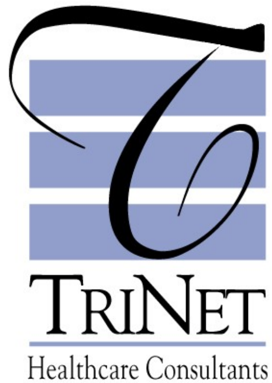

MAXIMIZING THE BENEFITS OF DECISION SUPPORT

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MAXIMIZING THE BENEFITS OF DECISION SUPPORT OUTLINE

I. Obstacles & Solutions

II. A Plan for DSS Benefits Realization

III. Guidelines for Effective Use of DSS

IV. Decision Support Applications

OBSTACLES TO EFFECTIVE USE OF DECISION SUPPORT SYSTEMS

- Lack of Education on Benefits
- Limited Access
- Organizational/Political
- Lack of Data Integrity
- Not Maintained
- Cost Accounting Confusion

SOLUTIONS

- Educate Users on Information on Decision Support Benefits
- Get Decision Support Outside Finance
- Internalize It!
- Maintain It (Commit Resources)
- Develop a Plan

DECISION SUPPORT = PRODUCT + <u>PROCESS</u>

PLAN FOR DS BENEFITS REALIZATION

1. Educate Management and Medical Staff

   - Discuss Benefits of Decision Support Information
   - Show Reports on Real Hospital Data
   - Avoid Controversial or Threatening Data
   - Be Prepared to Address Issues of Access, Report Requests, Etc.

PLAN FOR DS BENEFITS REALIZATION (CONT)

2. Conduct Interview to Assess Information Needs
    - CEO and COO
    - Medical Staff
    - CFO/Finance
    - Budgeting
    - Planning/Marketing
    - Quality Assurance/Utilization Review
    - Managed Care
3. Establish Goals: Identify Areas of Under-Utilization or Inefficiencies

DECISION SUPPORT INTERVIEWS SAMPLE FORM

Interviewee: ______________________

I. ACCESS

Do you currently access the Decision Support system? __________

If not, who produces reports for you? ______________________

Interest in system training? ______________________

Need for benefits education? ______________________

General Concerns ______________________

II. STRATEGIC INFORMATION NEEDS

	Strategic Information Needs	Data Needed	How is need being met?	Action Steps
1.				
2.				
3.				
4.				
5.				
6.				

III. APPROACH/PHILOSOPHY

1. Costing
2. Product Line Reporting
3. Budgeting
4. Cost Management

DECISION SUPPORT INTERVIEWS SAMPLE FORM (continued)

IV. DECISION SUPPORT APPLICATIONS

Application	Use DSS?	Other Method	Frequency	Interest	Comments/Action Steps
Product Line Reporting					
"What If?" Modeling					
Case-Based Budgeting					
Market Share Analysis					
Patient Origin Reporting					
Physician Reporting					
Practice Pattern Analysis					
Physician/Peer Comparisons					
Treatment Protocols					
Outpatient Analysis					
Physician Credentialing					
Severity Analysis					
Acuity Analysis					
Outcome Analysis					
ICD-9-CM Reporting					
Product/DRG Profitability					
LOS Comparisons					
Departmental Utilization					
Contribution Margin by Product/DRG					
Payor Analysis					
Flexible Budgeting					
Productivity/FTE Reports					
Cost Allocation					
Departmental Profit/Loss Statements					
Budget/Actual Variance Reports					
Rate/Efficiency/Volume Variance					
Exception Reporting					
Contracting					
Pricing Services					
Corporate-Wide Reporting					
Zero-Based Budgeting					
Year-End Projections					
Payroll Budgeting					
Balance Sheet Reporting					
Proforma Financial Statements					
Graphs					

PLAN FOR DS BENEFITS REALIZATION (CONT)

4. Identify and Remove Obstacles
   - Clean up Data
   - Streamline and Enhance Data Interfaces
   - Automate Wherever Possible
   - User Education
5. Determine Plan for Access to System
   - Multiple Users (Open Access)
   - Key User(s)
6. Develop Plan for Maintenance
   - Routine Audit Reports to Verify Data
   - Document Maintenance Guidelines
   - Designate Backup Person

PLAN FOR DS BENEFITS REALIZATION (CONT)

7. Designate a Decision Support Coordinator
   - Facilitate the Utilization of DSS in Organization
   - Address Management's Information Needs
   - Ensures Data Integrity
   - Orient Hospital Personnel to DSS and Its Impact
   - Encourage Efficient and Effective Use of DSS
8. Document Your "Decision Support Plan" and Distribute
   - Short Term Goals
   - Long Term Goals

