

# **The Balanced Score Card in Health Care**



- ⌘ Origins and rationale**
- ⌘ Content**
- ⌘ Implementation**
- ⌘ Issues and challenges**
- ⌘ Work in progress**

**M. Ward  
Division of Medicine  
Royal Brisbane Hospital**

# BSC: Origins



- ⌘ A broad-based performance measurement system developed for commercial use (Kaplan & Norton 1993)
- ⌘ Widely used various forms in large commercial and government organisations
- ⌘ Increasing use by health care industry in USA

# BSC : Rationale



- ⌘ Traditional financial markers are necessary, but not sufficient to measure organisational success
- ⌘ Methods of linking organisational goals & values with day to day activity are often inadequate - the "*vision-reality gap*"
- ⌘ Better measures often needed of "intangible assets" eg staff knowledge and skills

# BSC : Rationale



- ⌘ The “*vision-reality gap*” - evidence of the problem from industry surveys :
  - ☑ Only 57 % senior management and 7% of middle managers and operational staff know how to translate organisational visions and goals into practice (Kaplan 93)

# **BSC : An aeronautical analogy**



- ⌘ An aircraft instrument panel contains more than a fuel gauge
- ⌘ Various other instruments and warning lights are usually considered essential- eg :  
GPS/compass, altimeter, airspeed indicator, mileage traveled etc
- ⌘ If you only have a fuel gauge, it may be difficult to avoid mountains or arrive at the right airport

# BSC : Content - 4 standard dimensions



- ⌘ Client / customer *How do we look to our customers ?*
  - ☒ Service quality, customer satisfaction, return business
- ⌘ Internal operations *How efficient / effective are we ?*
  - ☒ Volume / rate / cost of production
- ⌘ Learning *Do our staff have the knowledge and skills they need now and for the future ?*
  - ☒ Work practice protocols / innovation, research, education
- ⌘ Financial *How do we look to our funders ?*
  - ☒ Budget - expenditure variances, return on investment

# BSC : The 5th dimension - staff



⌘ Staff : *How do we look to our staff ?*

☑ Workplace climate surveys

☑ Turnover

☑ Unfilled vacancies

☑ Number of appropriately skilled applicants for key positions

☑ Sick leave

# BSC in health care



⌘ Quality : *How well do we meet the patients needs ?*

☒ Outcomes, mortality, adverse events, satisfaction surveys, waiting times, complaints:compliments ratios

⌘ Activity: *How efficient and effective are we ?*

☒ Weighted separations, average length of stay, occasions of service, occupied bed days etc

⌘ Learning : *Do our staff have the right knowledge ?*

☒ Workplace innovation, publications, presentations, teaching

⌘ Financial : *How do we look to our funders ?*

☒ Year to date expenditure vs budget, cost per weighted separation



# BSC: health care experience

⌘ Duke Children's Hospital USA (*Meliones J. Harvard Business Review Nov-Dec 2000*)

☑ 1996 to 2000

☑ Cost per case reduced by 12%

☑ Average length of stay reduced by 22%

☑ Patient satisfaction increased by 8%

⌘ NB : BSC and pathways & change management

# BSC : Implementation



- ⌘ Obtain commitment from senior management
- ⌘ Recruit key clinicians / service delivery staff
  - ☑ Demonstrate the relevance of the measures to their work
  - ☑ Involve them in the choice of measures
- ⌘ Develop data collection and analysis infrastructure
- ⌘ Progress from snapshots to serial measurements for trend lines and control charts

# Measurement issues



## ⌘ Lag vs Lead vs Control

☒ *Goal* = Balanced budget

☒ *Lag indicator* = Expenditure over-run

☒ *Lead indicator* = Trend in drug costs

☒ *Control indicator* = Volume /type of prescriptions

## ⌘ Frequency of measurement

☒ Monthly : activity / finance

☒ Quarterly : quality of care / innovations

# RBH - Current use



- ⌘ All Divisions now using balanced score cards for monthly reports to Hospital Executive
- ⌘ Well accepted by departmental heads
- ⌘ Departments within Divisions in process of building local versions to roll up into divisional score card
- ⌘ Division of Medicine - restructured management advisory group agenda and filing system around BSC format

# Issues and challenges



- ⌘ Who are the customers ?
- ⌘ The data !! - content and processes
- ⌘ Public sector reverse cycle risks
- ⌘ Integrating the BSC with the:
  - ☑ Quality Improvement Cycle
  - ☑ Business planning process

