
Pay for Performance in Hospital Authority

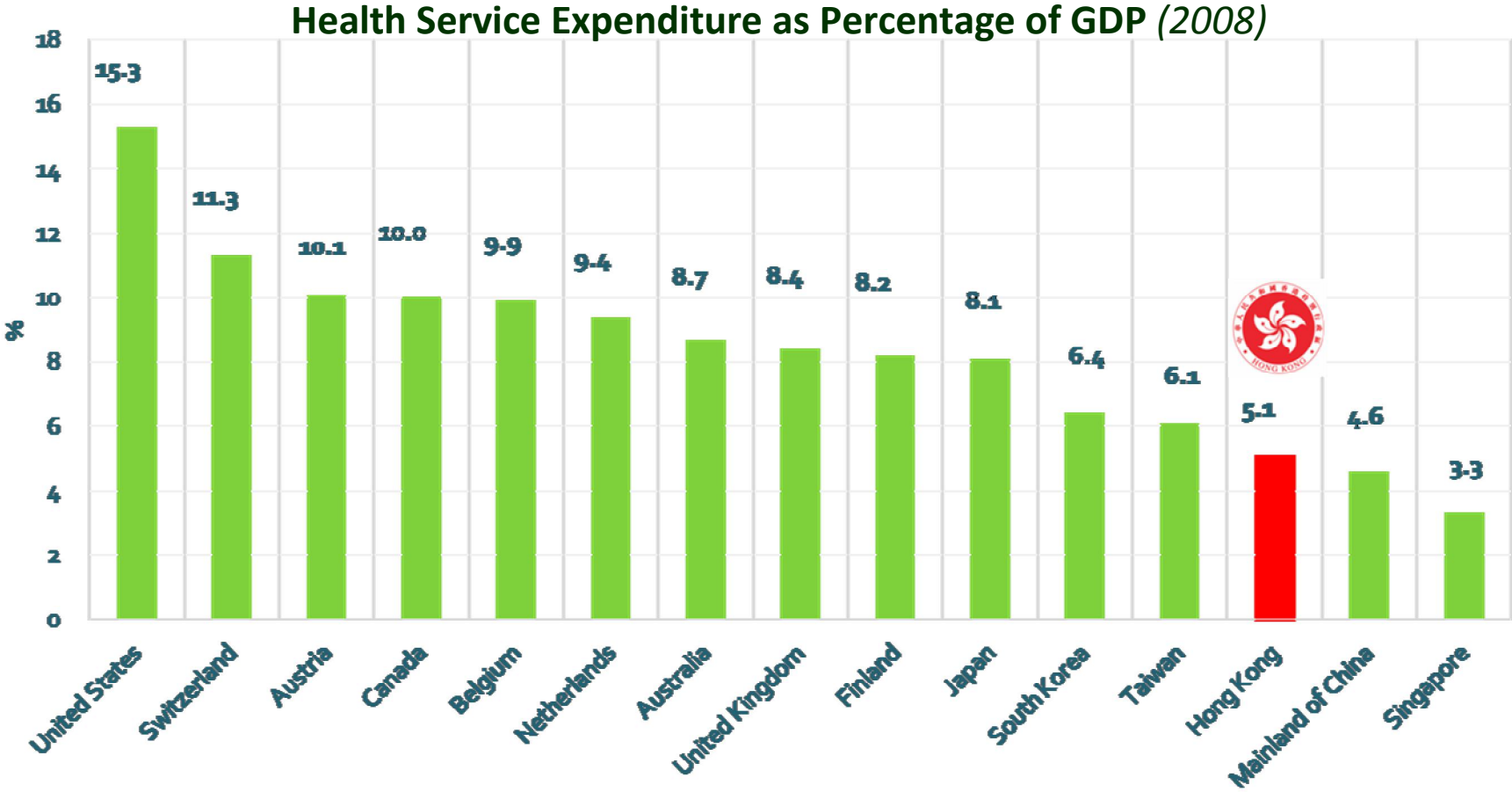
Hospital Authority Convention 2011

Dr. Koon Hung LEE

Chief Manager (Cluster Performance) Hospital Authority Head Office

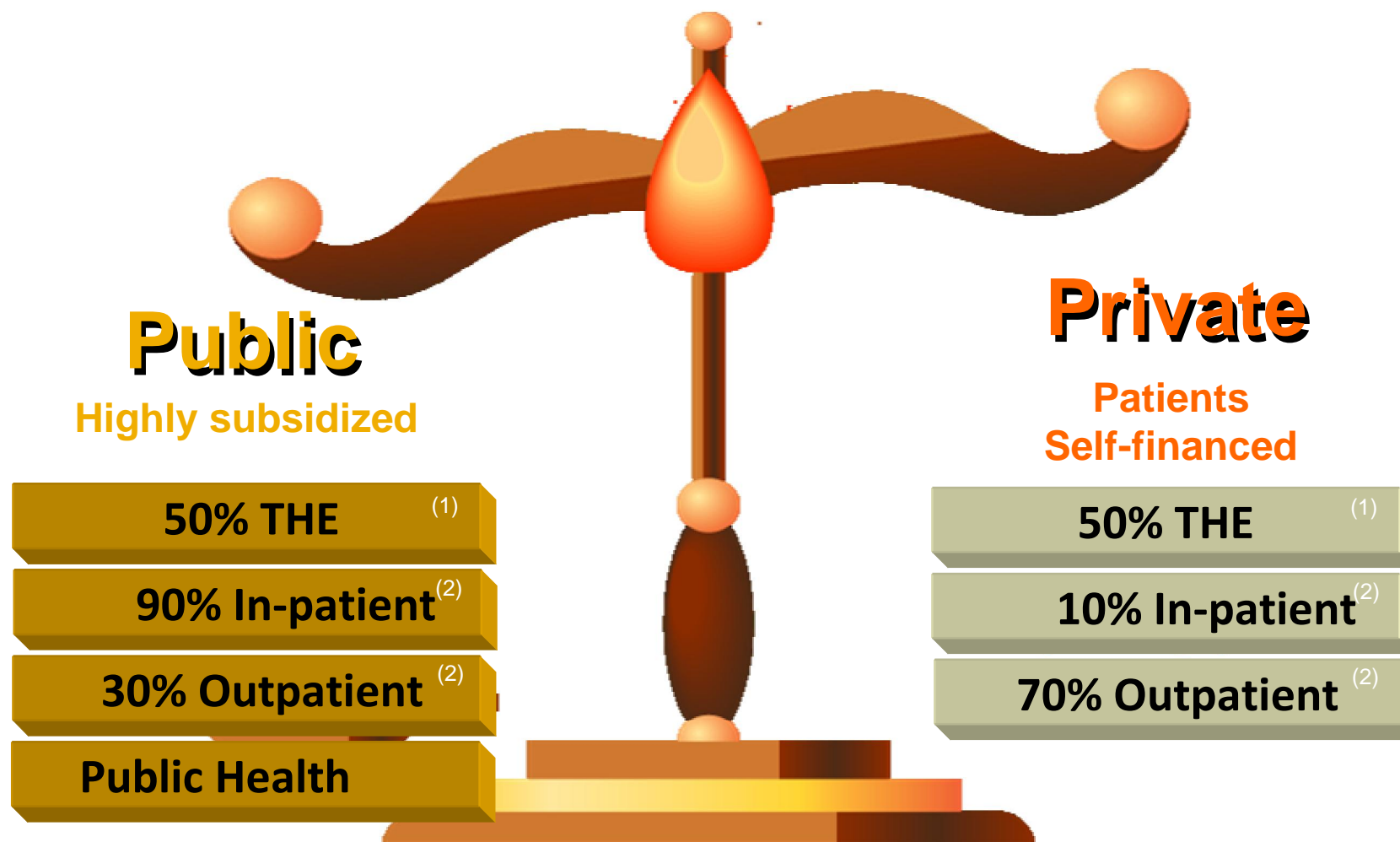


Healthcare Expenditure in Hong Kong and around the World



Source:
 1.OECD Health Data 2008
 2.OECD Tax Database
 3.WHO's National Health Accounts Series
 4.Various government source in the mainland of China, Taiwan, Hong Kong and Singapore

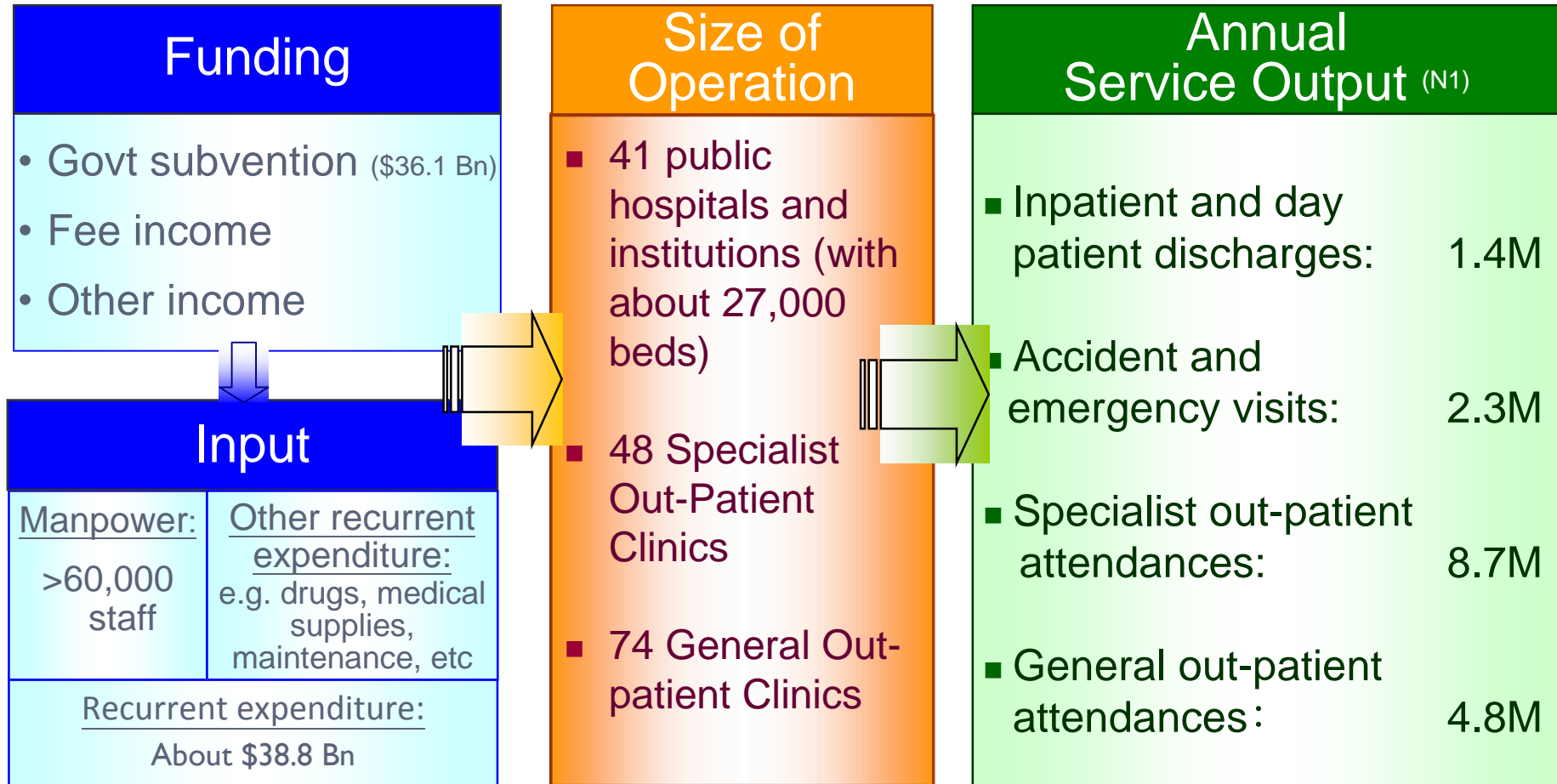
Public vs Private Total Health Expenditure (THE) in Hong Kong



資料來源: (1) Hong Kong Domestic Health Account 香港食物及衛生局網頁-香港本地醫療衛生總開支帳目(DHA)

Source : (2) Gabriel Leung, Keith Tin, Wai-Sum Chan: Hong Kong's health spending projections through 2033

Hospital Authority: Input and Output (2011/12)



► N1: Based on 2011-12 Controlling Officer's Report (COR) - Head 140

Key challenges faced by HA

- a) **Rising service demand and changing health needs**
 - Population growth and aging
 - Escalating diseases burden with increasing complexity
 - Intensifying use of HA services

