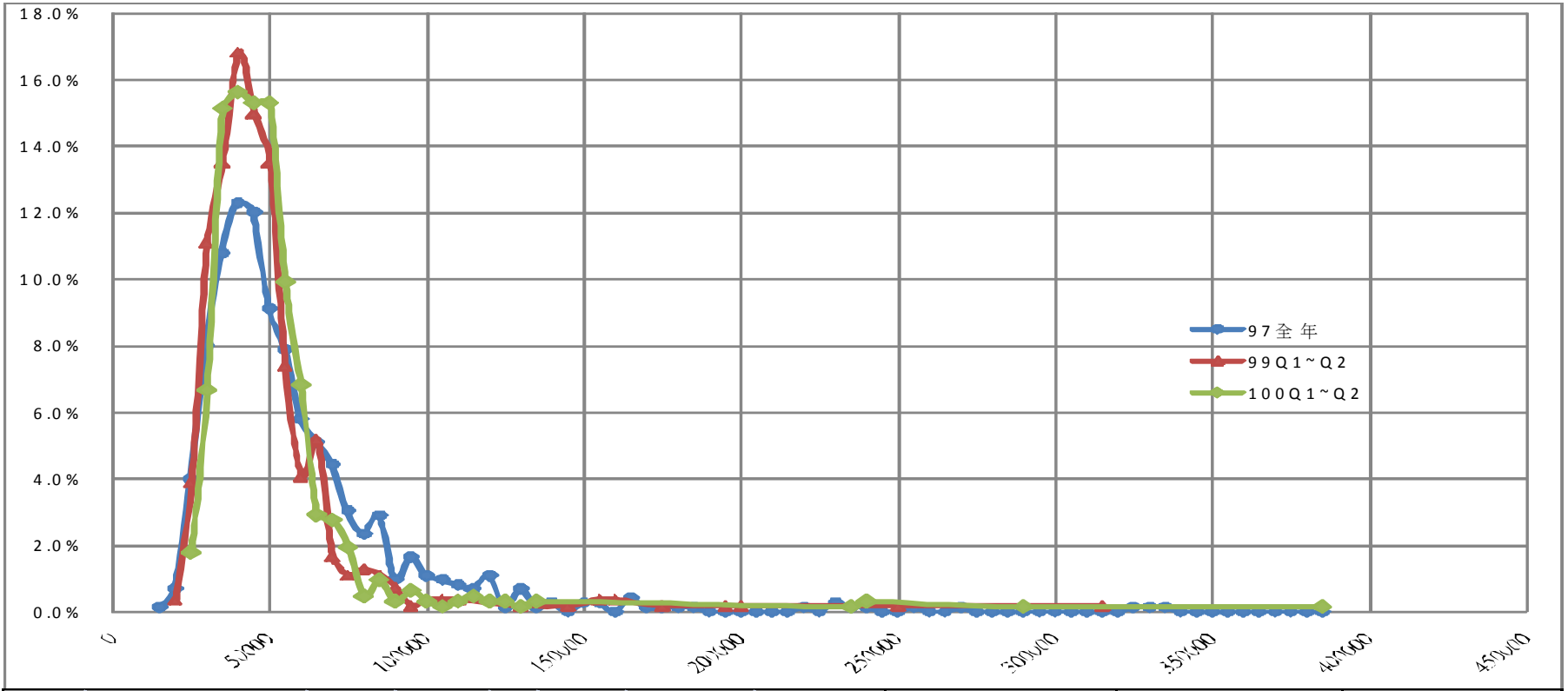
（合計）MDC		2009年 1~4季	2009年 成長率	2010年 1~4季	2010年 成長率
00	合計	11.98%	6.68%	16.40%	36.89%
02	眼之疾病與疾患	0.00%	--	0.00%	--
03	耳鼻喉及口腔之疾病與疾患	3.90%	15.73%	4.77%	22.31%
05	循環系統之疾病與疾患	64.53%	5.68%	69.30%	7.39%
06	消化系統之疾病與疾患	12.12%	7.93%	15.10%	24.59%
07	肝、膽系統或胰臟之疾病與疾患	19.78%	6.00%	21.85%	10.47%
08	骨骼、肌肉系統及結締組織之疾病與疾患	18.89%	6.54%	24.11%	27.63%
09	皮膚、皮下組織及乳房之疾病與疾患	6.14%	-21.78%	6.13%	-0.16%
10	內分泌、營養及新陳代謝之疾病與疾患	0.00%	--	0.00%	--
11	腎及尿道之疾病與疾患	52.20%	2.82%	69.23%	32.62%
12	男性生殖系統之疾病與疾患	26.68%	8.06%	29.20%	9.45%
13	女性生殖系統之疾病與疾患	9.75%	4.17%	17.72%	81.74%
14	妊娠、生產與產褥期	6.25%	3.48%	9.99%	59.84%

Outcome Measurement

- The percentage of cases under lower threshold or above fixed loss threshold
- Three-day emergency rate
- Fourteen-day re-admission rate after discharge from admission
- CMI value

