From Raw Data to Actionable Information

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Today's Topics

- Raw Data Analysis vs. Canned Reports
- Live Demonstration of Pivot Tables
  - Radiology
  - Transport
- Excel Tips & Tools
- Dashboards
  - Bi-weekly Operating Report
  - Daily Operating Reports

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Canned Reports vs. Raw Data

Canned Reports

- Can be costly
- Inflexible
- Can't be 100% sure of qualifications
- Are there assumptions?
- Outliers?
- Exclusions?

Raw Data Analysis

- Inexpensive
- Can be "sliced & diced"
- Control of data inputs & outputs
- Ability to drill down

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Typical Data Requests / Questions

- How many CT exams were done between Nov 1 and April 30th?
- How many were done, by month?
- How many were pediatric?
- How many were ED?
- Of the pediatric population, how many were clinic patients?
- What's the breakdown of the types of patients?
- What resources (machines) are those patients being done on?
- How many exams are begun by hour of day? Graph it.
- How many exams are done by day of week? And by shift?
- What's the average time, from begin to complete, for the different exam times?
- Which physicians are our biggest referrers? How many have they referred by month?

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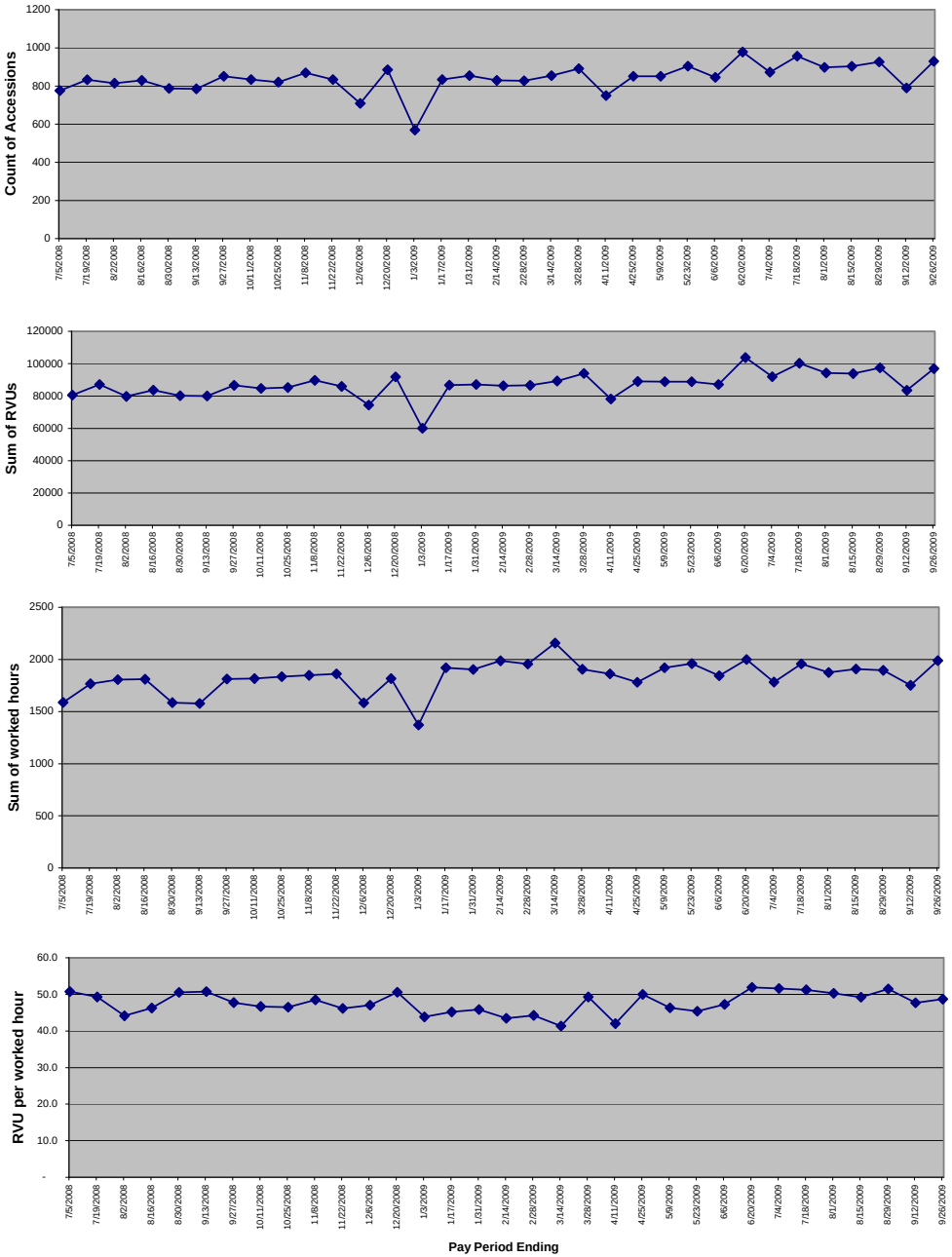
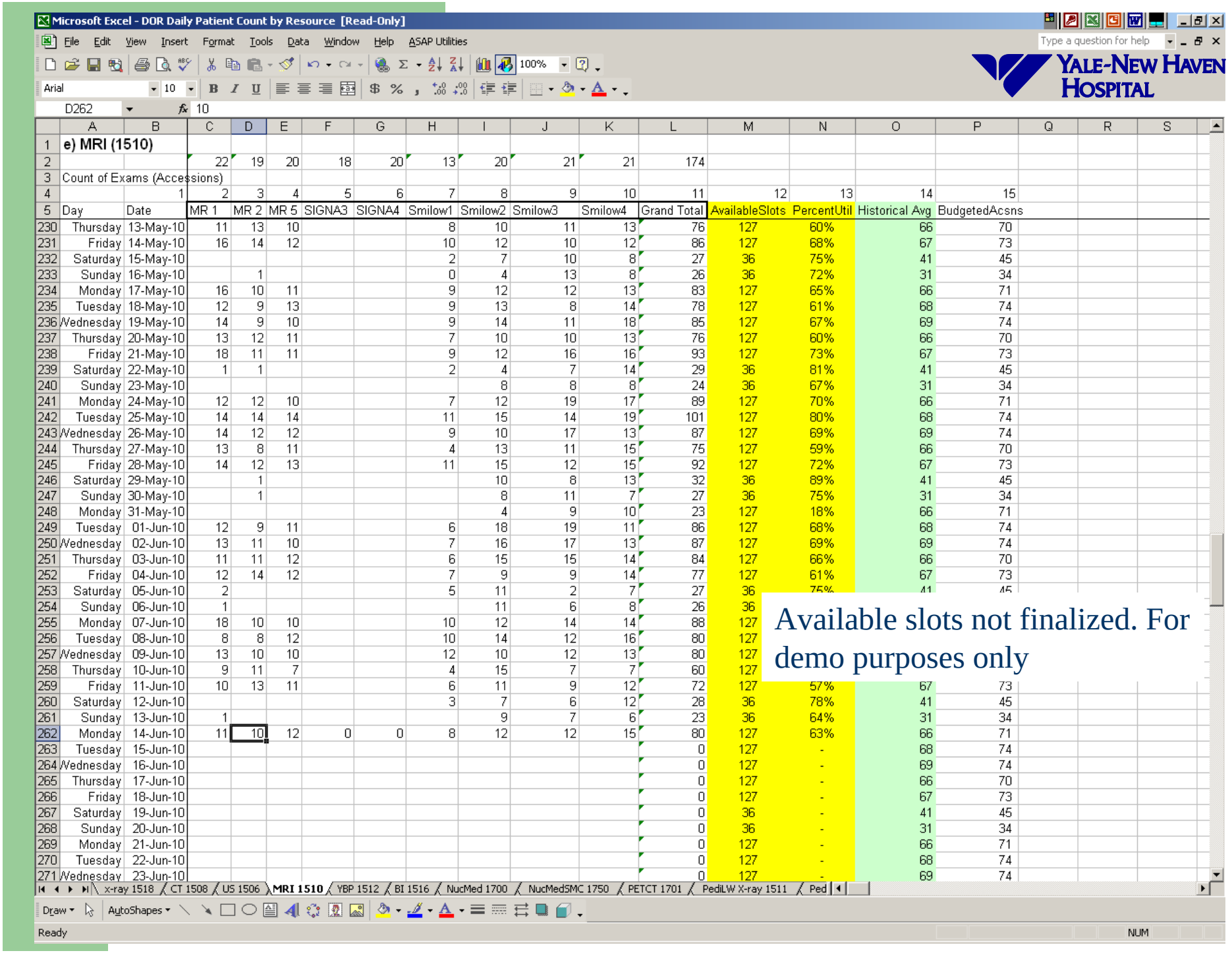
Dashboard Data