ENHANCING DATA QUALITY

- Develop Audit Procedures

- Payroll Data to Supplement GL Data
  - Jobcode Detail
  - Pay Category (OT, Nonproductive, etc.)
  - By Pay Period

- Acuity Data into Case Mix System
  - Costing
  - Resource Analysis

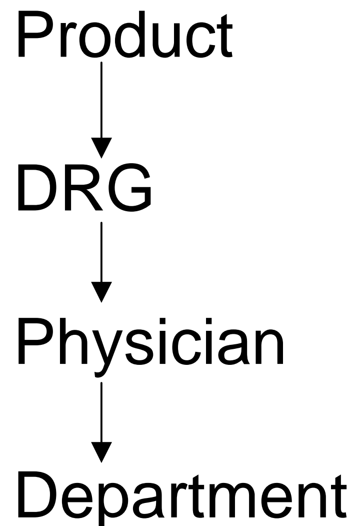
- Outpatient Data

ENHANCING DATA QUALITY (CONTINUED)

- Date of Service
  - Utilization Analysis
  - Contracting
- Take Advantage of User-Defined Data Fields
  - Employer
  - Additional Demographic Data
  - Key Quality Indicators/Flags
- Improve TIMELINESS of Data

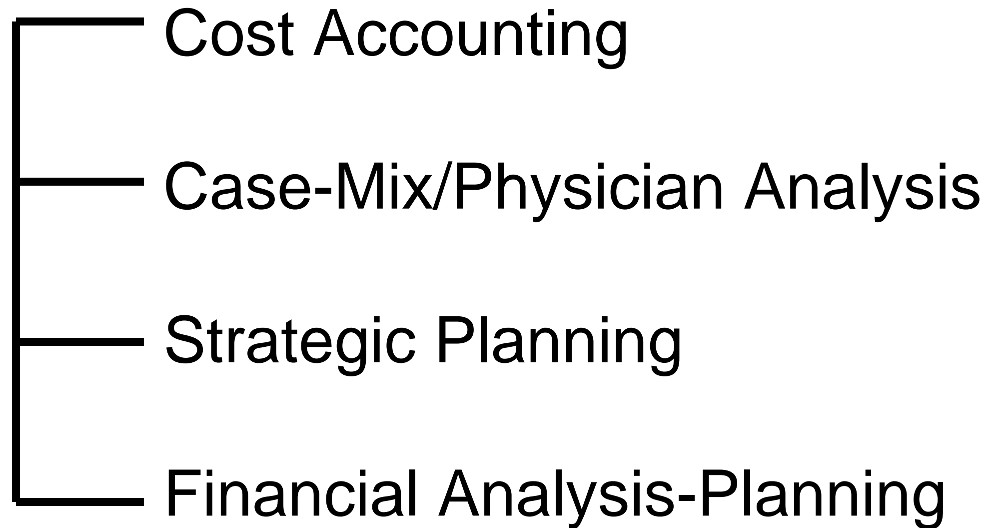
OTHER GUIDELINES FOR EFFECTIVE USE OF DECISION SUPPORT

- Exception Reporting to “Filter” Data
- Phased Approach to Case Mix Reporting



- Automate Wherever Possible

DECISION
SUPPORT
APPLICATIONS



COST ACCOUNTING APPLICATIONS

- Product Costing
- Management Cost Allocation
- Productivity Monitoring
- Flexible Budgeting

FLEXIBLE BUDGETING
Getting Started

1. Educate management on the benefits of flexible budgeting
2. Start with your traditional fixed budget
3. Develop Statistics for each cost center
4. Select which cost centers are to be flexed:
   - Routine Units
   - Ancillaries
   - Support Services
5. Select which expense accounts are to be flexed
   - Salaries
   - Supplies
6. Break out fixed and variable costs using percentages or dollar breakouts

FLEXIBLE BUDGETING
Getting Started (Cont.)