Percentage of cases under lower threshold or above fixed loss threshold-1

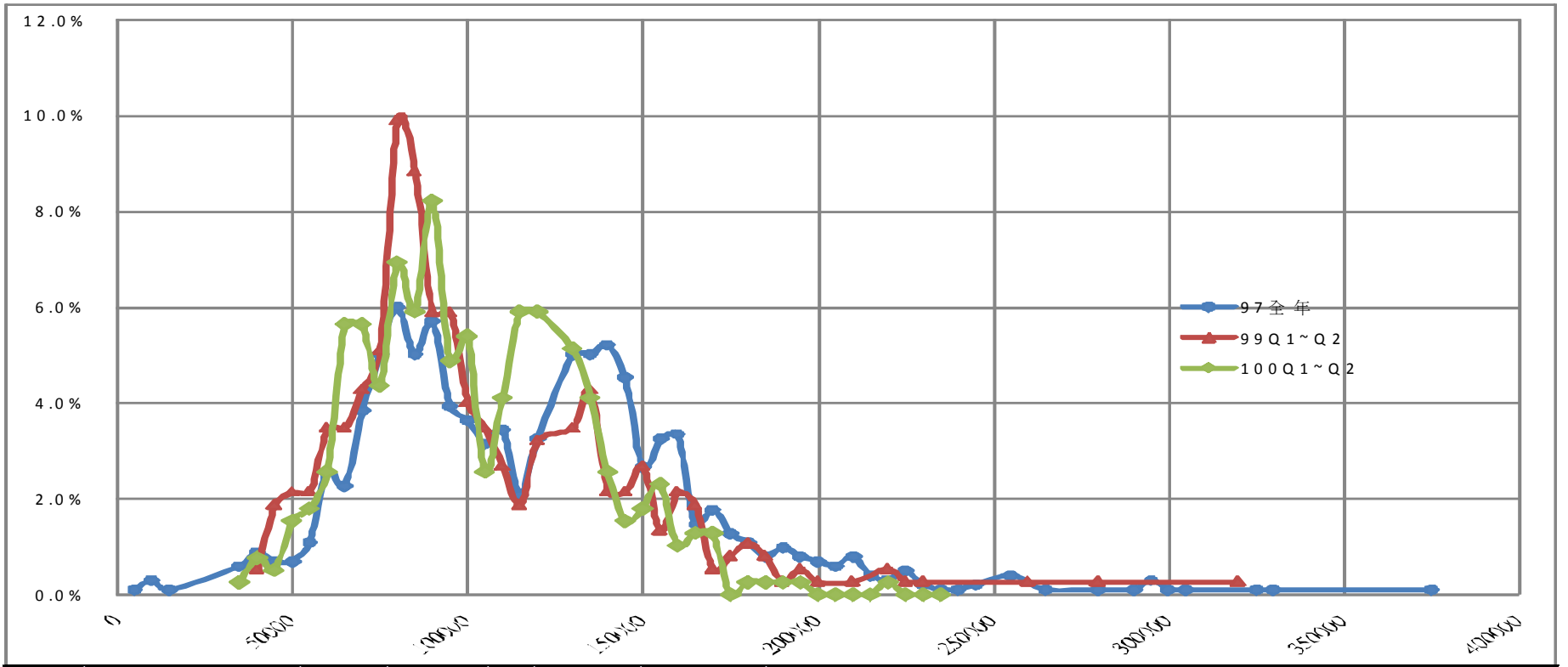
Case: Appendectomy with CC



							97年		99年1~6月		100年1~6月	
DRG	中文名稱	RW	支付點數範圍			下限臨界點	上限臨界點	個案數	幾何平均住院日	個案數	幾何平均住院日	個案數	幾何平均住院日
164	複雜闌尾切除術，有合併症/併發症	1.4299	55,897	~	58,612	27,633	100,684	723	8	541	7	614	7

Percentage of cases under lower threshold or above fixed loss threshold-2

Case: Total hip replacement without CC



							97年		99年1~6月		100年1~6月	
DRG	中文名稱	RW	支付點數範圍			下限臨界點	上限臨界點	個案數	幾何平均住院日	個案數	幾何平均住院日	個案數	幾何平均住院日
20902	髖關節再置換術，無合併症/併發症	3.1652	123,732	~	129,742	49,951	180,755	1,016	8	374	7	390	7

