

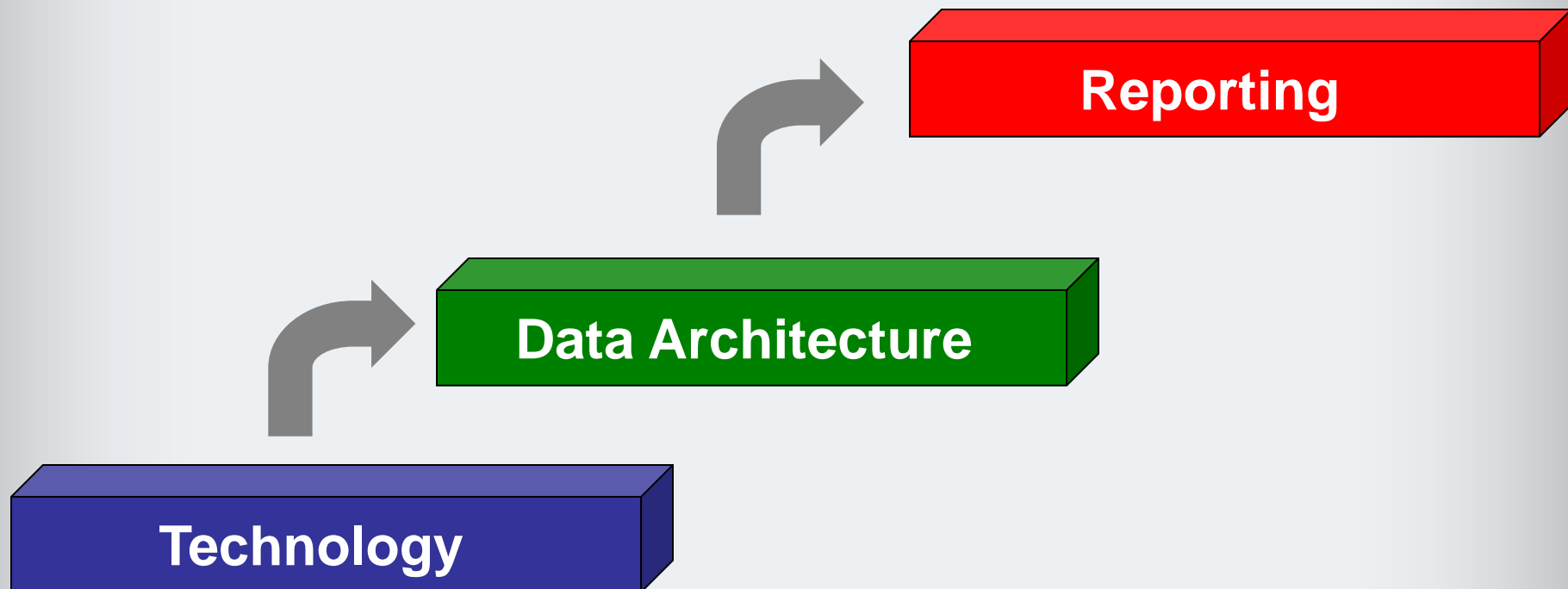
A Clinical Data Warehouse?