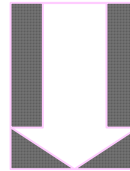
- b) **Worldwide medical technology advancement \Rightarrow rising public expectation on HA to upkeep care quality and standards**
 - Treatment modality and clinical knowledge
 - Medical devices and pharmaceuticals
 - Modernized facilities, medical equipment and IT systems

- c) **Workforce and productivity**
 - Mounting workload in the midst of manpower shortages



History of HA Resources Allocation System

HA Recurrent Budget



HKE	HKW	KCC	KEC	KWC	NTE	NTW
Historical / facilities based						
Activity / cost based						
Age-adjusted population based						
Pay for performance (P4P)						

Accountability for \$36 Bn tax-payers' money

- ▶ **Commonly heard criticisms on HA's efficiency**
 - ▶ “big elephant” – inefficient; un-responsive to public needs?
 - ▶ “fat top lean bottom”; “focus on big tertiary hospitals, neglect smaller community hospitals”
 - ▶ “long waiting time, not focused on strategic priority areas”
 - ▶ “antiquated equipments and service, not up to world standard”
- ▶ **How to secure sustainable funding growth from Government to meet HA's challenges – confident with HA's efficiency**
- ▶ **How to provide incentives to hospitals to enhance productivity & quality, transparently and fairly?**



Pay-4-Performance

“The use of incentives to encourage and reinforce the delivery of evidence-based practices and health care system transformation that promote better outcomes as efficiently as possible.”

*Outcomes-Based Compensation: Pay-For-Performance Design Principles.
4th Annual Disease Management Outcomes Summit. Johns Hopkins/American Healthways, Nov. 2004*



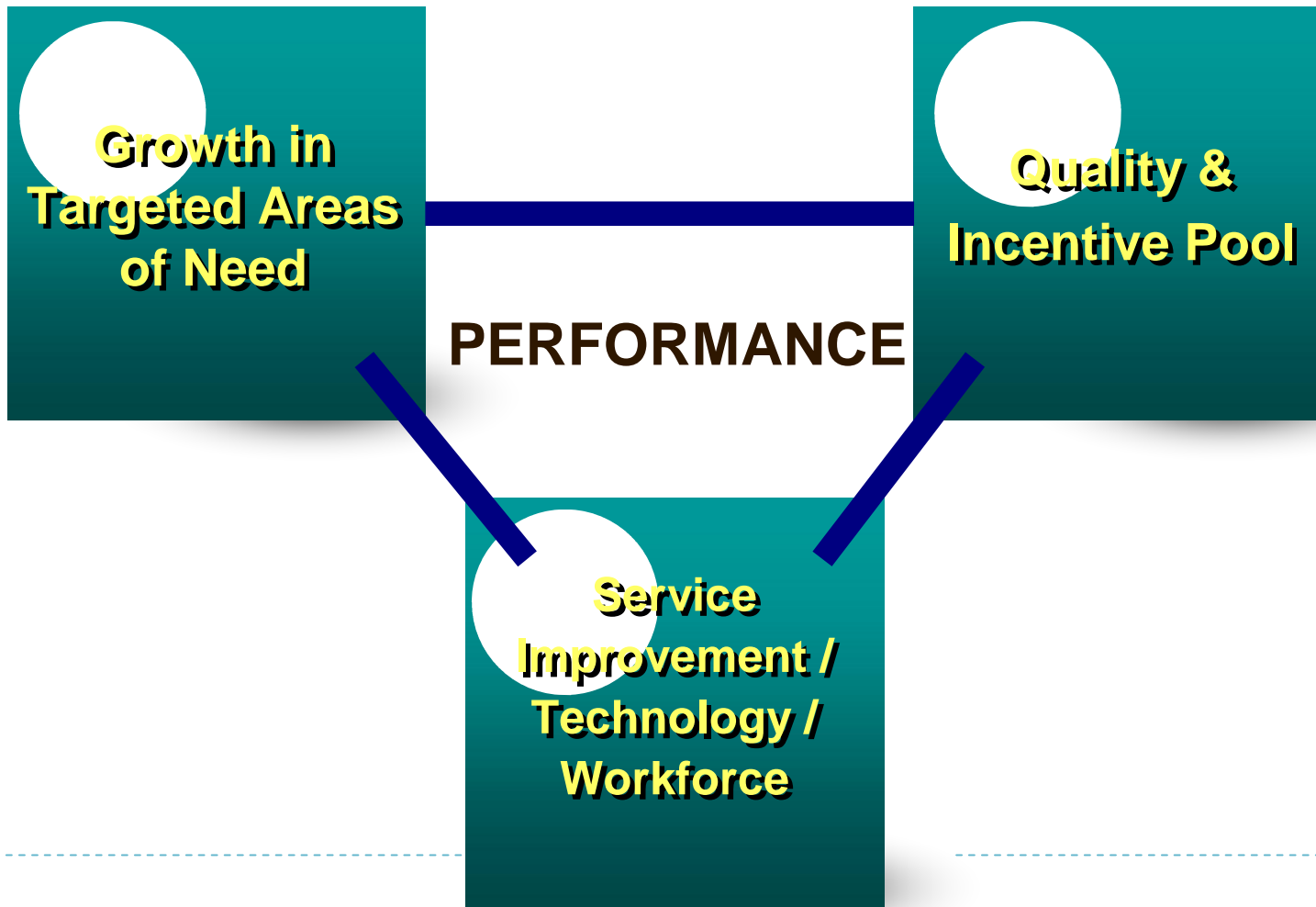
Pay for performance

- performance of Hospital Authority ?**
- performance of hospital clusters ?**



Pay for Performance in Hospital Authority

$$\text{Performance (P4P)} = G + Q + \text{STW}$$



HA's Pay for Performance

1st applied to 2009/10 resources allocation:

I. Current year Baseline Budget

- **Redistribution to drive efficiency & productivity improvement**

- ➔ Casemix as an efficiency measurement for acute IP services

(Reduction in baseline budget for Clusters with higher than expected casemix-adjusted cost in next year, and vice versa)

II. New/Improved Service based on targeted growth - Allocation of new recurrent funding from Government

- **Service growth in targeted areas of need**

- ➔ Casemix adjusted (Weighted Episodes) - a unit of measurement for strategic purchasing in acute IP services

- **Quality Enhancement**

- **Service Improvement, Technology & Workforce**



Baseline budget efficiency measurement based on DRG adjusted cost

- **Overall baseline efficiency adjustment (acute IP) = 20% of difference between historical and expected (DRG-adjusted) cost**
- **10% cash redistribution**
- **Remaining 10% to be retained by 'over-funded' clusters ⇒ to ↑ throughputs**