7. Calculate the standards from historical data:
   - Apply fixed/variable breakouts to historical data
   - Create ratios to represent standards for variable labor and expense, e.g.:
     - Productive Manhours/Unit
     - Productive Salary/Productive Manhour
     - Non-Salary Expense/Unit
8. Apply the standards to actual statistics
9. Combine variable and fixed portions of the budget
10. Produce reports to compare flexible budget to actual
11. Highlight variances and review with management

FLEXIBLE BUDGETING STANDARDS

Examples

Department	Standard	Value
ICU	RN Hours/Patient Day	10.25 Hrs.
ICU	RN Salary/Hour	$21.60
ICU	Med Surg Supplies/ Patient Day	$18.50
Radiology	Film Expense/Exam	$2.75

FLEXIBLE BUDGETING: VARIANCE REPORT

DEPARTMENTAL VARIANCE ANALYSIS

665 SURGERY AND RECOVERY

	ORIGINAL BUDGET	VOLUME ADJUSTMENT	FLEXIBLE BUDGET	ACTUAL	RATE VARIANCE	EFFICIENCY VARIANCE	TOTAL VARIANCE
SALARY							
MANAGEMENT							
TECHNICIAN							
RN/LPN							
CLERICAL							
•							
•							
•							
TOTAL SALARY							
NON SALARY							
SURGICAL							
OFFICE SUPPLIES							
INSTRUMENTS							
RENTAL OF EQUIPMENT							
•							
•							
•							
TOTAL NON-SALARY							
TOTAL EXPENSE							

COST ACCOUNTING REQUIREMENTS

- Build Upon Available Cost & Statistical Systems
- Educate and Involve Hospital Managers
- Dynamic, Non Static
- Implemented Quickly
- Cost Effective
- Maintainable

COST ACCOUNTING POTENTIAL PITFALLS

- Lack of Focus on BENEFITS
- Loss of Commitment
- Prolonged process
- Excessive Detail
- Over-Use of Consultants for Data Collection
- Inadequate Education of Hospital Staff on Cost Accounting Techniques
- Inability to Maintain and Use the Data

“CAN I HAVE A DECISION SUPPORT SYSTEM WITHOUT A COST ACCOUNTING STUDY?”

<u>COSTING APPROACHES</u>

- Simple RCC’s
- Detailed RCC’s (Cost Components)
  - Direct/Indirect
  - Fixed/Variable
  - Salary/Non-Salary
- Industry RVU’s
- Simplified Cost Accounting
- Engineered Standards

COST ACCOUNTING
A SIMPLIFIED APPROACH

- Commitment to Efficient, Cost-Effective Process
- Phase Approach
- Hospital Assumes Primary Responsibility for Data Collection
- Make Use of Existing RVU/Standards Data
- Use 8020 Rule
- Focus on Immediate Realization of Benefits

COST ACCOUNTING PROCESS
PHASE I: ASSESSMENT

A. Readiness Review

- Determine Cost Accounting Goals
- Review Information Systems
- Existing Data
- Available Resources

B. Operations Review

- Review Accounting Systems
- Prepare Workplan

COST ACCOUNTING PROCESS (CONT)
PHASE II: HOSPITAL ORIENTATION

A. Train Cost Accounting Team

B. Prepare Forms for Department Manager

- Department Questionnaire
- List of Procedures to be Studied
- Fixed/Variable Worksheets
- Labor and Supply Estimate Forms

C. Conduct Department Manager Orientation

COST ACCOUNTING PROCESS (CONT)
PHASE III: DATA COLLECTION

A. Conduct Department Interviews

B. Develop Workplan for Data Collection

C. Hospital Compiles Cost/RVU Data and Enters Into System

COST ACCOUNTING PROCESS (CONT)
PHASE IV: DEVELOP PATIENT COST

A. Load Fixed/Variable Breakouts

B. Develop Management Cost Allocation

C. Integrate Procedural Cost/RVU Data Into Case Mix System

D. Implement Necessary Tables to Calculate Patient Cases

COST ACCOUNTING PROCESS (CONT)
PHASE V: BENEFITS REALIZATION

A. Develop Preliminary Product Lines

B. Develop Management Reports

C. Senior Management Education

CASE-MIX / PHYSICIAN ANALYSIS

- Practice Pattern Analysis
- Physician/Peer Comparisons
- Physician Credentialing
- Treatment Protocols
- Outpatient Analysis

CASE-MIX / PHYSICIAN ANALYSIS (CONT)

- Severity Analysis Using Medisgroups

    Physician Profiles with Costs/Severity/Outcome

    Evaluate Impact of New Treatment Protocols

    Strategic Planning: Impact of Severity on Resources

SEVERITY ANALYSIS

SEVERITY ANALYSIS BY PRODUCT

	CASES	LOS	COST/CASE	CHARGE/CASE
PRODUCT 1				
RESPONDERS, ASG=0				
RESPONDERS, ASG=1				
RESPONDERS, ASG=2				
RESPONDERS, ASG=3/4				
NON-RESPONDERS				
TOTAL PRODUCT 1				
PRODUCT 2				
•				
•				
•				