# **BSC : Who are the customers ?**



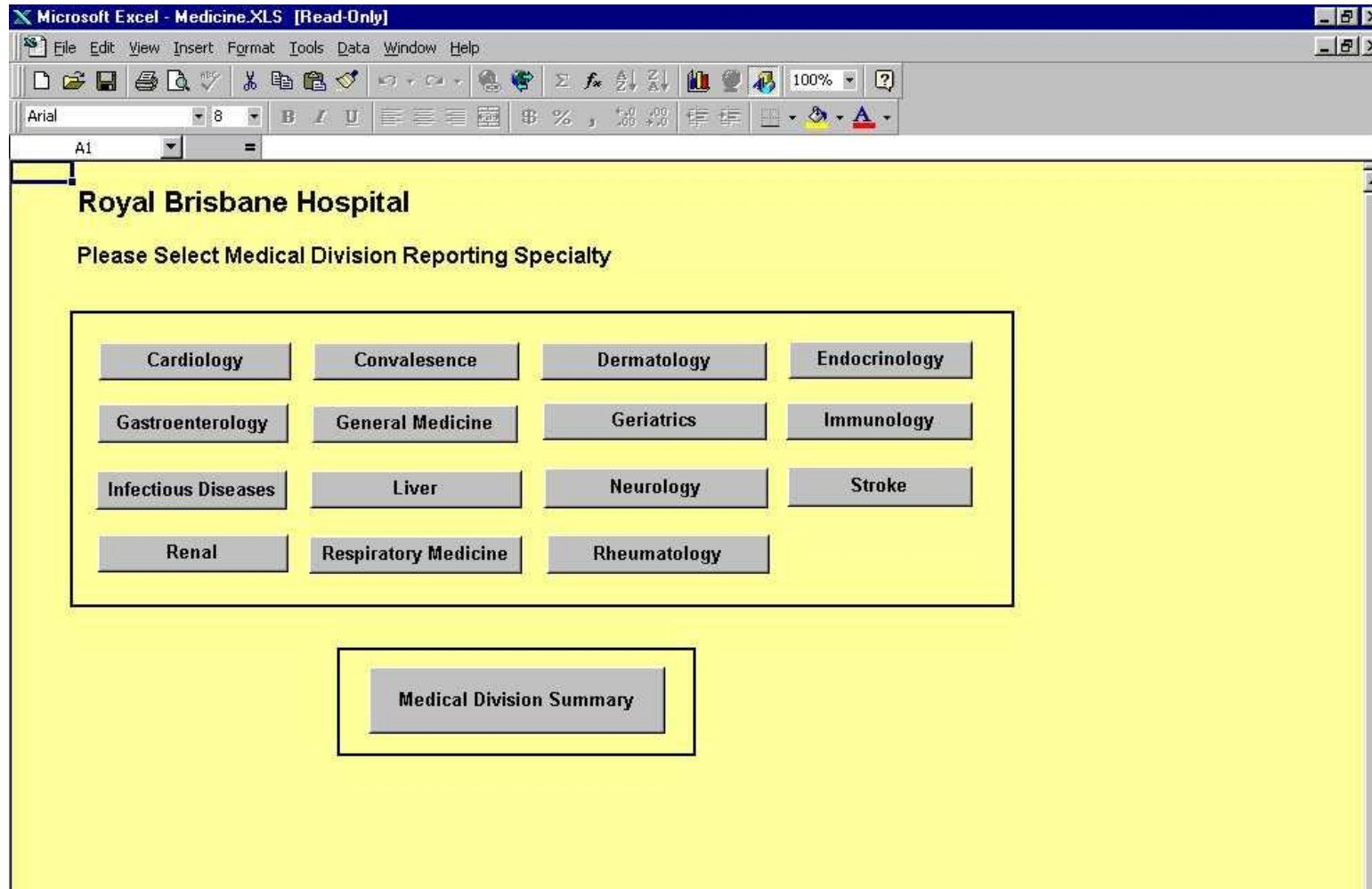
- ⌘ The patient ?
- ⌘ The referring doctor ?
- ⌘ The Health Dept ?
- ⌘ The Government ?
- ⌘ The taxpayer ?
- ⌘ All of the above ?

# Data issues



- ⌘ Limited central data set
- ⌘ Identifying relevant local data
- ⌘ Finding suitable benchmarks / targets
- ⌘ Merging central and local data
- ⌘ Automating the task
- ⌘ Checking validity and meaning
- ⌘ Cost of collection vs utility of information
- ⌘ Statistical mind sets : trends vs t-tests

# Data - current central BSC data source







# Data - current central BSC data source

Microsoft Excel - Medicine.XLS [Read-Only]

File Edit View Insert Format Tools Data Window Help

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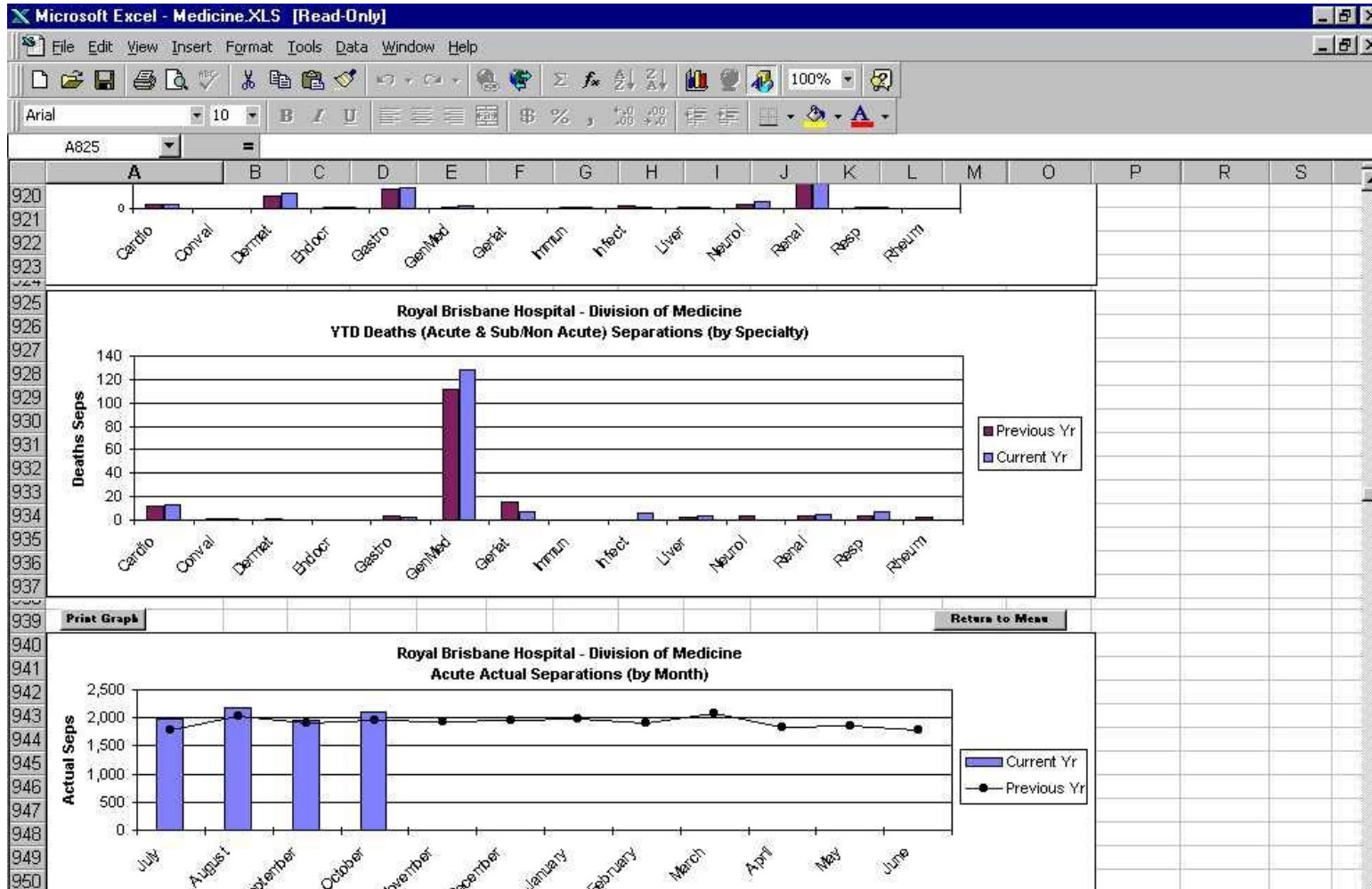
**Royal Brisbane Hospital - Division of Medicine** [Return to Menu](#)