Ahmad Baghal, MD, MS

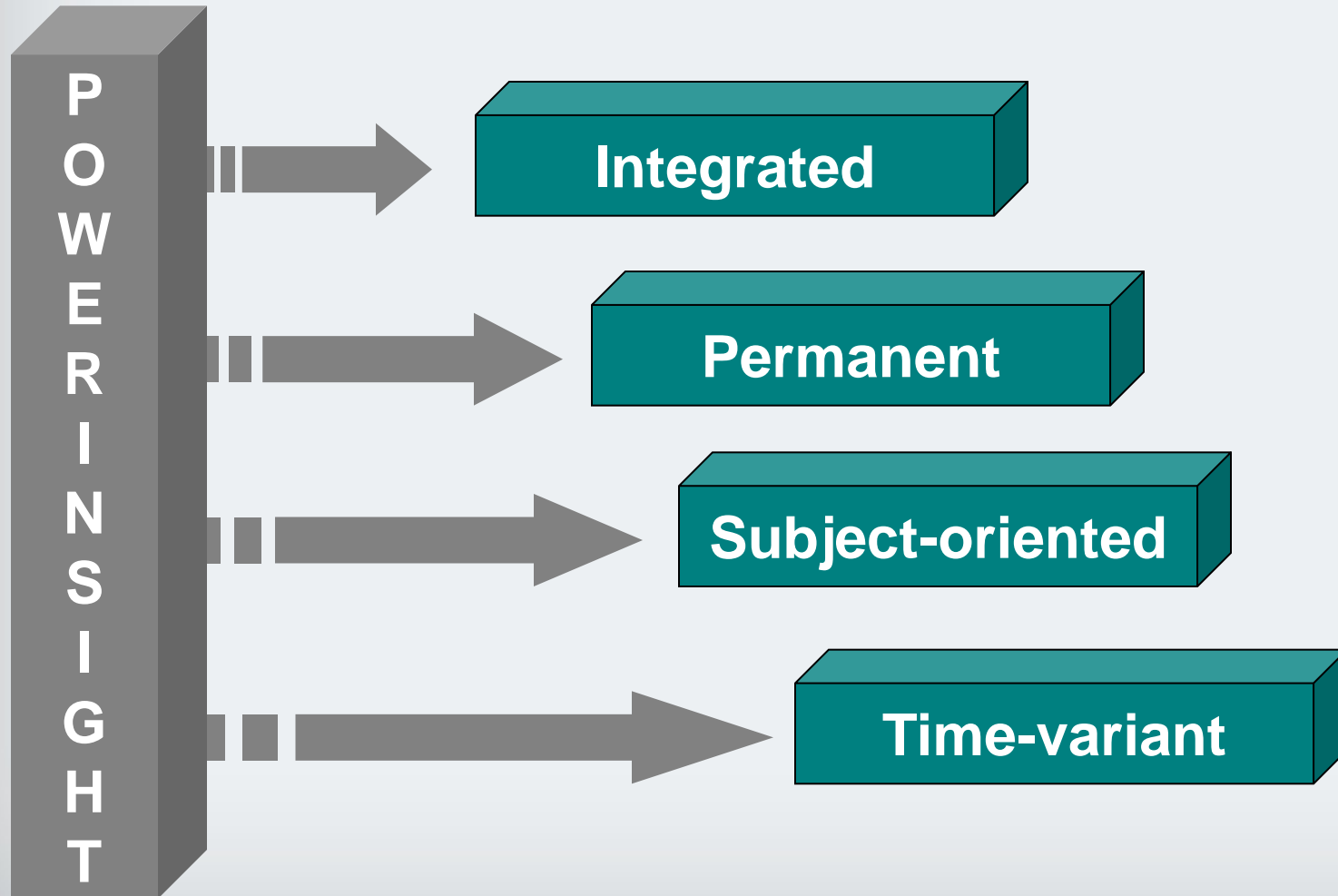
Geoff Gordon, MS

James Willig, MD, MPH

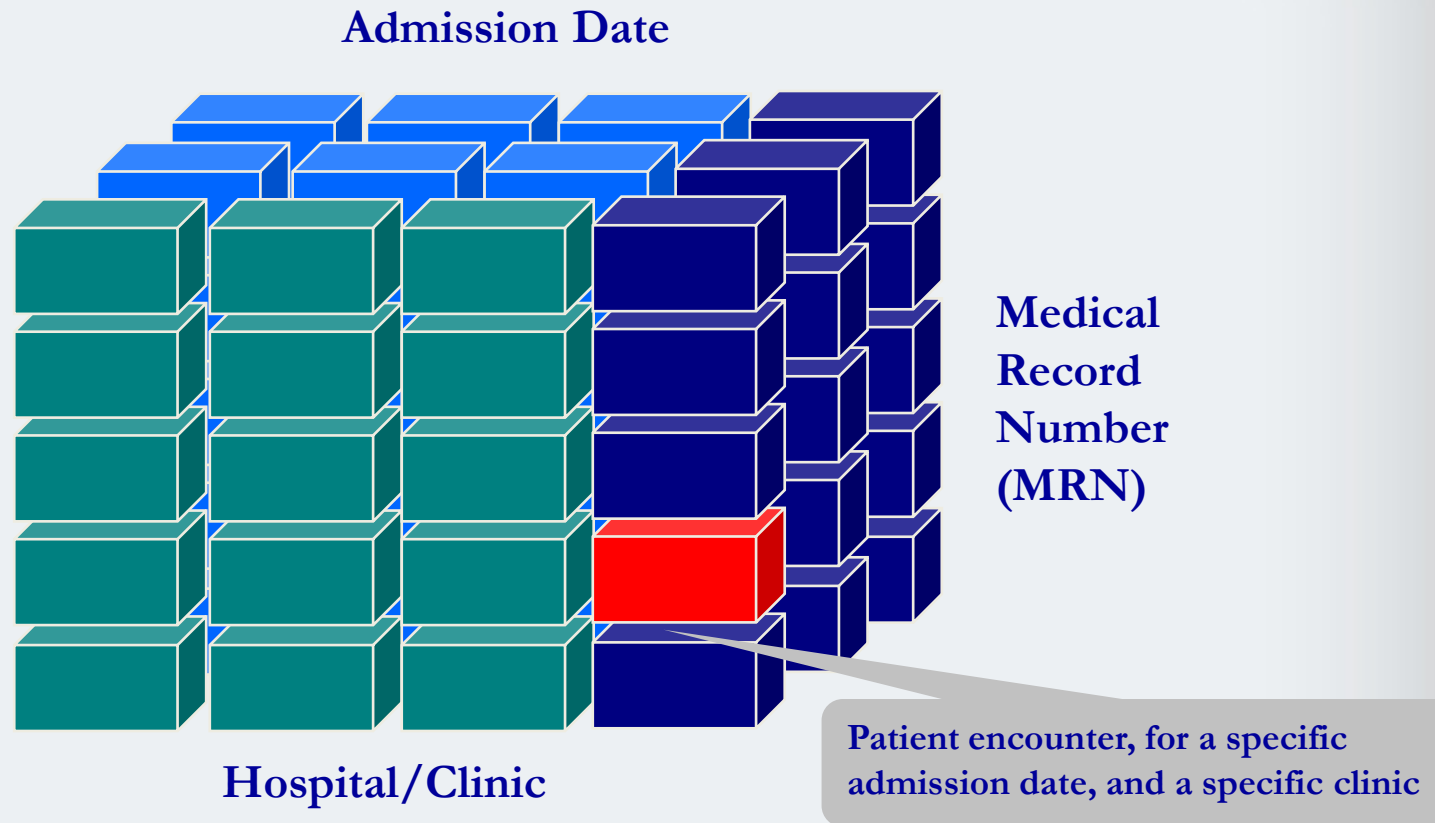
