

Safety and Feasibility of Same Day Discharge after Uncomplicated Percutaneous Coronary Intervention (PCI)

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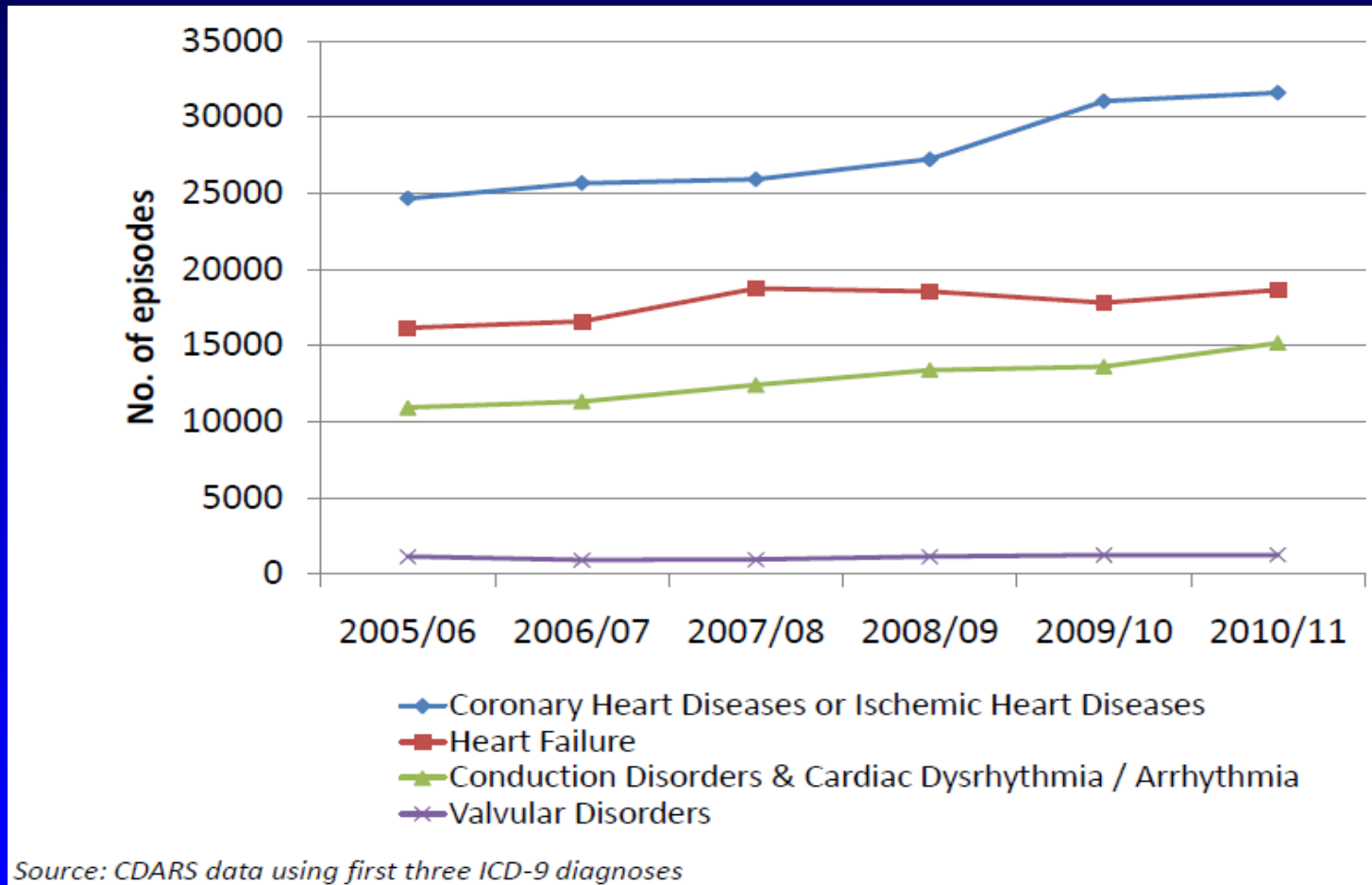
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Background