**Division Summary**

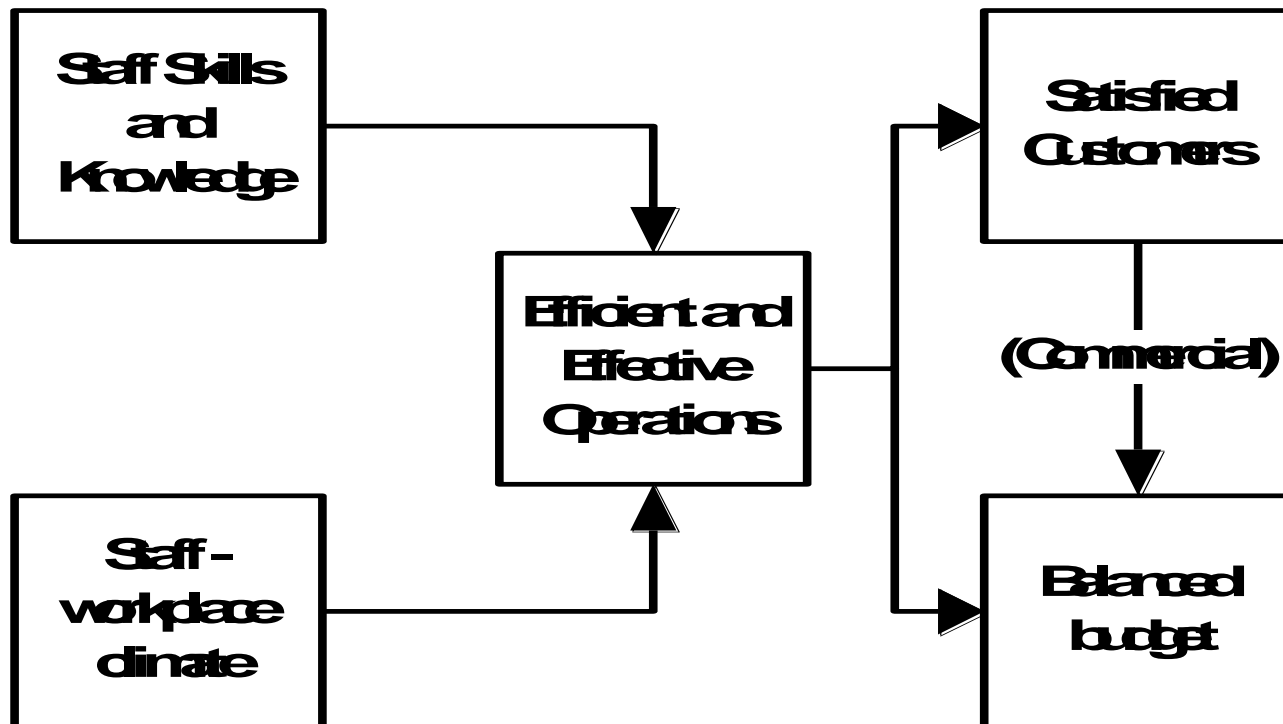
Activity Graphs

Inpatients		Outpatients
<b>By specialty</b>	<b>By Month</b>	<a href="#">Clinic Waiting Times</a>
<a href="#">Actual Seps Weighted Seps</a>	<a href="#">Actual Seps Weighted Seps</a>	<a href="#">Occasions of Service</a>
<a href="#">Casemix Index Actual V's Quota Seps</a>	<a href="#">Casemix Index Actual V's Quota Seps</a>	
<a href="#">Occupied Beddays Average Length of Stay</a>	<a href="#">Occupied Beddays Average Length of Stay</a>	
<a href="#">Public Seps Private Seps</a>	<a href="#">Public Seps Private Seps</a>	
<a href="#">Emergency Seps Elective Seps</a>	<a href="#">Emergency Seps Elective Seps</a>	
<a href="#">Day Only Seps Deaths Seps</a>	<a href="#">Day Only Seps Deaths Seps</a>	