SEVERITY ANALYSIS

PHYSICIAN STATISTICS

	AVG LOS	MORBIDITY %	MAJOR MORBIDITY %	MORTALITY %	AVERAGE NURSING ACUITY	AVERAGE ANCILLARY COSTS	NUMBER READMITS	AVERAGE NUMBER CONSULTS	AVERAGE PRE-OP DAYS
ORTHOPEDICS									
PHYSICIAN A									
PHYSICIAN B									
PHYSICIAN C									
PHYSICIAN D									
PHYSICIAN E									
•									
•									
•									
TOTAL SPECIALTY									
PEDIATRICS									
PHYSICIAN F									
PHYSICIAN G									
PHYSICIAN H									
PHYSICIAN I									
PHYSICIAN J									
•									
•									
•									
TOTAL SPECIALTY									

STRATEGIC PLANNING

- Product Line Management
- Case-Based Budgeting
- Market Share Analysis
- Patient Origin Reporting
- Physician Reporting
- Strategic Planning Model

PRODUCT LINE MANAGEMENT

METHODOLOGY FOR GROUPING DRGS INTO PRODUCT LINES

<u>Step 1</u>

- Determine Physician Specialties with Significant Case Volumes

- Assess Market

<u>Step 2</u>

- Determine Which Specialties Admit The Most Patients in Each DRG

<u>Step 3</u>

- Determine Which Ancillary Services Provided Significant Levels to Identified DRGs

PRODUCT LINE MANAGEMENT

METHODOLOGY FOR GROUPING DRGS INTO PRODUCT LINES

Continued

Step 4

- Formulate Preliminary Product Line Categories
- Repeat Steps 4-6 Until All Key Individuals are Comfortable with Defined Product Lines

Step 5

- Assign DRGs to Product Categories

Step 6

- Test for Reasonableness and Meaningfulness

PRODUCT LINE REPORTING

CONTRIBUTION MARGIN BY PRODUCT BY PHYSICIAN

	CASES	TOTAL COST /CASE	VARIABLE COST /CASE	NET REVENUE /CASE	CONTRIBUTION MARGIN /CASE
PRODUCT LINES					
ORTHOPEDIC SURGERY					
PHYSICIAN A					
PHYSICIAN B					
PHYSICIAN C					
CARDIOVASCULAR SURGERY					
PHYSICIAN D					
PHYSICIAN E					
PHYSICIAN F					
WOMEN'S HEALTH					
PHYSICIAN G					
PHYSICIAN H					
PHYSICIAN I					
•					
•					
•					
TOTAL HOSPITAL					

PRODUCT LINE REPORTING

PATIENT ORIGIN REPORT

	AGE					FEMALE CASES	% OF TOTAL	MALE CASES	% OF TOTAL
	0-14	15-30	31-44	45-64	65+				
PRODUCT LINE									
CARDIAC									
GOTHAM CITY									
METROPOLIS									
POTTERSVILLE									
•									
•									
•									
TOTAL CARDIAC									
WOMEN'S HEALTH									
GOTHAM CITY									
METROPOLIS									
POTTERSVILLE									
•									
•									
•									
TOTAL WOMEN'S HEALTH									
•									
•									
•									
TOTAL HOSPITAL									

STRATEGIC PLANNING MODEL STEPS

1. Define Fixed/Variable Relationships

2. Cost/Volume Relationships
   - Manhrs./Statistic
   - Supplies/Statistic
   - Salaries/Manhour

3. Reimbursement Assumptions by Payor

4. Prepare Baseline Forecast

5. Simulate Impact of Volume Changes and Addition/ Deletion of Services

6. Examine Bottom-Line Impact of Various Scenarios

FINANCIAL APPLICATIONS

- Departmental Profit & Loss Reporting
- Variance Analysis
- Contracting with HMOs, PPOs
- Budgeting
- Procedure Pricing Using Income Sensitivity Analysis
- Corporate-Wide Management Reporting

NEW DIRECTIONS IN DECISION SUPPORT

- Outpatient Analysis
- Multi-Entity Reporting for Healthcare Corporations
- Executive Information Systems (EIS)

    Improve Access to Information

    Beyond Decision Support