Hospital Executive Dashboard

For the purpose of conceptually learning how the EIS/MIS helps health care administrators in both outpatient and inpatient settings maintain quality through benchmarking and informed decision making, you do not need to understand all of the categories, acronyms, and financial numbers within this Dashboard report. There is no COOKIE CUTTER EIS/MIS report. Each medical facility designs its report to fit its needs. It is standard to have key operational, financial, and productivity numbers in all management reports. However, the data definitions and case mixes are all contingent on the organization and how it chooses to define them.

Hospital System XYZ Year-to-Date Executive Dashboard		
Analysis of Hospital Z		**YTD May, 2011**
Page 1 of 5	**Hospital Z**	**Hospital System XYZ Grand Total**
Admissions	45,334	76,061
Patient Days	211,847	348,570
Adjusted Patient Days	303,142	526,793
Adjusted Admissions	64,871	114,951
Case Mix Adj Admissions	89,767	152,185
Average Daily Census	1,403.0	2,308.4
Surgeries – Inpatient	10,352	17,634
Surgeries – Outpatient	12,001	20,351
Surgeries – Total	22,353	37,985
Inpatient Revenue – Dollar	1,347,180,269	2,061,869,212
Total Inpatient Revenue/AA	20,767	17,937
Outpatient Revenue – Dollar	580,564,753	1,054,225,796
Outpatient Revenue % of Gross	30.1%	33.8%

This section (above) of the EIS report represents inpatient and outpatient activity and revenue, i.e., admissions, discharges, and charges for health services. The **average daily census** in this report represents the number of inpatients and outpatients that go through the hospital system per day. You will note that inpatient services are far fewer in number than outpatient services, but inpatient revenue is 66.2% and outpatient revenue is 33.7% year-to-date. This demonstrates how inpatient services are significantly higher than outpatient services and why payers support the shift to ambulatory care. Finally, note that all EIS/MIS reports tend to list month-to-date (first column) and then aggregate totals by year-to-date (second column).

Hospital System XYZ Year-to-Date Executive Dashboard		
Analysis of Hospital Z		**YTD May, 2011**
Page 2 of 5	**Hospital Z**	**Hospital System XYZ Grand Total**
Gross Revenue – Dollar	1,927,745,022	3,116,095,008
Gross Revenue/AA	29,717	27,108
Net Patient Revenue (Net BD – Dollar (MIS)	607,915,122	970,888,521
Net Patient Revenue (Net BD)/AA	9,371	8,446
Net Patient Revenue (Net BD) % Gross	31.5%	31.2%
Total Operating Revenue (MIS)	635,152,950	1,006,584,383
Bad Debt & Charity – Dollar	127,654,708	209,753,386
% of Gross Revenue	6.6%	6.7%
% of Net Patient Revenue (Net BD)	21.0%	21.6%

This section of the report shows gross revenue or billed charges, minus **bad-debt** (uncollectable accounts) and **charity care** (uncompensated care). Note that all non-profit hospital must have a charity care policy and offer charity care applications that are processed and approved according to their policy. This is a requirement to maintain their not-for-profit status.

Hospital System XYZ Year-to-Date Executive Dashboard		
Analysis of Hospital Z		**YTD May, 2011**
Page 3 of 5	**Hospital Z**	**Hospital System XYZ Grand Total**
Length of Stay – Total	4.67	4.58
Medicare PPS LOS	5.27	5.06
Total Case Mix	1.38	1.32
Medicare PPS Case Mix	1.65	1.53
LOS/Case Mix Adj	3.38	3.46
EBDIT Total Expenses – Dollar (MIS)	532,250,912	837,248,778
Per AA	8,205	7,284

This part of the report demonstrates how efficient the organization is or is not. The **length of stay** (LOS) is a critical indicator. This is because LOS should be consistent with the patients' diagnoses and their assigned diagnostic related groupings (DRG). If patients with minor illnesses have excessive lengths of stays, then the hospital loses money on those cases. Medicare perspective payment system (PPS) length of stay is generally longer, since older patients tend to be sicker.

Case mix is very important to a hospital. Let's take a look at case mix and what it means. This management report is not something you will be graded on in this course. Nevertheless, it is valuable information to benefit you in your future careers in health care administration.

What are Case Mix and CMI?

Case Mix: This useful indicator groups diagnoses based on research into utilization patterns among various provider types. It is used with the ICD system to group together patients with similar diagnoses and characteristics. It classifies people into groups that are

homogeneous in resource utilization, and therefore, may be used to provide both clinical and financial descriptions for study and resource allocation (CMS, 2011).

Case Mix Index (CMI): CMI represents the average diagnosis-related group (DRG) relative weight (RW) for a hospital. It is calculated by adding the DRG weights for all Medicare discharges and dividing by the number of discharges (CMS, 2011).