PowerInsight Layers



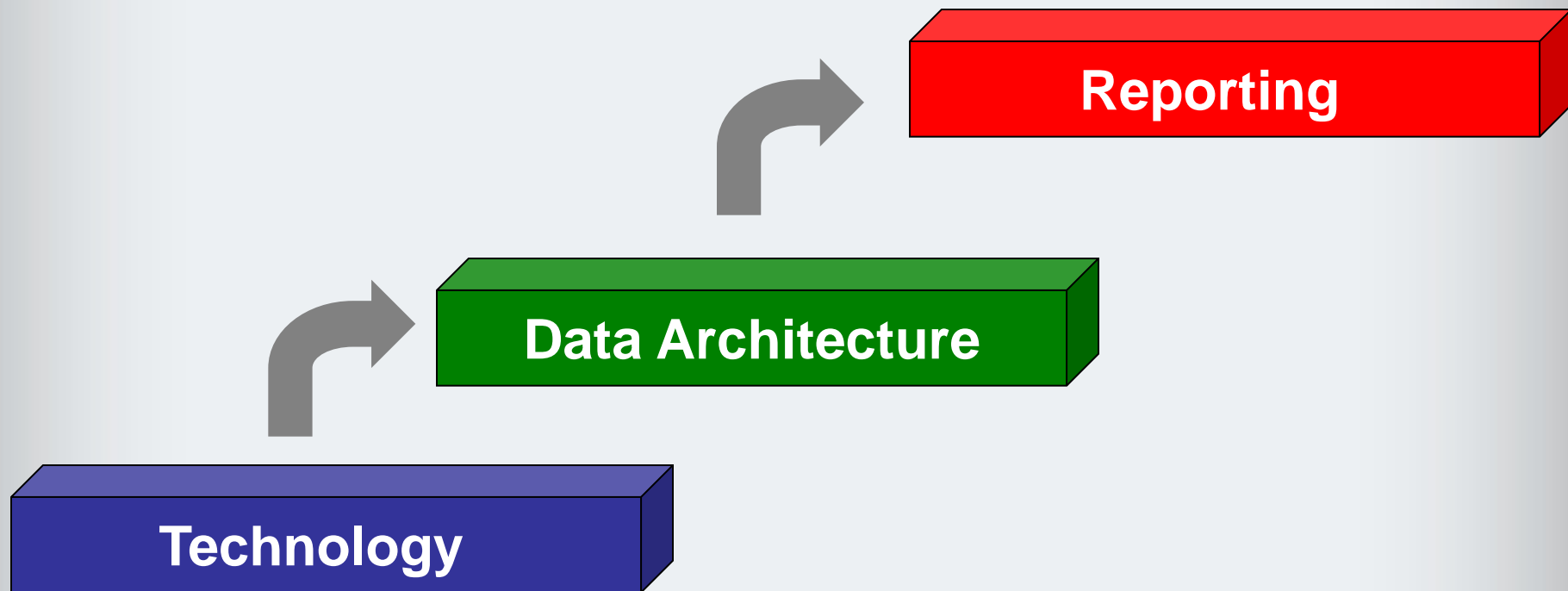
Basics: Definition



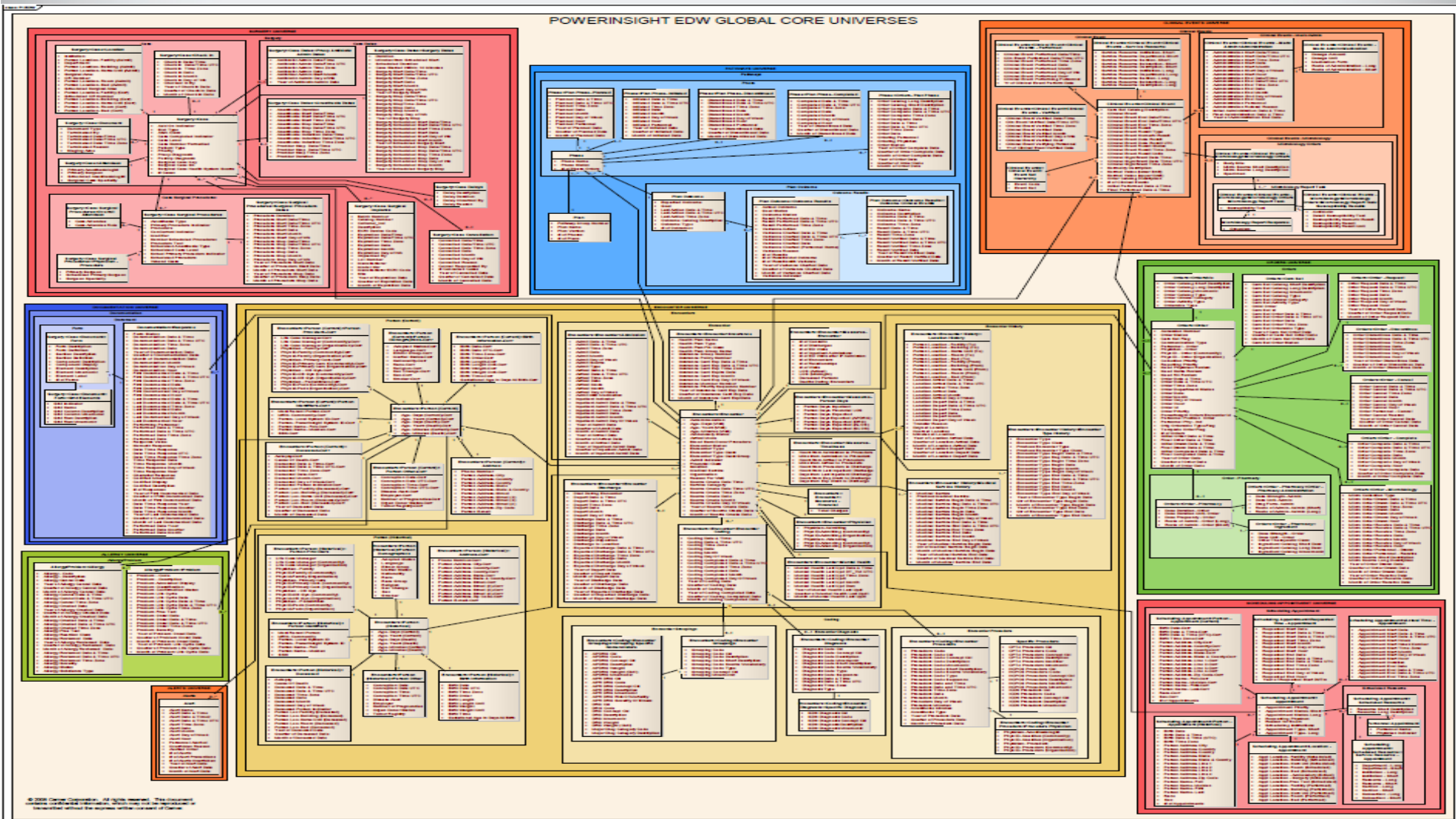
Basics: Slice and Dice