# Data - current central BSC data source

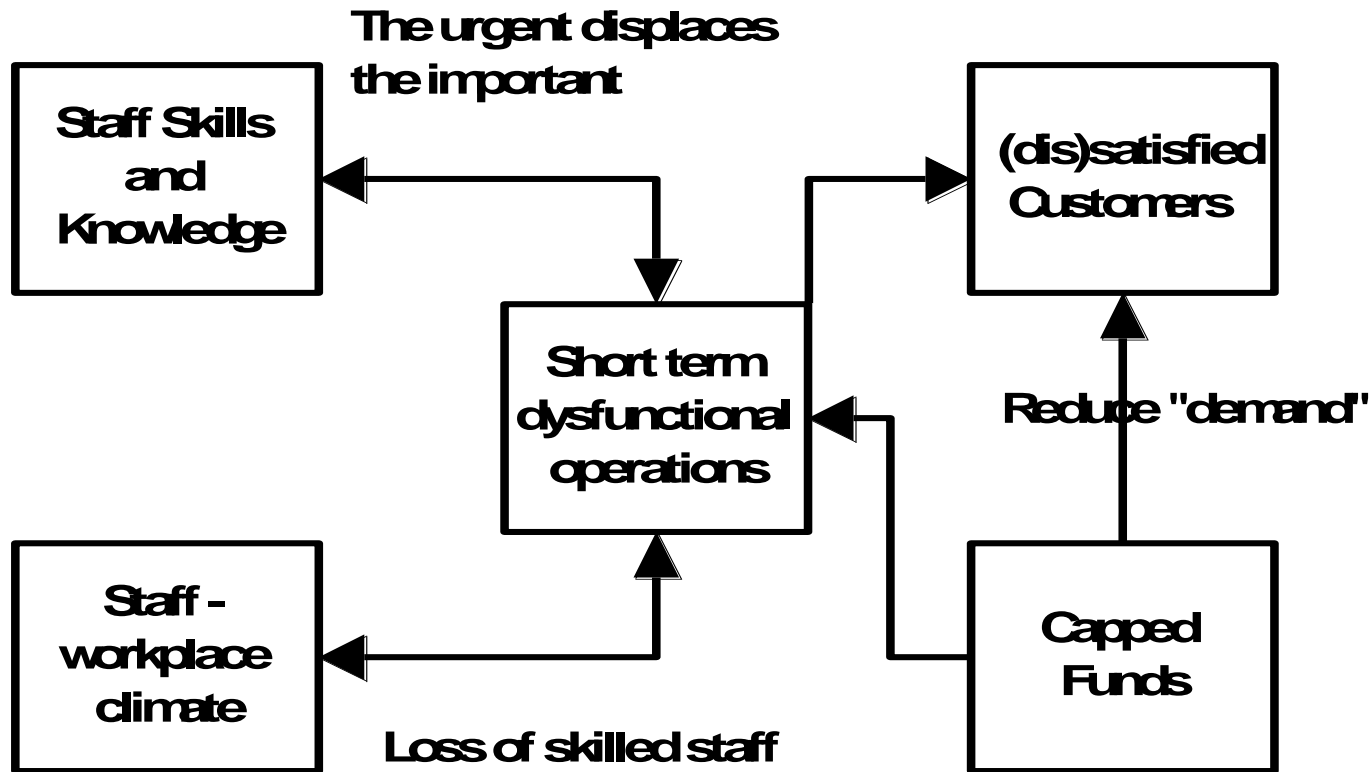


# Assumptions about BSC linkages (in good times)



# Public sector in hard times ....

*- risks of putting the engine in reverse*



# Integrating with the CQI cycle

⌘ The PDSA cycle simplified :

☑ Planning : *What are we trying to improve ?*

☑ Measurement : *How will we know when we've done it ?*

☑ Implementation : *How do we change things ?*

# Work in progress



⌘ Planning : *What are we trying to achieve ?*

☑ RBH : Clinical Service Development Group

☑ Quality Improvement and Enhancement Program (QIEP) : Clinician Led Management

☑ QIEP - Medical Quality Processes (MQP)

☑ Guidelines web site and network

# Work in progress



⌘ Measurement : *How will we know when we've done it ?*

☒ QIEP-MQP

☒ **Clinical Indicators**

☒ **IT/IM support**

- "Teleform"
- PDA database

☒ RBH

☒ **Balanced Score Card**

☒ **Balanced Score Card Generator**



# Work in progress



## ⌘ Implementation *"What do we need to change?"*

### ☑ Clinical Support Systems Project

- ☒ Implementation of evidence based practice in heart failure and coronary thrombosis

### ☑ Clinical Service Improvement Collaborative

### ☑ RBH Clinical Service Development Group

#### ☒ Innovation's /project management

- Medical Assessment and planning unit
- Medical Day Procedure Unit

# Clinical Service Improvement Collaborative



- ☒ Built on existing MQP and other networks
- ☒ Voluntary membership
- ☒ Confidential sharing of sensitive information
- ☒ Information exchange / integration
- ☒ Collegiate learning model
- ☒ Health Round Table benchmarking model