Casemix efficiency adjustment for baseline budget

Clusters	Acute IP Output by Weighted Episodes*	Total Acute IP Cost (Mn)		10% of difference between actual and expected cost
		Actual Cost	Predicted Cost#	
A	125,471	1,656	1,727	7.1 Mn
B	148,771	2,271	2,048	(22.3 Mn)
C	151,818	2,040	2,090	5.0 Mn
D	116,398	1,628	1,603	(2.5 Mn)
E	269,939	3,710	3,717	0.7 Mn
F	181,912	2,468	2,505	3.7 Mn
G	120,543	1,577	1,660	8.3 Mn
Total	1,114,851	15,350	15,350	0

Incremental approach to narrow the gap between actual vs Casemix cost

- **Weighted episodes (WE) = Complexity adjusted discharges and deaths**
- **#Predicted cost = No. of WE X HA average cost per WE**

0.1% – 0.6% of cluster's budget



Service Growth for Priority Areas

- **Service enhancement in response to population growth and ageing effect**
E.g. Opening of additional beds majority in under-supplied areas
- **Enhancing life threatening services**
Expanding oncology treatment and take on extra renal dialysis patients
- **Addressing unacceptable long waiting time**
85% cancer patients receive radiotherapy within 28 days
- **Secondary prevention programmes (e.g. diabetes management)**
- **Public Private Partnership programmes**



Illustration of targeted growth funding

Priority Areas (based on CMI by DRGs)	Service growth (no. of cases)	*WE (No. X CMI)	\$ Mn
AP Chemotherapy	XXXX	XXX	\$\$
AP Cataract	XXXX	XXX	\$\$
AP dialysis	XXXX	XXX	\$\$
IP Hip and knee procedures	XXXX	XXX	\$\$
IP Breast cancer operations	XXXX	XXX	\$\$
IP Colorectal cancer procedures	XXXX	XXX	\$\$
IP Transurethral prostatectomy	XXXX	XXX	\$\$
.....
Total (@\$12,000 per WE)		25000	\$300Mn

*Weighted episodes (WE) = No. of episodes per DRG X cost weight for that DRG

Quality & Service Enhancing Programmes – input based

- ▶ **New programmes to improve patient safety**
 - ▶ *(e.g. 2D barcoding to reduce identification errors)*
- ▶ **Medication safety**
- ▶ **Replacement of high risk single use devices**
- ▶ **New drugs and expanded Drug Formulary**
- ▶ **New diagnostic technologies, *e.g.: Cytogenetic service***
- ▶ **Hospital accreditation preparation**
- ▶ **Training and retention of staff**



Quality Performance Indicators for the \$50Mn Pilot Program

Strategic Priority Areas	Quality Performance Indicators	Performance Target
Access (Process)	Waiting time SOPD - routine category 1. Medicine 2. Surgery 3. Psychiatry 4. Orthopaedics	Non-priority 1 & 2 cases 75th percentile waiting time at 52 weeks
	Cancer treatment waiting time 5. Colorectal cancer 6. Breast cancer	90% of patients < 55 days from diagnosis to first definitive treatment
Patient Safety (Outcome)	7. MRSA bacteraemia for acute episodes	< 0.1258 MRSA bacteremia in acute beds per 1,000 acute patient days
	8. Casemix-adjusted unplanned readmission index	HA's best performance
Disease-specific management / integrated care (Process & Outcome)	9. Fracture hip surgery (pre-op LOS)	70% of fracture hip surgery with pre-op LOS \leq 2 days
	10. DM – HbA1c control in each cluster (all DM patients i.e. from SOPC, FMSC & GOPC)	35% of DM patients treated in GOPD and SOPD with HbA1c <7%
	11. Hypertension - BP control for GOPC patients	65% with BP < 140/90 mmHg



Government has provided additional funds to HA Since 2009/10

	09/10	10/11	11/12
Recurrent Baseline Increase	\$872M	\$872M	\$872M
<i>(Per Refined Population-Based Funding Model)</i>			

Major RAE in 10/11 & 11/12 :

To expand Drug Formulary

\$194M

\$237M

To enhance training of healthcare staff

-

\$296M

To enhance mental health services

-

\$196M

To strengthen drug safety & quality

\$57M

\$192M

To recruit additional 300 nurses

-

\$139M

\$251M

\$1,166M



What is HA's Performance in recent years?

Continuous Enhancement of Quality Care

✓ Accessibility

- Treatment of life threatening diseases (e.g. cancer, chronic renal failure etc)
- Improving capacity on diagnostic services (e.g. CT and MRI)
- Improving coverage of HA core services

✓ Quality & Safety Improvements



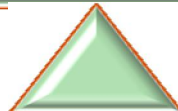
Coping With Mounting Service Demand

- ✓ Expanded facilities (~ 300 beds)
- ✓ Seeing more patients
- ✓ Increased throughput



Productivity Improvement

- ✓ Continual shift of inpatient to ambulatory & community care
- ✓ Reduce avoidable hospitalization
- ✓ Reducing length of stay



Value for Money:

Increase in Service Throughput

2010/11 vs 2008/09

Increase in recurrent subvention*

\$1.95 B (↑ 6.5%)

Increase in throughput # :

Acute inpatient discharges/death

55,640 (↑ 6.7%)

Day patient discharges

92,798 (↑ 26.4%)

Specialist outpatient attendances

479,743 (↑ 8.2%)

General outpatient attendances

-93,871 (↓ 1.9%)

Accident & emergency attend.