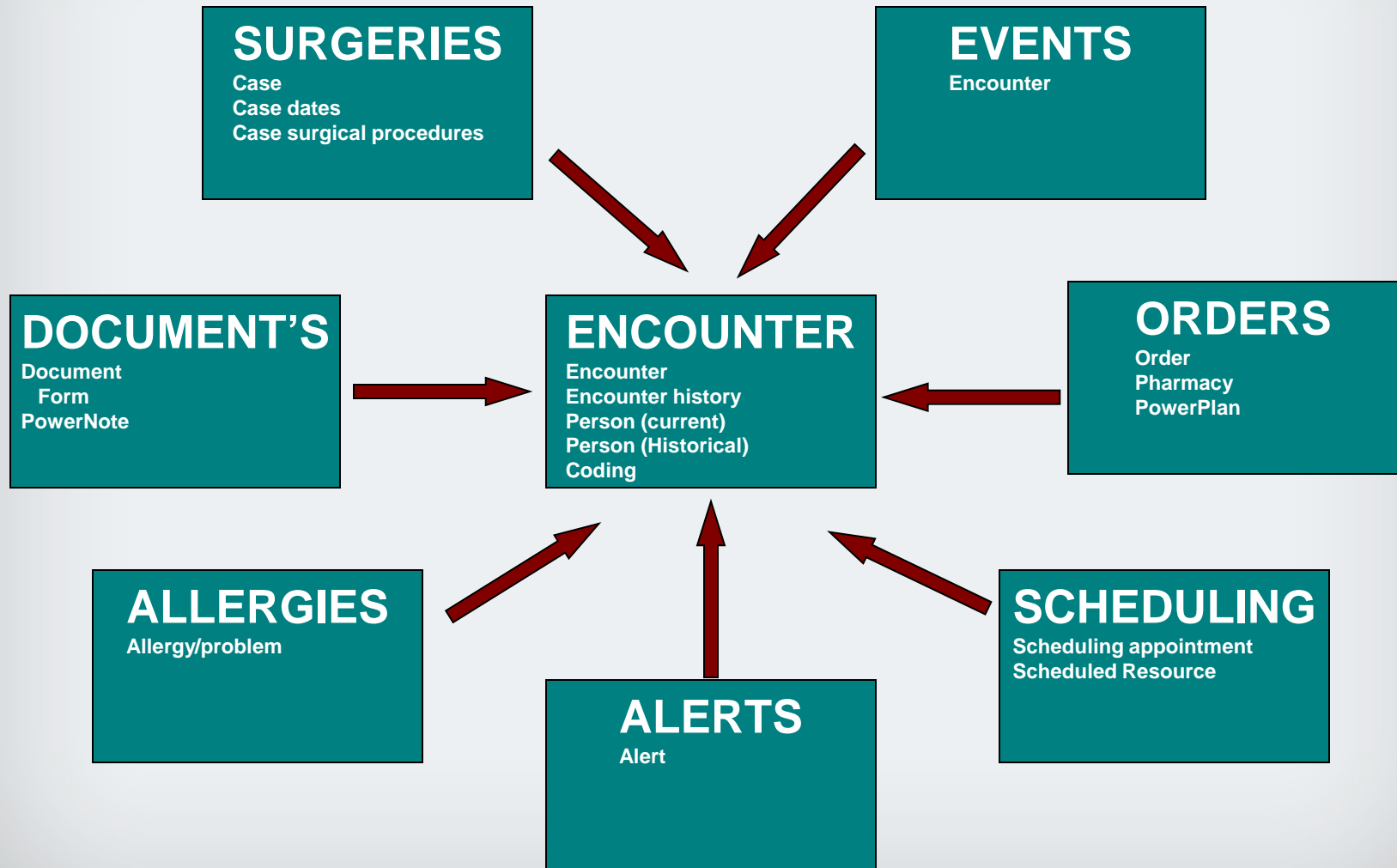
PowerInsight Layers



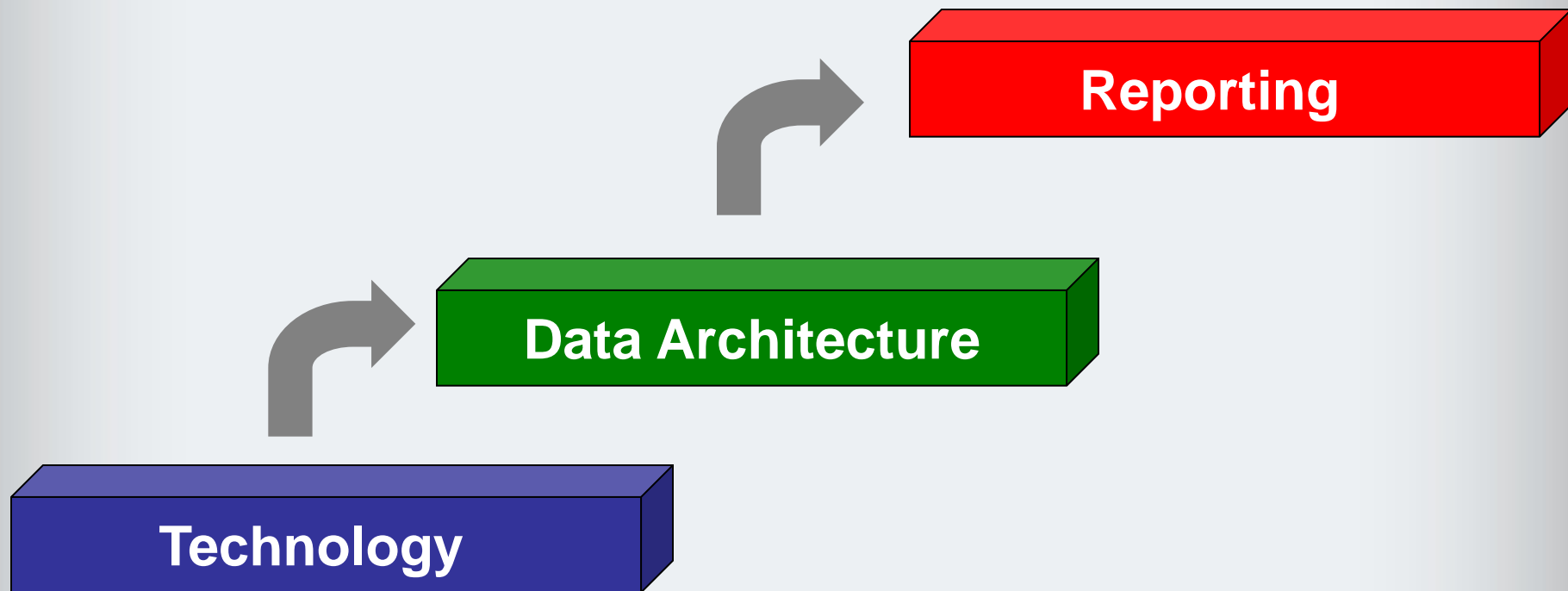
PowerInsight Core Universes