# Work in progress :

## Balanced Score Card Manager



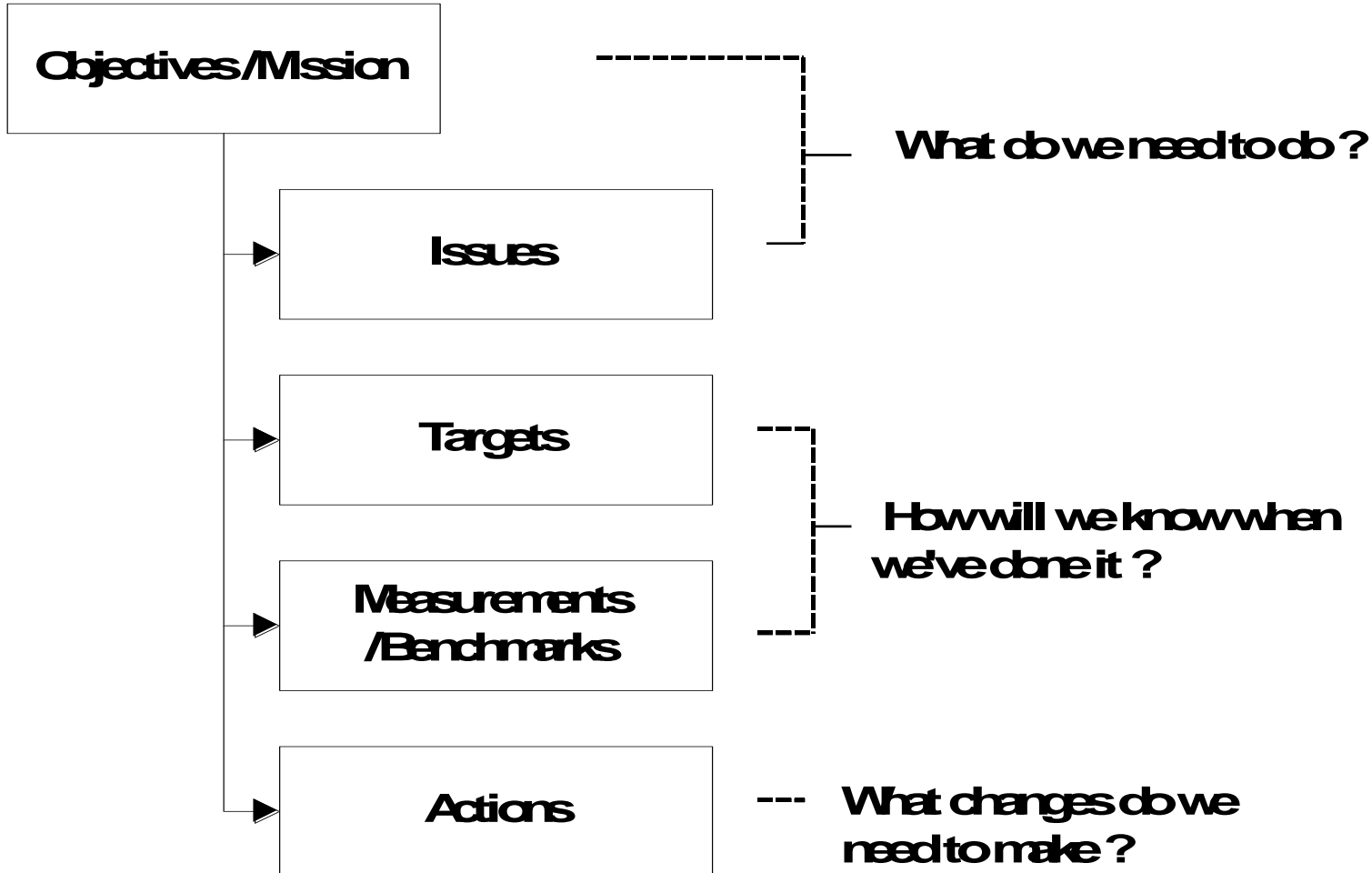
### ⌘ Objectives:

- ☑ Integrate central and local data
- ☑ Single validated source
  - ☒ DSS / Transition II etc
- ☑ Reduce data collection / analysis burden