108,590 (↑ 5.1%)

** Exclude RAE for Healthcare Reform programmes & time limited one-off funding*

Based on HA Executive Information System data for 2008, 2009 & 2010



Improving Service Accessibility

Treatment of Life Threatening Illness

- Cancer:**

	2008/09	2010/11*	Annualized growth
<u>HA Clinical Oncology Services</u> ^{N1}			
Outpatient Attendance	307k	336k	↑5%
Inpatient Headcount	11,647	14,037	↑10%

- Renal Failure:**

	2008/09	2010/11*	Annualized growth
<u>Haemodialysis (HD) Services</u>			
No. of HD Procedures ^{N1}	97k	107k	↑5%
Patient Headcount ^{N2}	744	782	↑3%

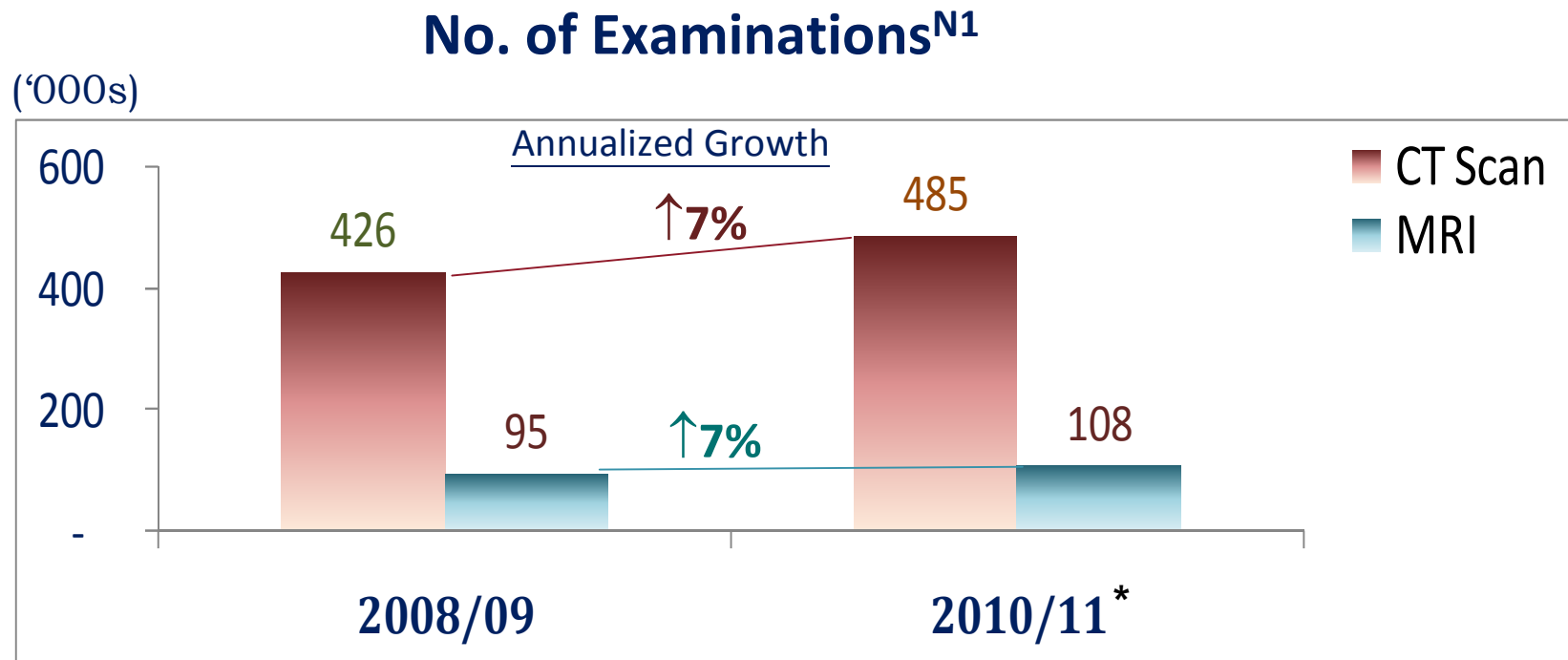
* 12-month annualized

N1: Source – Executive Information System, Hospital Authority

N2: Source – Hong Kong Renal Registry, Hospital Authority

Improving Service Accessibility: *Diagnostic Services*

Increasing capacity on Computerized Tomography (CT) and Magnetic Resonance Imaging (MRI) services



* 12-month annualized

N1: Source – Executive Information System, Hospital Authority

Expanding HA Core Service Coverage: *Drugs and Medical Devices*

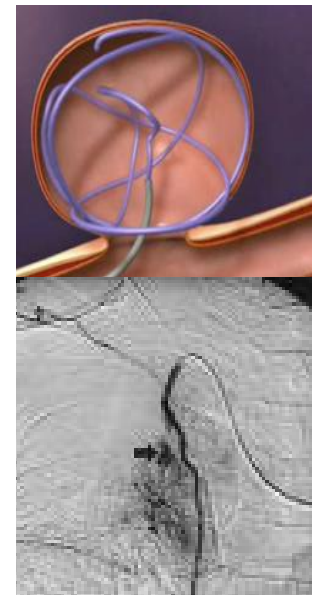
HA Drug Formulary (HADF)

Expanded clinical application of 12 drug classes and inclusion of 8 new “special drugs” in 2009/10 & 2010/11

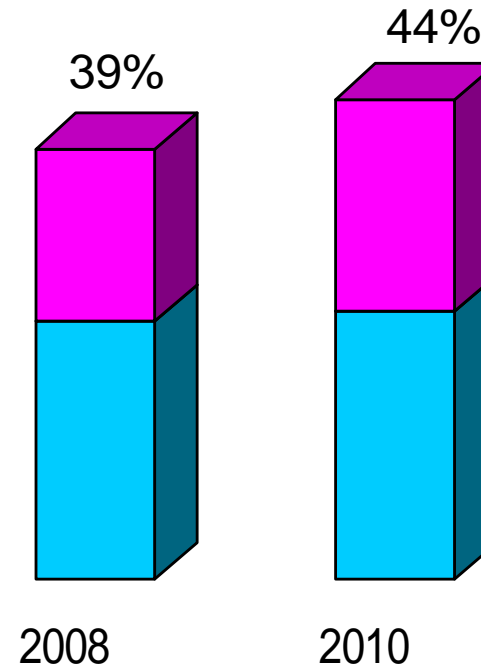
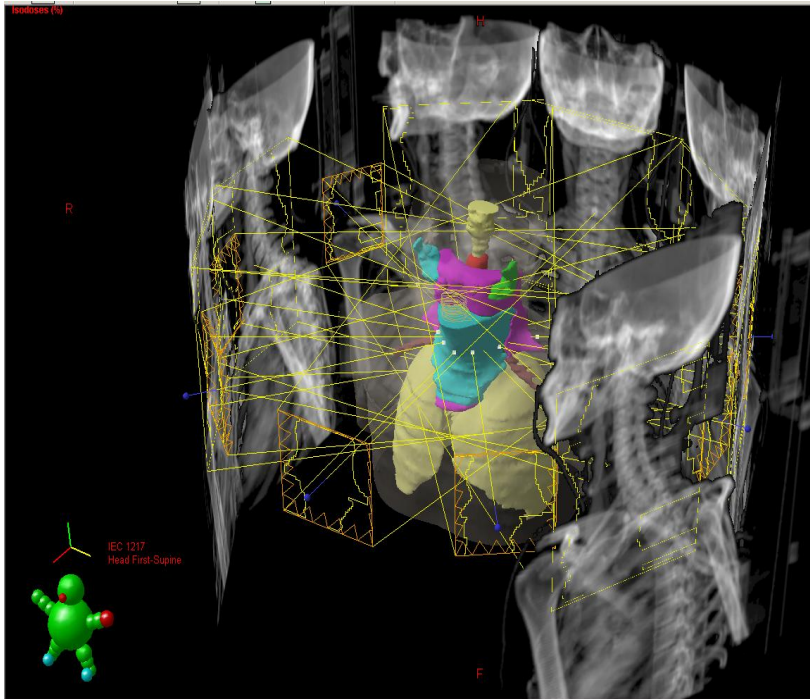
Medical Devices