Types of Data



PowerInsight Layers



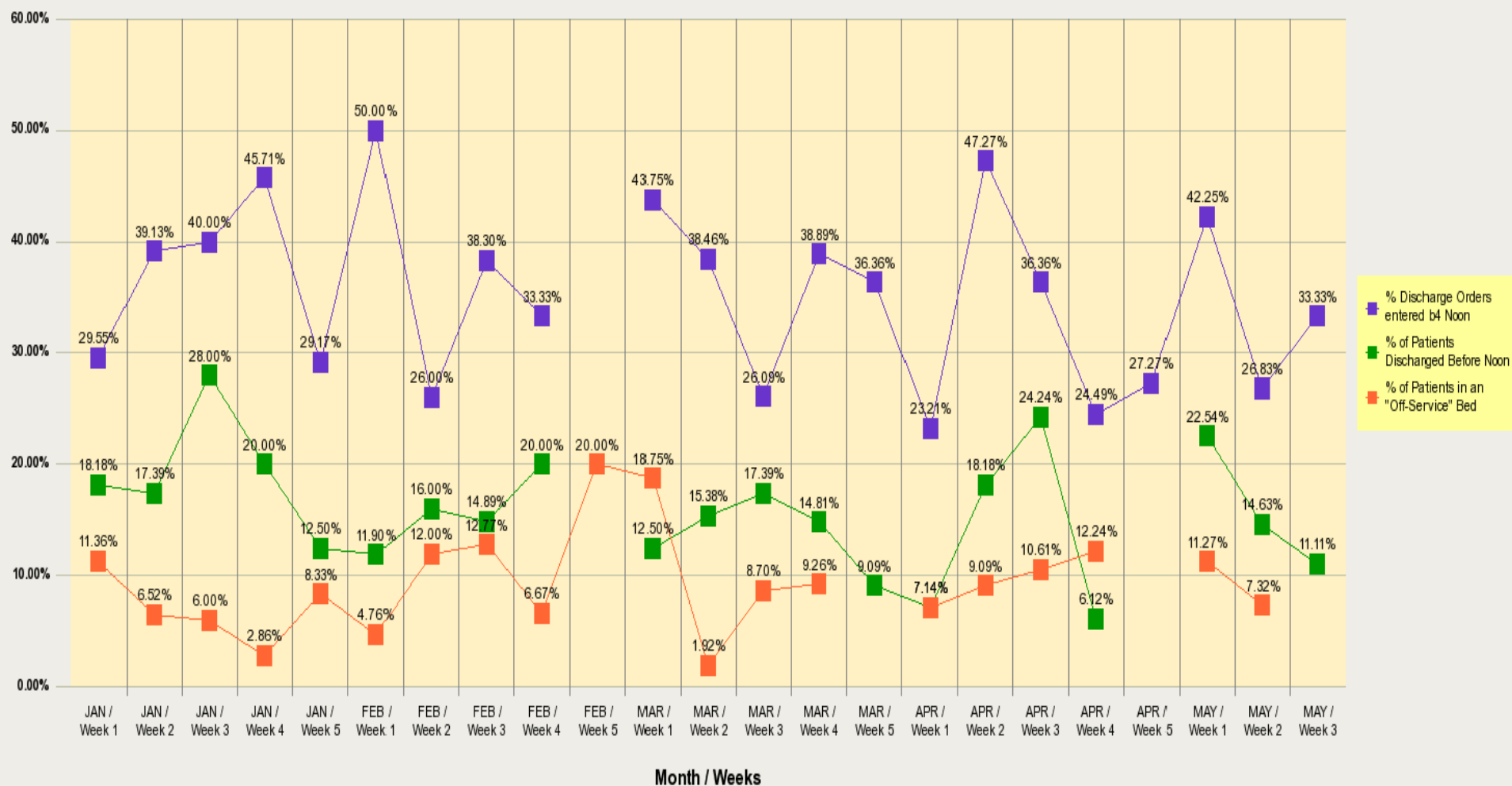
Showcase: Neurology

Why neurology patients end up in off-service beds?