Pay Period from		Pay Period to	Pay Period Ending	Count of Accessions	Sum of RVUs	Sum of worked hours (REG & OTP) **	RVUs per Worked Hr
6/22/2008	---	7/5/2008	7/5/2008	776	80550	1587.25	50.7
7/6/2008	---	7/19/2008	7/19/2008	833	87105	1767.25	49.3
7/20/2008	---	8/2/2008	8/2/2008	815	79760	1806.5	44.2
8/3/2008	---	8/16/2008	8/16/2008	829	83730	1810.75	46.2
8/17/2008	---	8/30/2008	8/30/2008	788	80195	1586.5	50.5
8/31/2008	---	9/13/2008	9/13/2008	785	80075	1576.75	50.8
9/14/2008	---	9/27/2008	9/27/2008	851	86570	1812.5	47.8
9/28/2008	---	10/11/2008	10/11/2008	834	84760	1815.75	46.7
10/12/2008	---	10/25/2008	10/25/2008	821	85325	1834.25	46.5
10/26/2008	---	11/8/2008	11/8/2008	869	89650	1848	48.5
11/9/2008	---	11/22/2008	11/22/2008	834	85920	1863	46.1
11/23/2008	---	12/6/2008	12/6/2008	709	74440	1583.75	47.0
12/7/2008	---	12/20/2008	12/20/2008	885	91875	1815.5	50.6
12/21/2008	---	1/3/2009	1/3/2009	569	60105	1371.75	43.8
1/4/2009	---	1/17/2009	1/17/2009	834	86785	1919.4	45.2
1/18/2009	---	1/31/2009	1/31/2009	854	87185	1902.75	45.8
2/1/2009	---	2/14/2009	2/14/2009	830	86285	1985.75	43.5
2/15/2009	---	2/28/2009	2/28/2009	827	86570	1956.25	44.3
3/1/2009	---	3/14/2009	3/14/2009	854	89250	2157.5	41.4
3/15/2009	---	3/28/2009	3/28/2009	891	93975	1906	49.3
3/29/2009	---	4/11/2009	4/11/2009	750	78180	1861.75	42.0
4/12/2009	---	4/25/2009	4/25/2009	851	89030	1782	50.0
4/26/2009	---	5/9/2009	5/9/2009	851	88920	1921	46.3
5/10/2009	---	5/23/2009	5/23/2009	904	88920	1960.5	45.4
5/24/2009	---	6/6/2009	6/6/2009	846	87200	1844	47.3
6/7/2009	---	6/20/2009	6/20/2009	978	103710	1998.25	51.9
6/21/2009	---	7/4/2009	7/4/2009	873	91940	1782.5	51.6
7/5/2009	---	7/18/2009	7/18/2009	957	100300	1957.5	51.2
7/19/2009	---	8/1/2009	8/1/2009	898	94270	1875	50.3
8/2/2009	---	8/15/2009	8/15/2009	903	93910	1907	49.2
8/16/2009	---	8/29/2009	8/29/2009	926	97495	1894.25	51.5
8/30/2009	---	9/12/2009	9/12/2009	790	83535	1752.5	47.7
9/13/2009	---	9/26/2009	9/26/2009	930	96875	1988.75	48.7

Fill out values in BLUE box

MRI


Count of Accessions
Sum of RVUs
Sum of worked hours
RVU per worked hour
Pay Period Ending


Microsoft Excel - DOR Daily Patient Count by Resource [Read-Only]
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e) MRI (1510)
Count of Exams (Accessions)
Day
Date
MR 1
MR 2
MR 5
SIGNA3
SIGNA4
Smilow1
Smilow2
Smilow3
Smilow4
Grand Total
AvailableSlots
PercentUtil
Historical Avg
BudgetedAcsns
Available slots not finalized. For demo purposes only

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YNHH MRI (1510) Daily Operating Report