2010/11 - Provision of medical devices for immediately life threatening emergency

2011/12 - Expanded coverage on selected procedures & indications for improving standard of care



Trend of High-Tech Radio-therapy



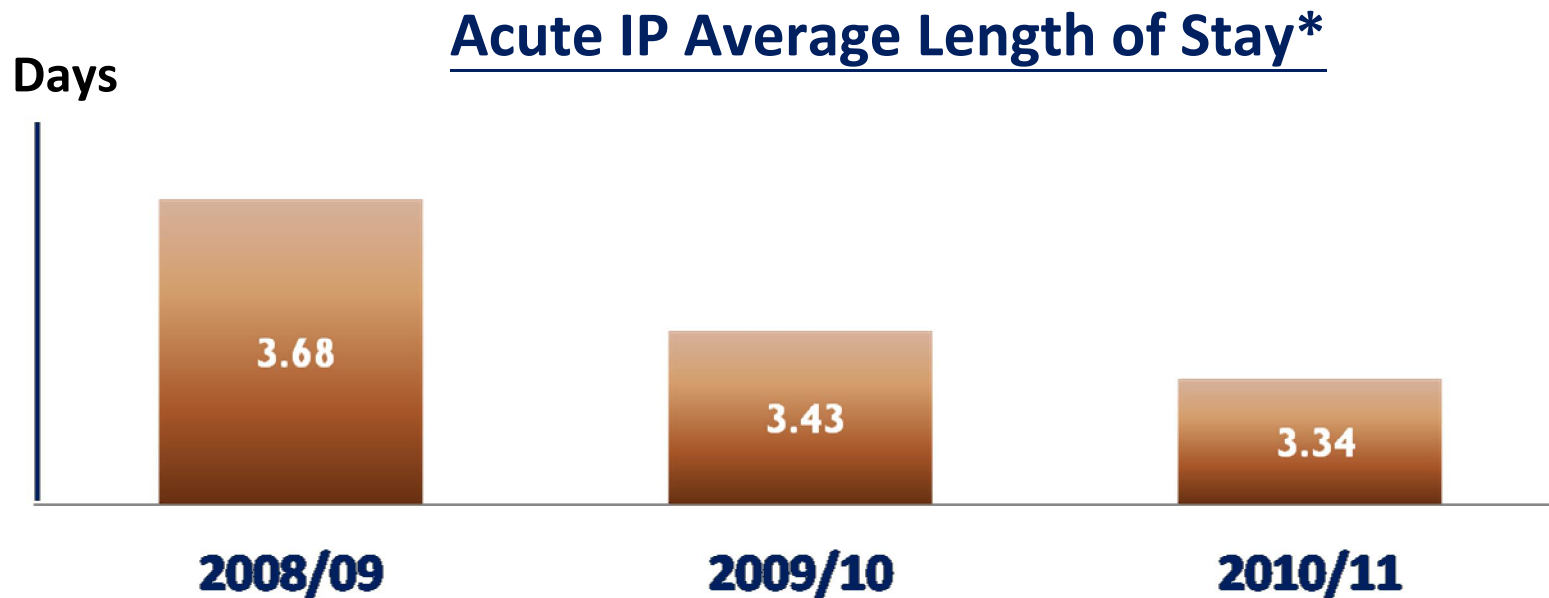
■ Routine RT
 ■ High Tech RT

	2000	2008	2010
Total no. of routine & high-tech RT courses	9,680	10,459	11,666

Enhanced Efficiency:

Improvement in Overall Productivity

- Shorter length of stay, treat more patients with same facilities
- ⇒ bedday saving ~ 1,500+ beds



* Based on HA DRG data



Enhancing Quality & Safety

Implementing various quality improvement measures:

- Reduce re-use of Single-Used Device
- Enhance sterilization in operations
- Strengthen control on pharmaceutical products
- Hospital accreditation

Declining Incidence Rate of Reportable Sentinel Events

(incidents, near-misses and adverse events)