- *Is there an association between the time a discharge is entered and the time when a patient is discharged?*

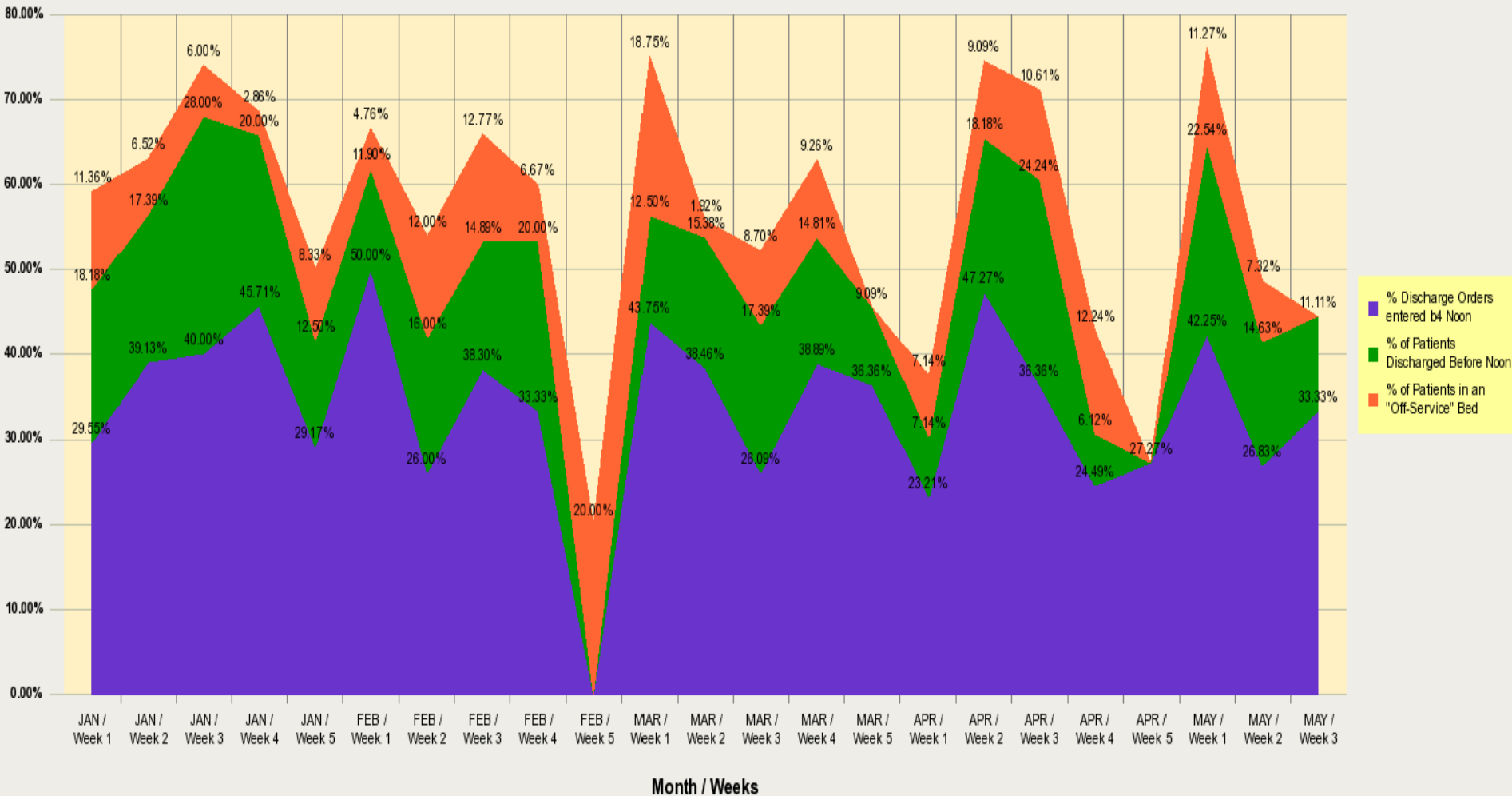
Showcase: Neurology

Monthly Discharge Trend



Showcase: Neurology

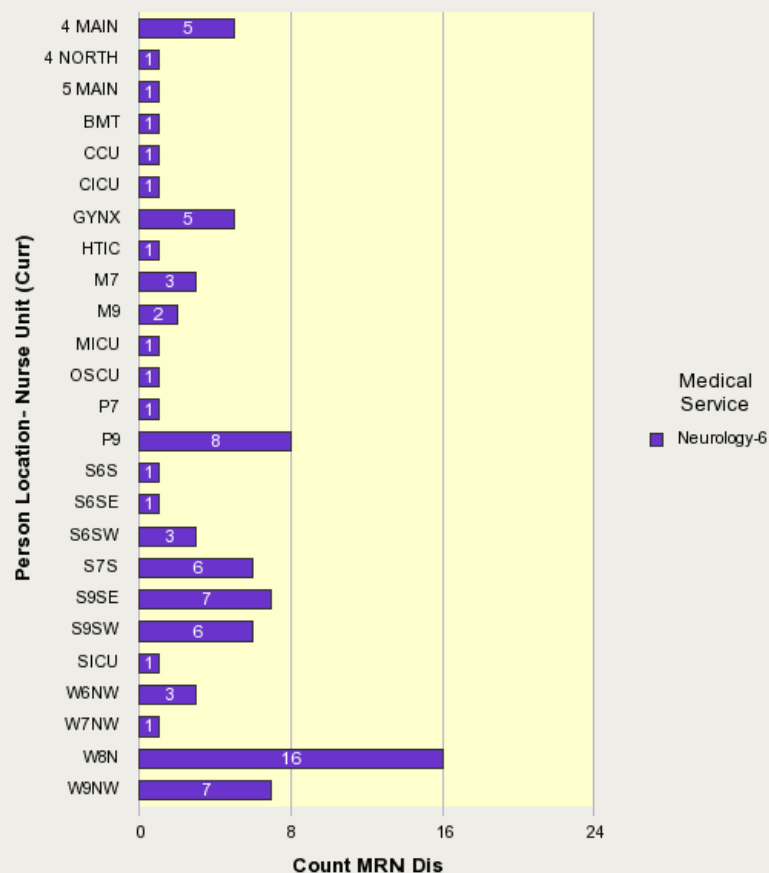
Monthly Discharge Trend



Showcase: Neurology

OFF SERVICE PATIENTS

Last Refreshed: 05/18/2012 12:25:12 PM



		Week 1	Week 2	Week 3	Week 4	Week 5		
JAN	After Noon	5	1	3	1	2	Monthly After Noon :	12
	Before Noon		2				Monthly Before Noon :	2
	Total in Weeks:	5	3	3	1	2	Monthly Total:	14
FEB	After Noon	2	6	5	3	1	Monthly After Noon :	17
	Before Noon			1			Monthly Before Noon :	1
	Total in Weeks:	2	6	6	3	1	Monthly Total:	18
MAR	After Noon	8	1	3	5		Monthly After Noon :	17
	Before Noon	1		1			Monthly Before Noon :	2
	Total in Weeks:	9	1	4	5		Monthly Total:	19
APR	After Noon	4	4	5	6		Monthly After Noon :	19
	Before Noon		1	2			Monthly Before Noon :	3
	Total in Weeks:	4	5	7	6		Monthly Total:	22
MAY	After Noon	7	3				Monthly After Noon :	10
	Before Noon	1					Monthly Before Noon :	1
	Total in Weeks:	8	3				Monthly Total:	11
Total Discharge:								84

Showcase: Emergency Dept.

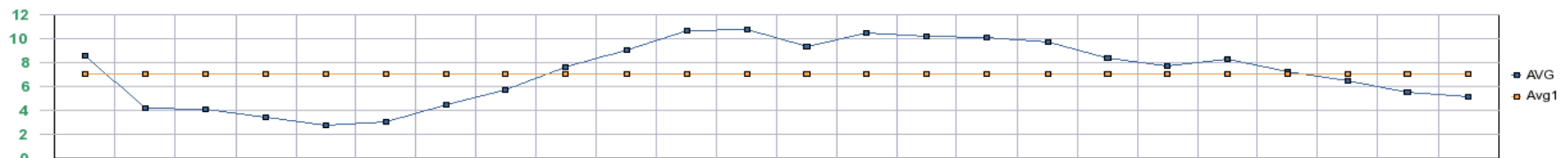
What was the hourly traffic of patients arriving in the ED during a specific month?

- *A need to better plan and allocate resources to better serve incoming patients.*

Showcase: Emergency Dept.

DATA SET	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVG	TOTAL	
00-59	9	11	10	13	8	6	1	8	9	9	8	6	7	3	11	8	9	6	10	10	1	13	9	9	11	12	12	1	11	11	12	9	264	