Heart disease is the major mortality and morbidity worldwide

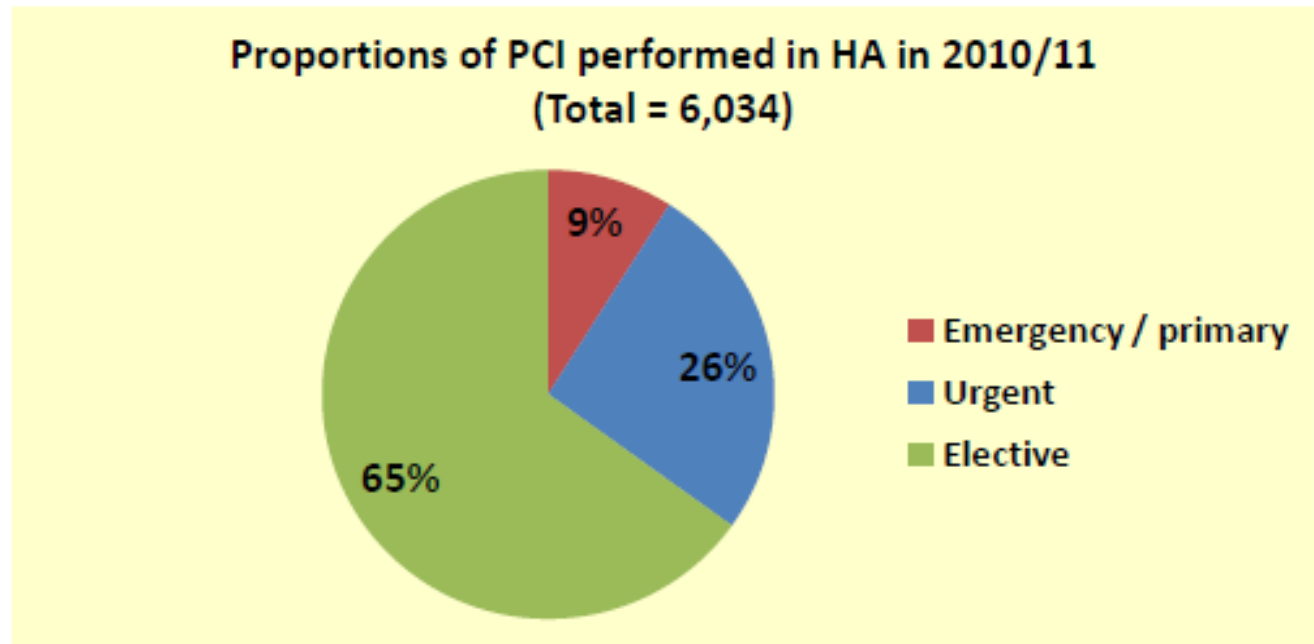


Growing Trend of In-patient Service Demand in HA

PCI has become the most commonly performed cardiac intervention

Total no. of PCI performed

- 2007/08: 4,933
- 2008/09: 5,252



Data source: cardiac service survey 2010/11



Growing Demand on PCI Service

Angioplasty & The Procedure

- Angioplasty or PCI (Percutaneous Coronary Intervention) are techniques used to widen the narrowing in coronary arteries without surgery



Background

1. Usual practice: stay at least one night for observation even if no complications arise
2. ↑ number of procedures → escalating costs of health care → significant constraints on health care facilities



HA Territory-wide PCI Audit 2003-2005

PCI Audit Working Group
Central Committee (Cardiac Services)

HA Convention 2006



HA Territory-wide PCI Audit 2003-2005: General Report

	2003	2004	2005	2003-2005
<i>Total no. of PCI cases performed in HA hospitals</i>	3,904	4,894	4,693 (4,965)*	13,491
<i>On-site random checking</i>	15%	12%	12%	12-15%
<i>Total mortality (≤72 hours)</i>	23 (0.59%)	30 (0.61%)	31 (0.66%)	84 (0.62%)
<i>Major complications reported (excluding death) (≤72 hours)</i>	52 (1.33%)	95 (1.94%)	81 (1.73%)	228 (1.69%)

*Signed cases only (signed + unsigned cases = 4,965)



Major Complications

On event basis in a total of 3904 , 4894, and 4693 cases
for 2003 , 2004, and 2005 respectively
(direct and indirect procedure causes included)

	2003		2004		2005		World- wide %
	No.	%	No.	%	No.	%	
Death	23	0.6	30	0.6	31	0.7	0.5-1.4
New Non-Q MI	21	0.5	50	1.0	31	0.7	5-10
New Q-wave MI	7	0.2	5	0.1	10	0.2	0.4-3
Unplanned CABG	1	0.0	6	0.1	4	0.1	0.2-3
Unplanned Re-PCI	10	0.3	6	0.1	8	0.2	1
Stroke	0	0.0	2	0.0	4	0.1	0.5
Bleeding	6	0.2	10	0.2	12	0.3	0.1-2
Cardiac Tamponade	5	0.1	14	0.3	11	0.2	Up to 3
Vascular Surgery or Repair	2	0.1	2	0.0	1	0.0	



Opportunities

1. Advancement of coronary stents and miniaturization of PCI equipment
2. Availability of closure devices for trans-femoral approach and increase adoption of trans-radial route, patients can now be mobilized earlier after procedure
3. Well-developed Cardiac Day Centre in QEH and availability of day-PCI protocol



Inclusion Criteria

1. Good pre-morbid functional status with independent activities of daily living
2. Simple coronary lesions at the discretion of the operators
3. Lives with at least one other member of his family

OR

lives close to the hospital - preferable but not a mandatory criterion



Exclusion Criteria

1. Patients with acute coronary syndrome or acute myocardial infarction
2. Any complex coronary lesions that have substantial risk of complications within the first 24 hours after PCI (at the discretion of the operators)
3. Living alone



Results

- Since 2003
- 129 patients recruited, 30 females and 99 males
- Mean age 66.19 +/- 9.97
- 99, 27 & 3 patients with one vessel, 2 vessels and 3 vessels tackled respectively
- All were successfully treated and discharged the same day without any complication
- Enhanced patient comfort and satisfaction



Results

- One patient readmitted for mild wound oozing and one for atypical chest pain but discharged the next day
- 30 day mortality is 0 %, no patient was readmitted due to stent thrombosis within 1 month
- Assume 2 hospital bed days can be saved for each patient with uncomplicated PCI, 258 bed days were saved
- Around 1000 PCI are performed in QEH each year - 65% are elective cases
 - 330 uncomplicated PCI → Day PCI
 - 660 bed days saved
 - \$2.18 millions saved (HK \$3300 x 660 bed days)



Conclusions

- Improved patients' satisfaction
- Better utilization of Ambulatory Cardiac Day Centre
- Hospital beds can be saved
- Model of shifting in-patient to day-patient care for invasive cardiac procedures

“Same Day Discharge after

Uncomplicated PCI is Safe and Feasible”



Future Directions

Same Day Discharge after Uncomplicated PCI



Routine Service in view of the rising number of
PCI procedures in HA hospital



Thank You