Diagnosis-Related Group (DRG): This is a system involving classification of medical cases and payment to hospitals on the basis of diagnosis. It falls under Medicare's prospective payment system to reimburse inpatient hospitals regardless of the cost to the hospital to provide services in question.

CMI

MS-DRG RW x hospital base rate = MS-DRG payment for hospital stay

CMI is an important calculation and indicator for hospitals on how they are performing. To calculate CMI, hospitals first have to abstract the relative weights of their diagnostic related group (DRG) assignments of their patients' hospital bills. Each DRG is given a relative weight by Medicare. The **relative weight** (RW) represents the costs related to the specific diagnostic related groups (DRG). For example, an admission for dehydration for IV therapy has a lower relative weight then a patient admitted for coronary bypass surgery, and therefore, the bypass surgery is reimbursed at a much higher rate.

The relative weights are multiplied by the Medicare specific **base rate** assigned to each individual hospital and the result equals the hospitals DRG reimbursement for the patient. Relative weights assigned to inpatient and outpatient services are the most quantitative (specific) benchmark data by which medical services may be measured. So the first step in calculating CMI is to is to abstract from the hospital database the DRGs, calculate their relative weights (the numerator), and then capture the patient discharges representing those relative weights (the denominator).

CMI Numerators: Relative Weights (RW)	CMI Denominators: Case Counts
All Hospital CMI (RW ALL cases)	All discharges related to the RW
Medicare CMI (RW of Medicare cases)	Medicare discharges related to the RW
Single payer CMI (RW of a Payer's cases)	Payer's discharges related to the RW
Geographic CMI (RW for a medical service area)	MSA discharges related to the RW

Once again, CMI is an important calculation and indicator for any hospital on how they are performing. The critical piece of calculating CMI is to define your **numerator** (types of cases) and **dominator** (number of cases). The CMI may be calculated many ways to use as both an internal benchmark for the facility management team, and as an external benchmark to compare to other hospitals of similar type, services, or populations. Example data definitions for calculating various types of CMI are shown in this chart. The analyst may calculate the "All Hospital CMI" using All DRG RW/All patient discharges, or just one Payer's RW, divided by that one payer's patient discharges. They may choose to calculate CMI based on a geographic area and compare different areas to each other. Much of this depends on what the management teams and C-Suite are attempting to do in their business strategies.

In summary, the CMI tells the hospital how "resource intensive" their patient population is. CMI also may be an indication of how sick the hospital's patients are since an increase in

severity of illness (SOI) is generally going to equal an increase in the DRG weights and thus an increase in CMI. Most hospitals calculate and report a Medicare CMI and an All Patient CMI. The Medicare CMI tends to be higher than the All Patient CMI, which includes a younger and healthier patient population in most cases. The CMI can also be used to show the cost effectiveness of the hospital's care delivery.

Hospital System XYZ Year-to-Date Executive Dashboard		
Analysis of Hospital Z		**YTD May, 2011**
Page 4 of 5	**Hospital Z**	**Hospital System XYZ Grand Total**
Salaries & Wages – Dollar	237,018,118	365,525,367
Benefits – Dollar	74,302,240	108,876,980
Benefits % of Total	23.90%	23.00%
Total Personnel - Dollar	311,320,358	474,402,347
Total Personnel Dollars/AA	4,799	4,127
Total Personnel % of Net Patient Revenue (Net BD)	51%	49%
Total Productive FTEs	10,998	17,214
Annualized Total Worked FTEs	26,586	41,611
Total Worked Hours/AA	146	129
Labor Cost/Paid Hour	31.59	30.79

In this section of the EIS report is the staff productivity. By tracking hours and dollars against admissions, discharges, and revenue, the C-Suite is able to pinpoint areas of need and avoid such things as over staffing during low patient census, or under staffing during high census periods, causing burnout among clinical and administrative staff.

Hospital System XYZ Year-to-Date Executive Dashboard		
Analysis of Hospital Z		**YTD May, 2011**
Page 5 of 5	**Hospital Z**	**Hospital System XYZ Grand Total**
Total Supplies % of Net Patient Revenue (Net BD)	20.7%	20.0&
Purchased Services – Dollar	21,505,910	42,376,347
Purchased Services/AA	332	369
Per AA	194	162
% of Net Revenue (Net BD)	17.0%	17.7%
Per AA	1,597	1,494
Modified Operating Income – Dollars (OIS)	59,541,869	94,955,722
MOI/AA	918	826
Other Oper Rev (Net Int & JV/Sub)	27,237,828	35,695,861
Net Patient Revenue (Net BD)	607,915,122	970,888,521
Net Revenue Per Day	4,025,928	6,429,725

Lastly, this section of the report addresses purchasing supplies and other operating income, as well as the bottom line, **net revenue per day**.