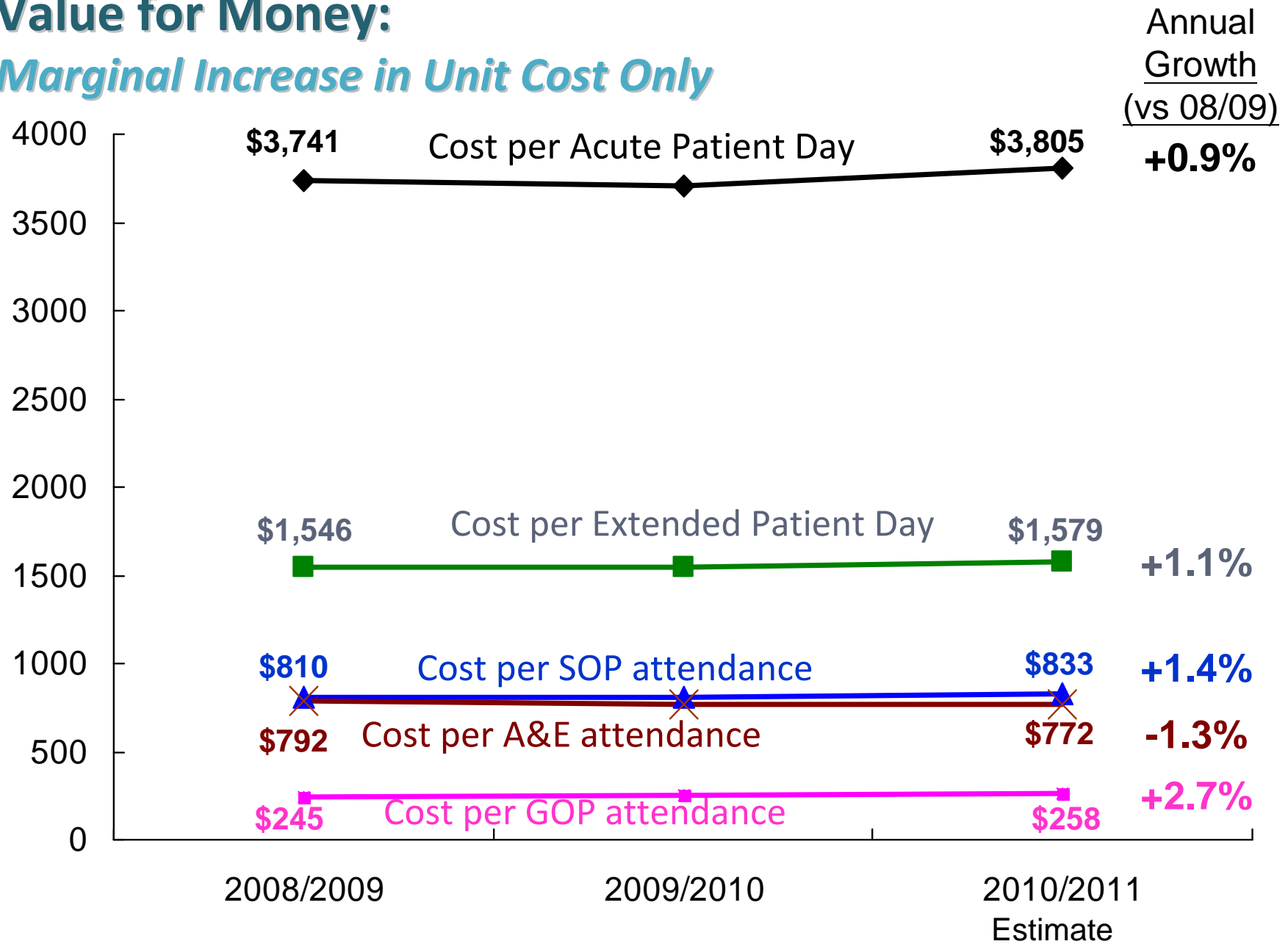
	2007/08*	2008/09*	2009/10*
No. of incidents per 1,000,000 D&D episode/attendance	2.7	2.4	2.0

* Oct to Sep

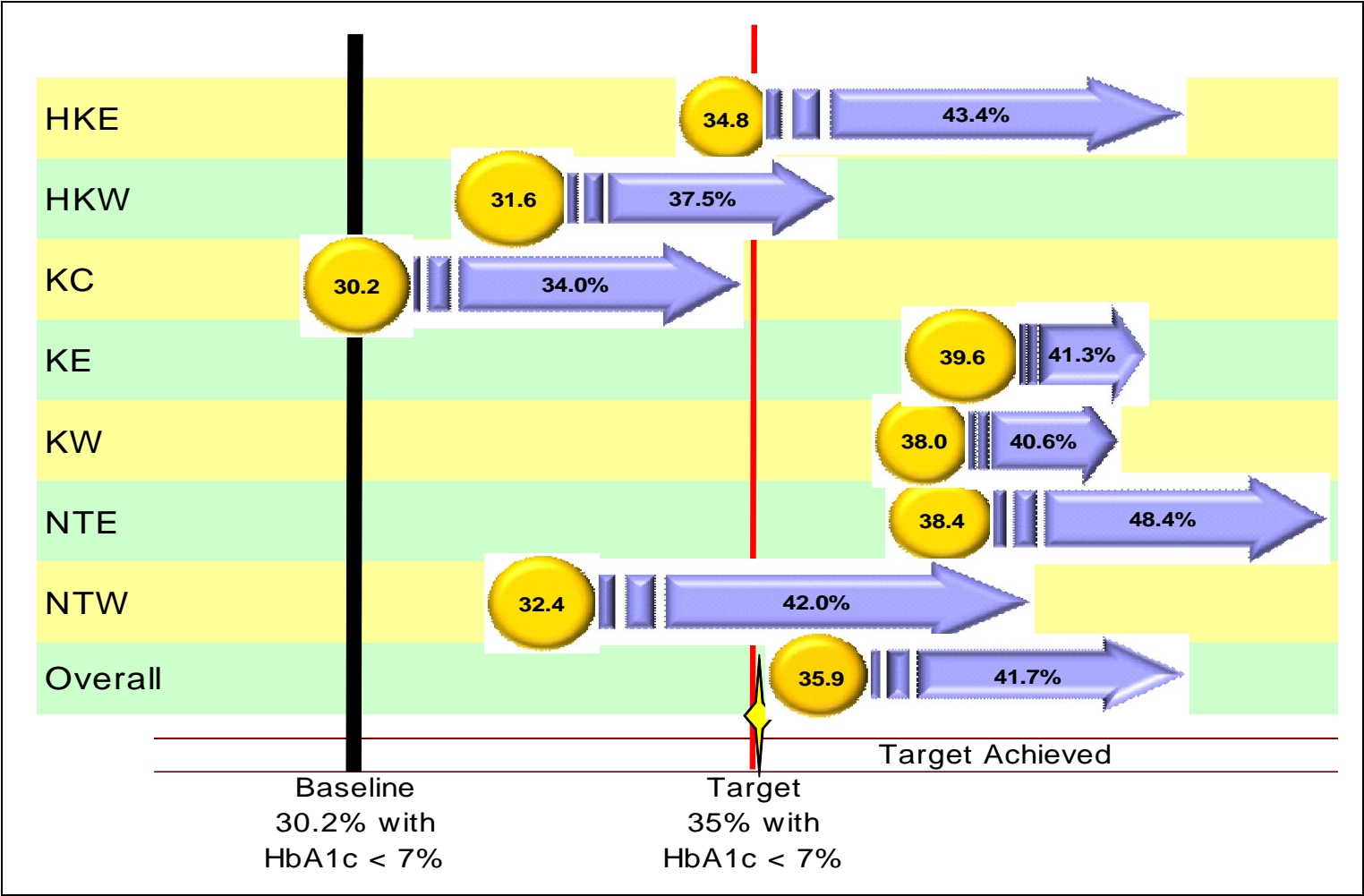



Value for Money:

Marginal Increase in Unit Cost Only




Percentage of Diabetic patients with HbA1c < 7%



 2009 Performance

 2010 Performance

 Consistent Performance

HA's Workforce Has Been "Over-stretched"

Despite continuous growth in activities, number of doctors & nurses could not catch up with service growth



Stop all unnecessary projects,
and defer P4P until manpower
situations improves



(六) 減少非臨床工作

除臨床診症，包括巡房及門診外，公立醫院醫生亦要應付大量非臨床的工作，令真正面對病人的時間減少，影響服務質素，尤其於流感高峰期間，人手更是足襟見肘。我們要求：

- 免除醫生文書工作，另聘文員處理。
- 免除醫生輸入 diagnostic coding，或者另聘 part-time 醫生處理。
- 馬上叫停「無謂」projects。
- 押後所有 P4P 計劃，直至人手問題得到改善為止。
- 押後醫院認證計劃 (Accreditation)，直至人手問題得到改善為止，令醫生騰出更多時間診症。

Strategies to address frontline staff issues

- ▶ **Measures to attract and retain frontline staff**
 - ▶ improve promotion and career prospects
 - ▶ enhance training and career development
 - ▶ recruit overseas trained doctors
 - ▶ overtime work compensation
 - ▶ reduce continuous long working hours
 - ▶ recruit more healthcare assistant workers to alleviate clerical duties
- ▶ **Review DRG systems to better reflect clinical practice**
 - ▶ reduce excessive documentation of diagnosis and procedures
 - ▶ review casemix efficiency re-distribution methodology



Pay for Performance – to stop or move forward?

- ▶ To stop P4P :-
 - ▶ How do we allocate resources?
 - ▶ Historical? Input-based?
- ▶ To stop casemix measurement :-
 - ▶ How to adjust for patient complexity?
 - ▶ How do we benchmark across hospitals?
 - ▶ How to account for HA's throughput?



Pay for Performance in Hospital Authority

Measures

QUALITY

Structure

- staff
- equipments
- drugs
- technology

Process

- waiting times
- unplanned readmission
- HBA1C

Outcome

??

Productivity

- Activity growth
- Cost per 'WE'

Basis for reward

INPUT

Achievement of input programmes deliverables

Performance

Target

- activity targets
- quality indicators targets

Rewards

FINANCIAL

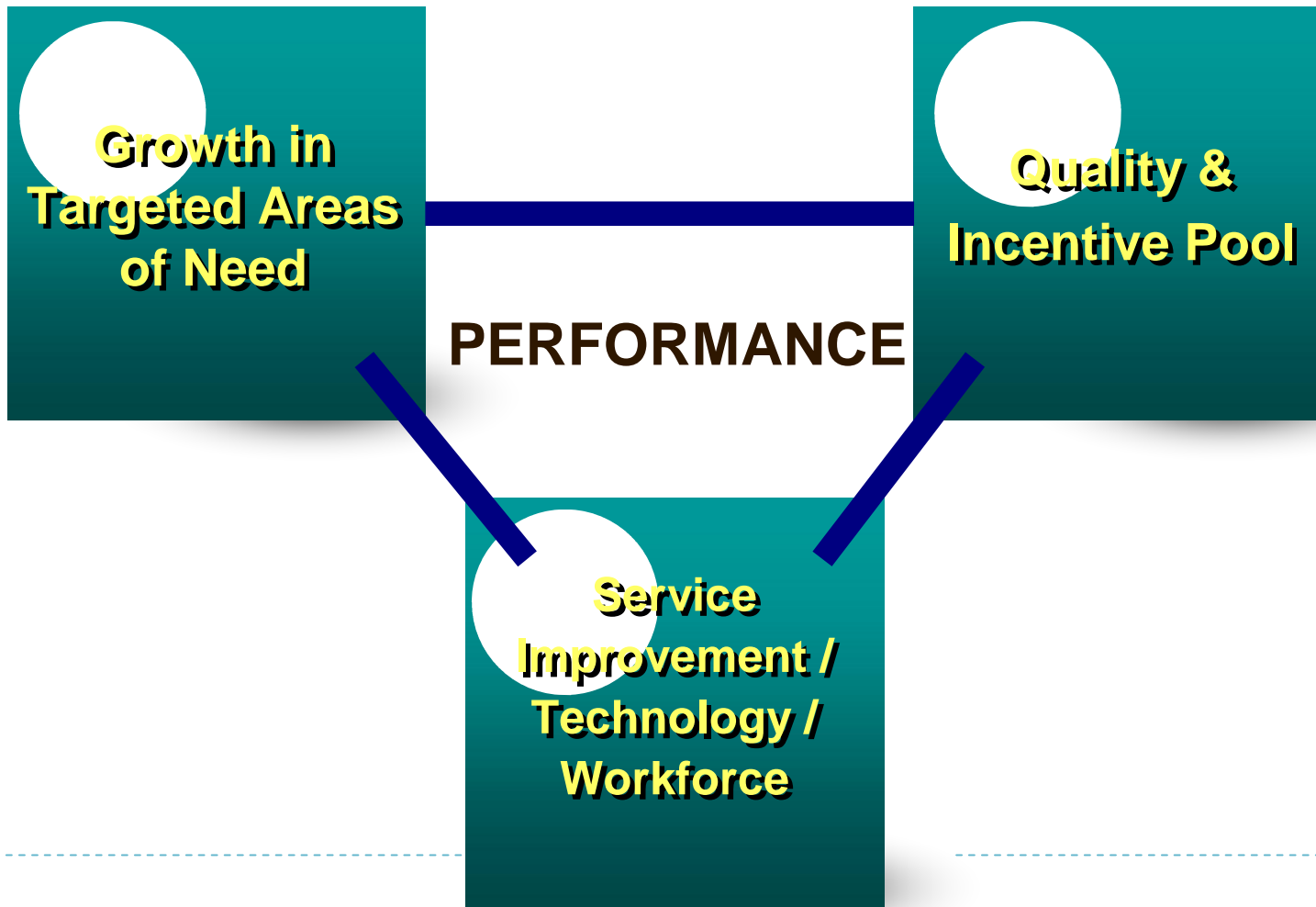
- Casemix redistribution
- programme funding
- quality incentive reward

NON-FINANCIAL

-??

Pay for Performance in Hospital Authority

$$\text{Performance (P4P)} = G + Q + \text{STW}$$



- END -