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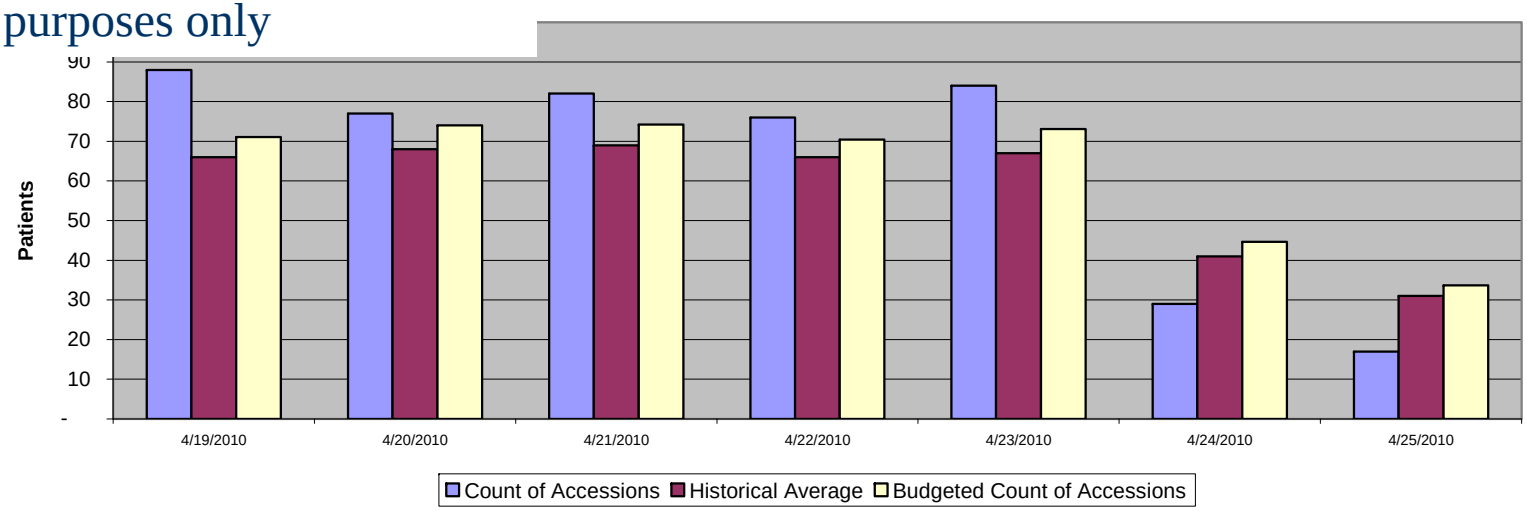
Select week ending date from drop down

Week Ending: 25-Apr-10

	Monday 19-Apr-10	Tuesday 20-Apr-10	Wednesday 21-Apr-10	Thursday 22-Apr-10	Friday 23-Apr-10	Saturday 24-Apr-10	Sunday 25-Apr-10	Week to Date	Month to Date 4	Entire Month 4	Year to Date 2010
Count of Accessions	88	77	82	76	84	29	17	453	1,503	1,897	12,604
Historical Average	*66*	*68*	*69*	*66*	*67*	*41*	*31*	408	1,429	1,765	12,037
Diff. from Hist. Average	22	9	13	10	17	(12)	(14)	45	74	132	567
Budgeted Count of Accessions	71	74	74	70	73	45	34	441	1,545	1,908	13,014
Diff. from Budgeted Count	17	3	8	6	11	(16)	(17)	12	(42)	(11)	(410)
Available Slots	127	127	127	127	127	36	36	707	2,447	3,082	20,141
% Slot Utilization	69%	61%	65%	60%	66%	81%	47%	64%	61%	62%	63%