01-59		4	4	5	9	5		4	5	4	3	5	4	7	2	9	4	3	1	2	2	5	2	2	4	2	6	1	7	4	6	4	121	
02-59	3	4	3	2	3	3	4	7		1	7	3	3	3	4	4	3	7	1	2	12	9	1	4	4	2	2	9	5	4	3	4	122	
03-59	4	5	2		3		12		4	1	1	5	1	5	1	3	3	5	2	2	3	3		3	4	9	1	1	2	2	5	3	92	
04-59	5	2	2	2		4	5	1	3	2		1		1	3	2	2	2		2	3	3	5	3	5	4	2	4	1	1	3	3	73	
05-59	3	1	8	6	1		5			3	4	1	1	4		1	4	1	2	2	2	1	3		5	4		2	4	6	2	3	76	
06-59	4	3	4	3	11	4	6	3	7	5	1	11	1	4	11	5	3	5	10	10	1	1	2	2	1	5	7	1	4	2	6	5	143	
07-59	6	2	6	9	12	8	2	7	4	7	8	12	7	2	5	4	5	5	4	9	7	7	8	6	2	5	3	6	4	2	6	6	180	
08-59	10	8	9	5	8	13	6	9	17	10	3	10	8	11	5	12	1	5	8	5	10	5	8	7	7	8	14	5	3	7	7	8	244	
09-59	7	13	11	10	16	8	8	13	12	10	2	7	11	9	7	6	7	10	16	11	10	12	6	4	6	8	12	11	7	4	11	9	285	
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11-59	13	13	9	10	16	14	11	12	14	8	11	18	11	8	11	7	6	7	10	9	10	16	9	8	3	12	19	11	19	11	4	11	340	
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13-59	10	16	15	8	12	6	10	8	5	6	9	14	7	9	18	15	5	9	17	10	15	8	7	15	6	17	8	16	11	10	5	11	327	
14-59	11	13	4	4	20	4	6	7	10	9	8	13	9	9	12	18	6	10	12	15	10	11	8	8	12	20	11	12	7	12	9	10	320	
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18-59	8	10	6	9	6	6	3	3	9	8	10	10	7	2	10	13	8	5	10	8	13	8	3	8	10	8	5	5	11	11	7	8	240	
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23-59	6	2	5	4	6	8	5	7	4	2	3	2	5	4	5	8	8	7	4	4	4	4	5	9	10	4	4	3	4	2	8	7	5	159
Total	175	197	173	176	207	158	158	173	165	150	149	213	183	169	168	195	129	169	189	199	182	172	145	146	137	193	192	176	191	171	160	7	5,360	