Three-day emergency rate

單位：% 件

(合計) MDC		2009年 1~4季				2010年 1~4季			
		再急診率	成長率	再急診件數	成長率	再急診率	成長率	再急診件數	成長率
00	合計	1.60%	5.96%	7,670	7.4%	1.70%	6.25%	7,789	1.6%
02	眼之疾病與疾患	0.89%	43.55%	82	41.4%	0.82%	-7.87%	74	-9.8%
03	耳鼻喉及口腔之疾病與疾患	0.95%	7.95%	205	10.8%	1.00%	5.26%	207	1.0%
05	循環系統之疾病與疾患	2.83%	4.81%	1,231	6.4%	3.04%	7.42%	1,348	9.5%
06	消化系統之疾病與疾患	1.88%	3.30%	1,517	7.5%	1.86%	-1.06%	1,439	-5.1%
07	肝、膽系統或胰臟之疾病與疾患	1.71%	7.55%	265	17.3%	1.83%	7.02%	294	10.9%
08	骨骼、肌肉系統及結締組織之疾病與疾患	1.64%	3.80%	1,910	5.5%	1.77%	7.93%	2,088	9.3%
09	皮膚、皮下組織及乳房之疾病與疾患	0.94%	-27.13%	11	-8.3%	1.24%	31.91%	18	63.6%
10	內分泌、營養及新陳代謝之疾病與疾患	1.07%	22.99%	95	28.4%	1.11%	3.74%	94	-1.1%
11	腎及尿道之疾病與疾患	4.21%	-21.75%	22	-21.4%	5.56%	32.07%	34	54.5%
12	男性生殖系統之疾病與疾患	5.13%	3.43%	521	10.9%	5.21%	1.56%	465	-10.7%
13	女性生殖系統之疾病與疾患	0.89%	5.95%	384	10.3%	0.95%	6.74%	395	2.9%
14	妊娠、生產與產褥期	1.10%	6.80%	1,427	4.7%	1.19%	8.18%	1,333	-6.6%

Fourteen-day re-admission rate after discharge from admission

單位：% 件

(合計) MDC		2009年 1~4季				2010年 1~4季			
		再住院率	成長率	再住院件數	成長率	再住院率	成長率	再住院件數	成長率
00	合計	2.33%	-1.3%	11,217	7.0%	2.61%	12.0%	12,003	7.0%
02	眼之疾病與疾患	1.75%	-4.4%	161	0.6%	1.80%	2.9%	162	0.6%
03	耳鼻喉及口腔之疾病與疾患	1.08%	-10.7%	232	-2.6%	1.09%	0.9%	226	-2.6%
05	循環系統之疾病與疾患	6.37%	-2.3%	2,776	7.9%	6.74%	5.8%	2,994	7.9%
06	消化系統之疾病與疾患	2.24%	-0.9%	1,810	7.5%	2.51%	12.1%	1,945	7.5%
07	肝、膽系統或胰臟之疾病與疾患	2.11%	-13.2%	326	31.9%	2.69%	27.5%	430	31.9%
08	骨骼、肌肉系統及結締組織之疾病與疾患	3.67%	0.3%	4,284	2.9%	3.73%	1.6%	4,407	2.9%
09	皮膚、皮下組織及乳房之疾病與疾患	6.39%	4.2%	75	37.3%	7.08%	10.8%	103	37.3%
10	內分泌、營養及新陳代謝之疾病與疾患	0.80%	-4.8%	71	18.3%	0.99%	23.8%	84	18.3%
11	腎及尿道之疾病與疾患	7.43%	-35.6%	39	48.7%	9.49%	27.7%	58	48.7%
12	男性生殖系統之疾病與疾患	3.69%	-5.6%	375	0.3%	4.21%	14.1%	376	0.3%
13	女性生殖系統之疾病與疾患	1.11%	1.8%	476	24.2%	1.42%	27.9%	591	24.2%
14	妊娠、生產與產褥期	0.45%	-8.2%	592	5.9%	0.56%	24.4%	627	5.9%

●CMI value

單位：點/次

（合計）MDC		2009年 1~4季	2009年 成長率	2010年 1~4季	2010年 成長率
00	合計	1.3360	0.32%	1.3739	2.84%
02	眼之疾病與疾患	0.7314	-0.01%	0.7319	0.07%
03	耳鼻喉及口腔之疾病與疾患	0.7196	0.04%	0.7192	-0.06%
05	循環系統之疾病與疾患	3.0899	-1.30%	3.1176	0.90%
06	消化系統之疾病與疾患	0.7553	-0.20%	0.7640	1.15%
07	肝、膽系統或胰臟之疾病與疾患	1.4937	0.19%	1.4988	0.34%
08	骨骼、肌肉系統及結締組織之疾病與疾患	1.7352	1.34%	1.7500	0.85%
09	皮膚、皮下組織及乳房之疾病與疾患	1.0897	0.24%	1.0802	-0.87%
10	內分泌、營養及新陳代謝之疾病與疾患	1.0265	0.00%	1.0265	0.00%
11	腎及尿道之疾病與疾患	4.7941	2.55%	4.4829	-6.49%
12	男性生殖系統之疾病與疾患	1.2451	0.11%	1.2469	0.14%
13	女性生殖系統之疾病與疾患	1.3449	-0.14%	1.3623	1.29%
14	妊娠、生產與產褥期	0.8894	0.06%	0.8915	0.24%

NHI Tw-DRGs Outcome

- 164 groups is implemented in 2010. It accounted for 17.36% of the total inpatient care expenses.
- Promoting the efficiency of medical services.

  DRG cases in 2010 the Length of days ↓ 4.60% compare with last year .
- Improving the medical care quality and curative effect (the clinical pathway)

  Three-day emergency rate and Fourteen-day re-admission rate after discharge from admission have small scale increase.
- We will continually pay attention to the situation of anyone discharge from hospital .