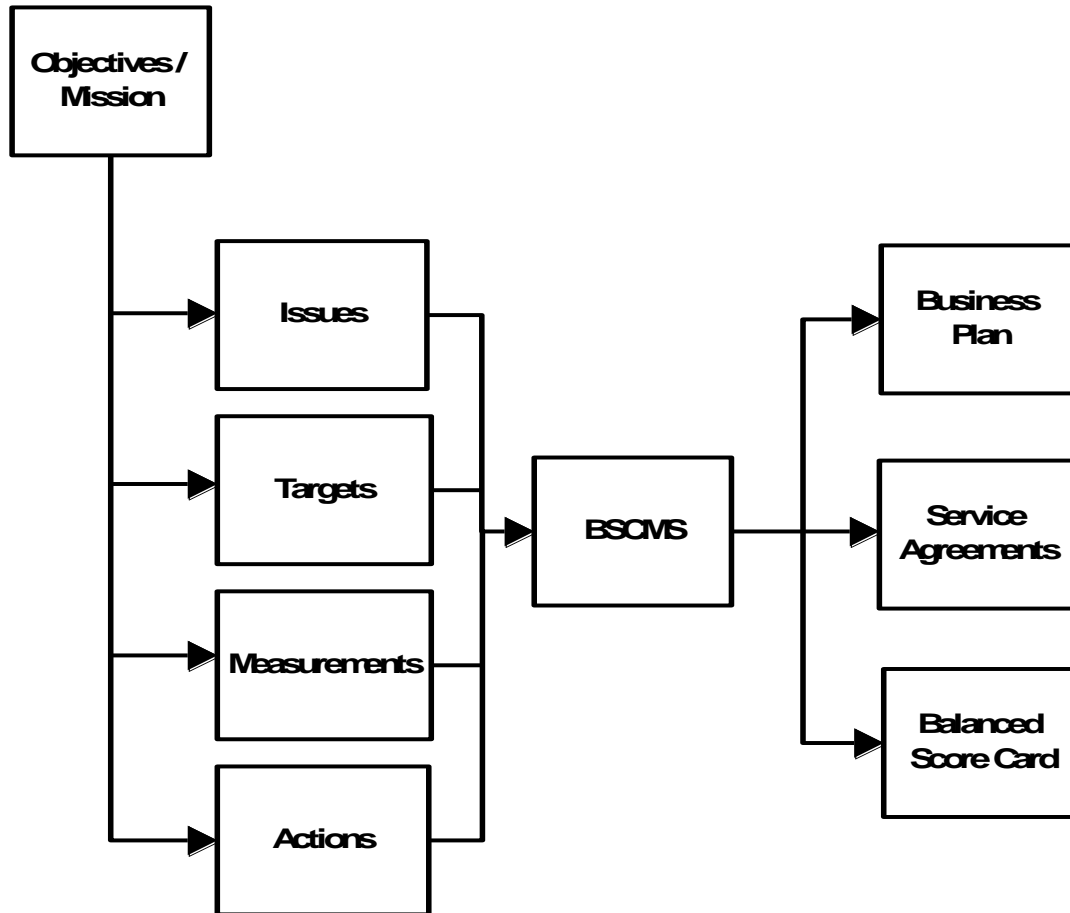
### ⌘ Hypothesis

- ☑ One data structure meets many needs

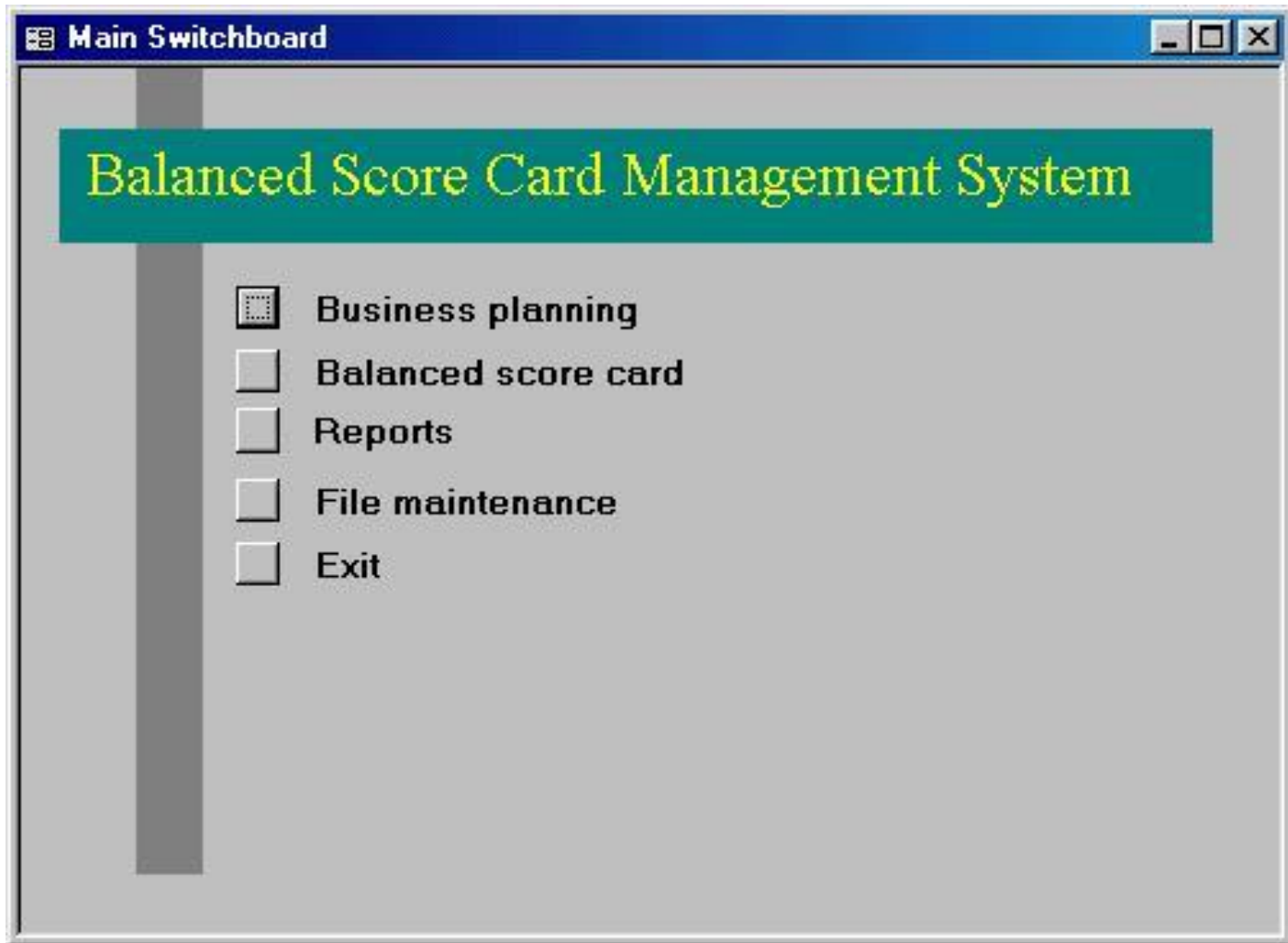
# Balanced Score Card Manager Structure



# Balanced Score Card Manager Hypothesis



# Balanced Score Card Management System (BSCMS)



# BSCMS - Business Planning

The screenshot displays a software interface for business planning. On the left, a sidebar titled 'Planning' features a green banner with the text 'Balanced Score' and three unchecked checkboxes labeled 'Planning', 'Score ca...', and 'Return to...'. The main window, titled 'B Plan Selector : Form', contains the following elements:

- Selection Criteria for Business Planning**
- Select Department**
- A list of departments under the heading 'DIVISION':
  - CARDIOLOGY
  - DERMATOLOGY
  - ENDOCRINOLOGY
  - GASTROENTEROLOGY
  - GERIATRICS
  - INFECTIOUS DISEASE
  - INTERNAL MEDICINE
  - LIVER
  - NEUROLOGY
  - NUCLEAR MEDICINE
  - RENAL
  - RHEUMATOLOGY
  - THORACIC
  - NURSING
  - CLIN SERV DEV GP
  - DIRECTORATE
  - CONVALESCENCE
  - IMMUNOLOGY
- An **Output** section with three buttons: 'Screen', 'Print', and 'Exit'.

# BSCMS - Business Planning

**Balanced Score Card**

File Edit View Insert Format Records Tools Window Help

Owner\_Issues\_Actions BSC

DIVISION

**Issues**

Issue	BSC	Type	Int/Ext:	Rep
Clinical Services Development Group	Learning	Achievement	All Internal	Yes
Internal / external service agreements	Activities	Need - Communic:	Internal=Exterr	Yes
Divisional / Departmental MAG structure / processes	Activities	Need - Organisatic	All Internal	Yes
Staff development / management training	Learning	Need - Skill/Educa	All Internal	No
▶ Concerns re ALOS in some DRGS	Activities	Need - Staff	Internal=Exterr	Yes
New bed allocations / nursing workforce	Activities	Risk - Costs	Internal=Exterr	Yes
Drug budget impact / growth	Finance	Risk - Costs	Mostly Externa	Yes

Record: 8 of 11

**Actions**

Action	Act Date	By	Status	Capital
▶ Campaign to all staff groups and monitoring	01/06/2001	Ward,	In progress	
Cohort study	01/06/2001	Levy,J	Completed	\$0.00
Profiling physicians	01/06/2001	Ward,	In progress	\$0.00

Record: 1 of 3

Record: 1 of 1 (Filtered)