Yellow Indicateds > daily average -Orange indicates > 2x daily average -Green indicates 3x daily average



UAB MEDICINE

So...*Why a Clinical Data Warehouse?*

- Current, actionable, and easy to understand data
- Information that is decision ready
- Analyze current and long-term trends
- Identify opportunities and problems
- Continuous feedback on the effectiveness of decisions

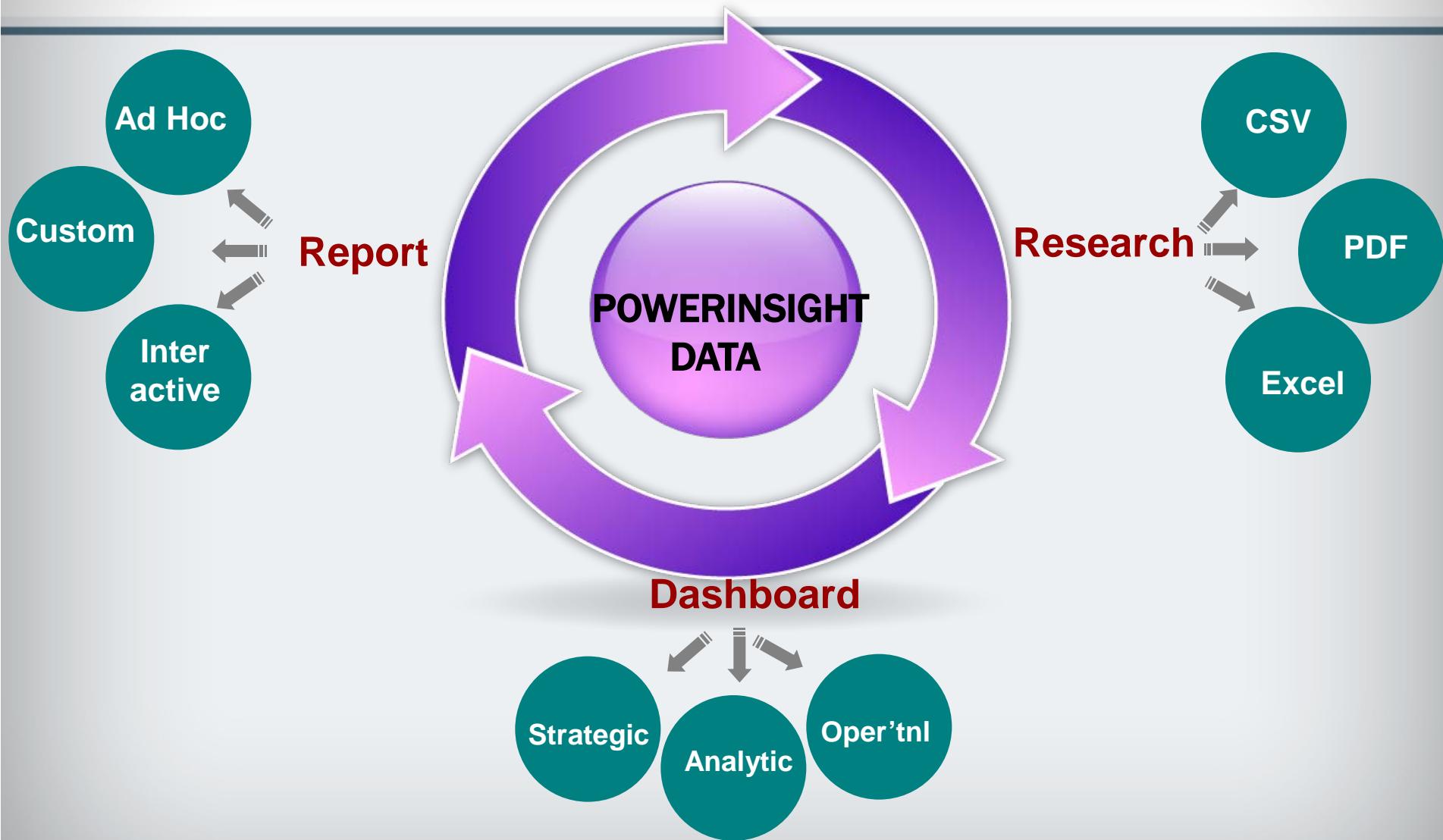
Integration – Maximizing benefits

- Mapping of terms
 - What equates to a diagnosis
 - Test result? Visit type? Medication used? Diagnosis code?
Combination of sources?
- Understand how data are recorded
 - Where? When? – Expected accuracy
 - Redundancies/equivalents – Optimal way to ask?
- Examples
 - Social service visits, shoulder dystocia, etc.

How can our CDW facilitate your work?

- *Cohort identification*
- *Hypothesis generation*
- *Retrospective analysis*
- *Operational reporting*
- *Strategic alignment*

PowerInsight = DATA



The Future

- Towards a vision for an Enterprise Data Warehouse...

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