BSC\_gen

Form View



# BSCMS - Targets / Templates

Owner\_targets

BSC targets-template

RENAL

Measurement	Staff	BSC Type	Subtype	Interval	Benchm	Bench
FTE - Total	All,	Activities	None	Annual	Last y	0.00
Beds - Non Acute overnight	All,	Activities	None	Total	Quota	8.00
Separations - Acute (excl. same day)	All,	Activities	None	Annual	Quota	492.00
Separations - Acute same day	All,	Activities	None	Annual	Quota	1927.00
Occupied bed days -acute	All,	Activities	None	Annual	Quota	1440.00
Occupied Bed Days Acute Same Day	All,	Activities	None	Annual	Quota	1927.00
Beds - Acute Overnight	All,	Activities	None	Total	Quota	10.00
Beds - Acute Same day	All,	Activities	None	Total	Quota	22.00
FTE - Medical	All,	Activities	None	Annual	Budge	0.00
FTE - Nursing	All,	Activities	None	Annual	Budge	0.00
FTE - Admin		Activities	None	Annual	Budge	0.00
FTE - Operational		Activities	None	Annual	Budge	0.00
Budget - Allocation		Activities	None	Annual	Budae	0.00

Record: 1 of 16

Record: 1 of 1 (Filtered)

BSC\_gen

Form View

FLTR

# BSCMS - Select from Score card log

**Balanced Score Card**

File Edit View Insert Format Records Tools Window Help

**Balanced score card generator**

**BSC Log Selector : Form**

Selection Criteria for Balanced Score Card Log

**Select Department**

- DIVISION
- CARDIOLOGY
- DERMATOLOGY
- ENDOCRINOLOGY
- GASTROENTEROLOGY

**Select Year**

- 1999
- 2000
- 2001
- 2002
- 00-01

**Select Month**

- January
- February
- March
- April
- May

**Select Staff**

- All
- Allworth,A
- Appaddurai,K
- Askew,A
- Atherton,I

**Output**

Preview

Printer

Go Exit

BSC\_gen : ...

Form View

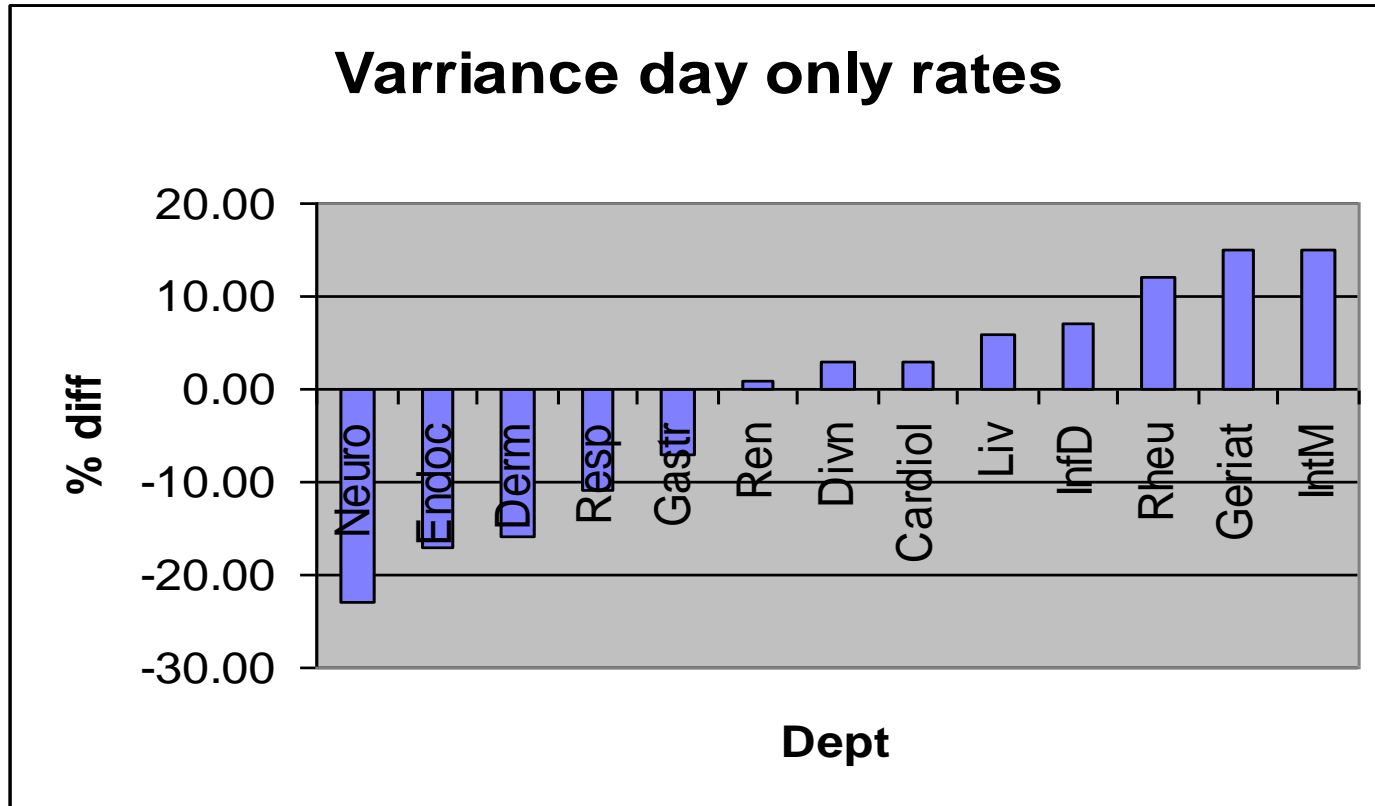
# BSCMS - Score card log output

**Balanced Score Card**

Owner	Year	Month	Staff	BSC Type	Measurement	Bench-value	Curr-value
INFECTIOUS	2001	March	All,	Activities	FTE - YTD Total	54.09	57.39
INFECTIOUS	2001	March	All,	Finance	Expenditure Actual	290865.00	309389.80
INFECTIOUS	2001	March	All,	Activities	Beds - Acute Overnig	5.00	13.00
INFECTIOUS	2001	March	All,	Activities		2603717.00	2861602.00
INFECTIOUS	2001	March	All,	Activities	Separations - Total	30.00	33.00
INFECTIOUS	2001	March	All,	Activities	Av. LOS - all	5.16	12.64
INFECTIOUS	2001	March	All,	Activities	Separations - Acute s	14.00	12.00
INFECTIOUS	2001	March	All,	Quality	Waiting Time - Outpa	1.00	1.00

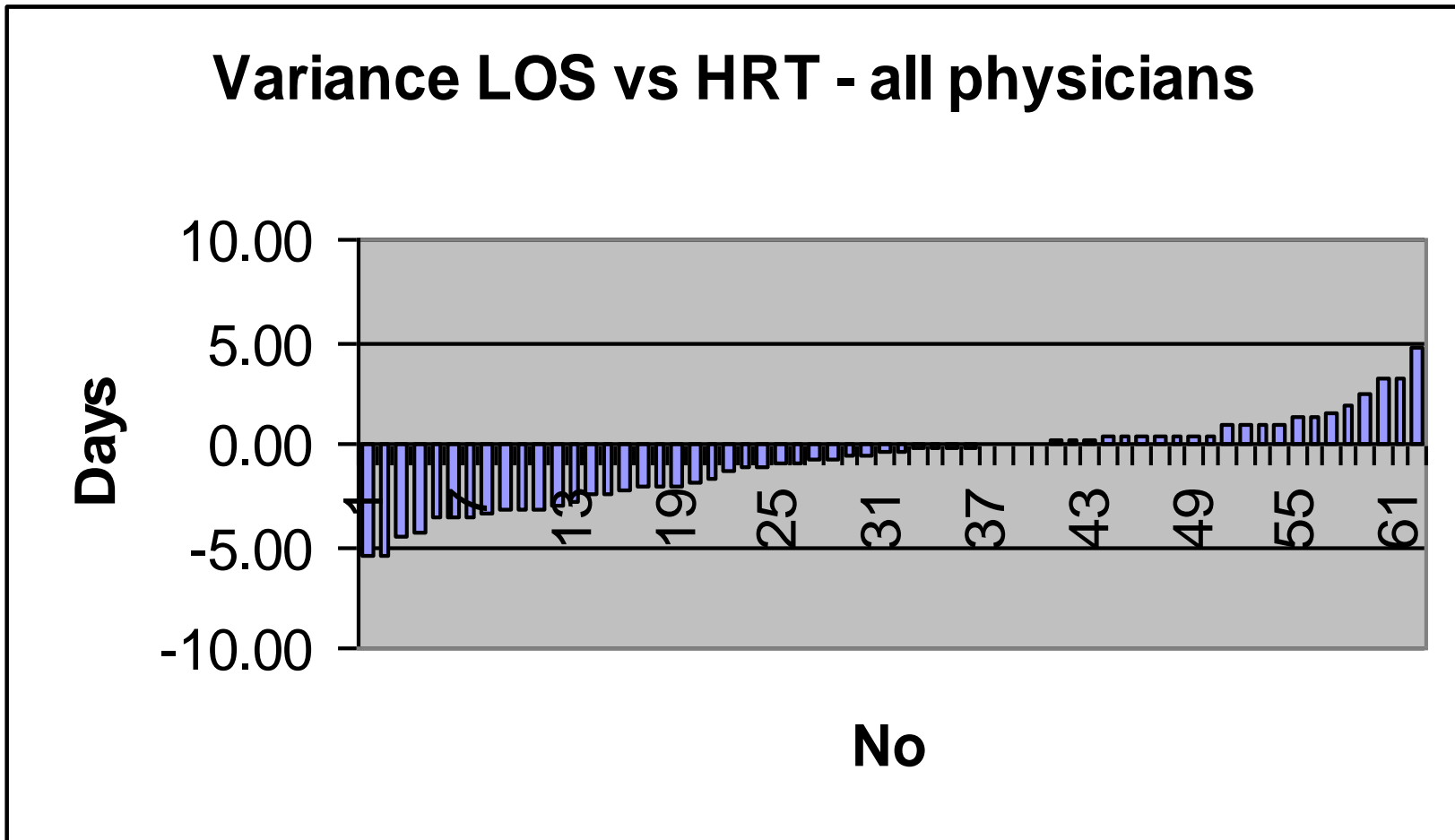
Page: 1 Ready

# Balanced Score Card Manager - Output



6/12 data 2000 HRT benchmark - (-ve = better than HRT)

# Balanced Score Card Manager - Output



6/12 data 2000 HRT benchmark - (+ve > HRT)

# Lessons learnt



- ⌘ Measure the performance of the teams that are measuring performance
- ⌘ Understand and accommodate clinician priorities and preferred learning methods
- ⌘ Clarify and reinforce the link between:
  - ☑ the problem and the measurement
  - ☑ the measurement and the intervention

# Measure performance of teams



- ⌘ Level 1 - Meetings held
- ⌘ Level 2 - Measurements made but no change
- ⌘ Level 3 - Modest improvements
- ⌘ Level 4 - Significant gains
- ⌘ Level 5 - Equal to best practice

# Keys to clinician support

- ⌘ Recruit by letting them identify the local problem to be solved
- ⌘ Build on existing “collegiate” clinician networks
- ⌘ Use preferred learning methods/ peer review



# Summary



- ⌘ The Balanced Score Card is valuable for
  - ☑ measuring and addressing the “vision-reality gap”
  - ☑ monitoring a broad range of activities
  - ☑ linking business and clinical management objectives
- ⌘ It is easily adapted for the health care environment provided :
  - ☑ High level organisational commitment
  - ☑ There is local ownership of relevant data / indicators
  - ☑ Adequate IT/IM support

# Summary



⌘ Major challenges are :

- ☑ Developing integrated / automated data collection and analysis systems
- ☑ Capturing and maintaining clinician commitment
- ☑ Linking problems with measurements and measurements with implementation of relevant improvements