Available slots not finalized. For demo purposes only



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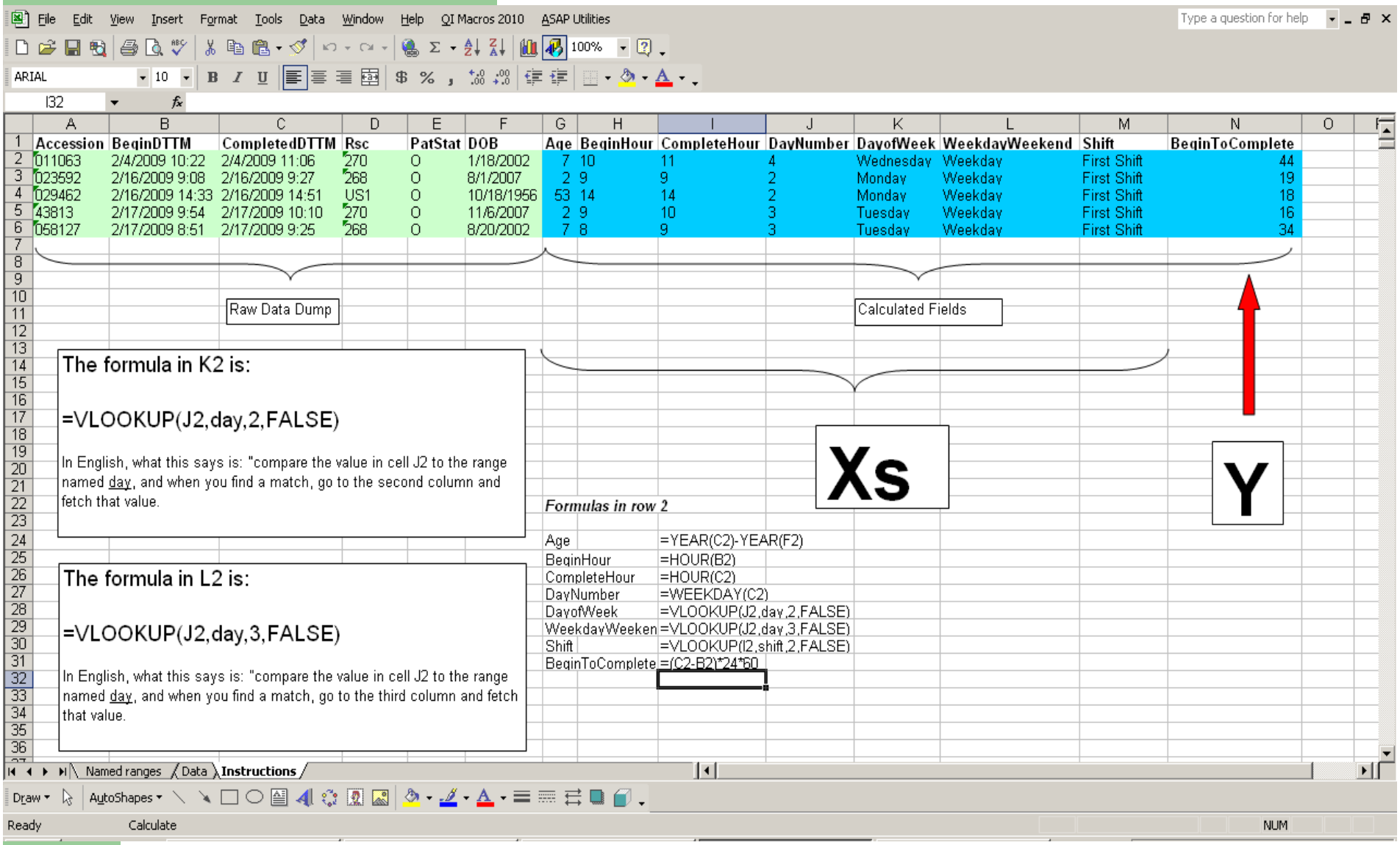

Accession	BeginDTTM	CompletedDTTM	Rsc	PatStat	DOB	Age	BeginHour	CompleteHour	DayNumber	DayofWeek	WeekdayWeekend	Shift	BeginToComplete
011063	2/4/2009 10:22	2/4/2009 11:06	270	O	1/18/2002	7	10	11	4	Wednesday	Weekday	First Shift	44
023592	2/16/2009 9:08	2/16/2009 9:27	268	O	8/1/2007	2	9	9	2	Monday	Weekday	First Shift	19
029462	2/16/2009 14:33	2/16/2009 14:51	US1	O	10/18/1956	53	14	14	2	Monday	Weekday	First Shift	18
43813	2/17/2009 9:54	2/17/2009 10:10	270	O	11/6/2007	2	9	10	3	Tuesday	Weekday	First Shift	16
058127	2/17/2009 8:51	2/17/2009 9:25	268	O	8/20/2002	7	8	9	3	Tuesday	Weekday	First Shift	34

Raw Data Dump

Calculated Fields

The formula in K2 is:

=VLOOKUP(J2,day,2,FALSE)

In English, what this says is: "compare the value in cell J2 to the range named day, and when you find a match, go to the second column and fetch that value.

The formula in L2 is:

=VLOOKUP(J2,day,3,FALSE)

In English, what this says is: "compare the value in cell J2 to the range named day, and when you find a match, go to the third column and fetch that value.

Xs

Y

Formulas in row 2

Age	=YEAR(C2)-YEAR(F2)
BeginHour	=HOUR(B2)
CompleteHour	=HOUR(C2)
DayNumber	=WEEKDAY(C2)
DayofWeek	=VLOOKUP(J2,day,2,FALSE)
WeekdayWeeken	=VLOOKUP(J2,day,3,FALSE)
Shift	=VLOOKUP(I2,shift,2,FALSE)
BeginToComplete	=(C2-B2)*24*60

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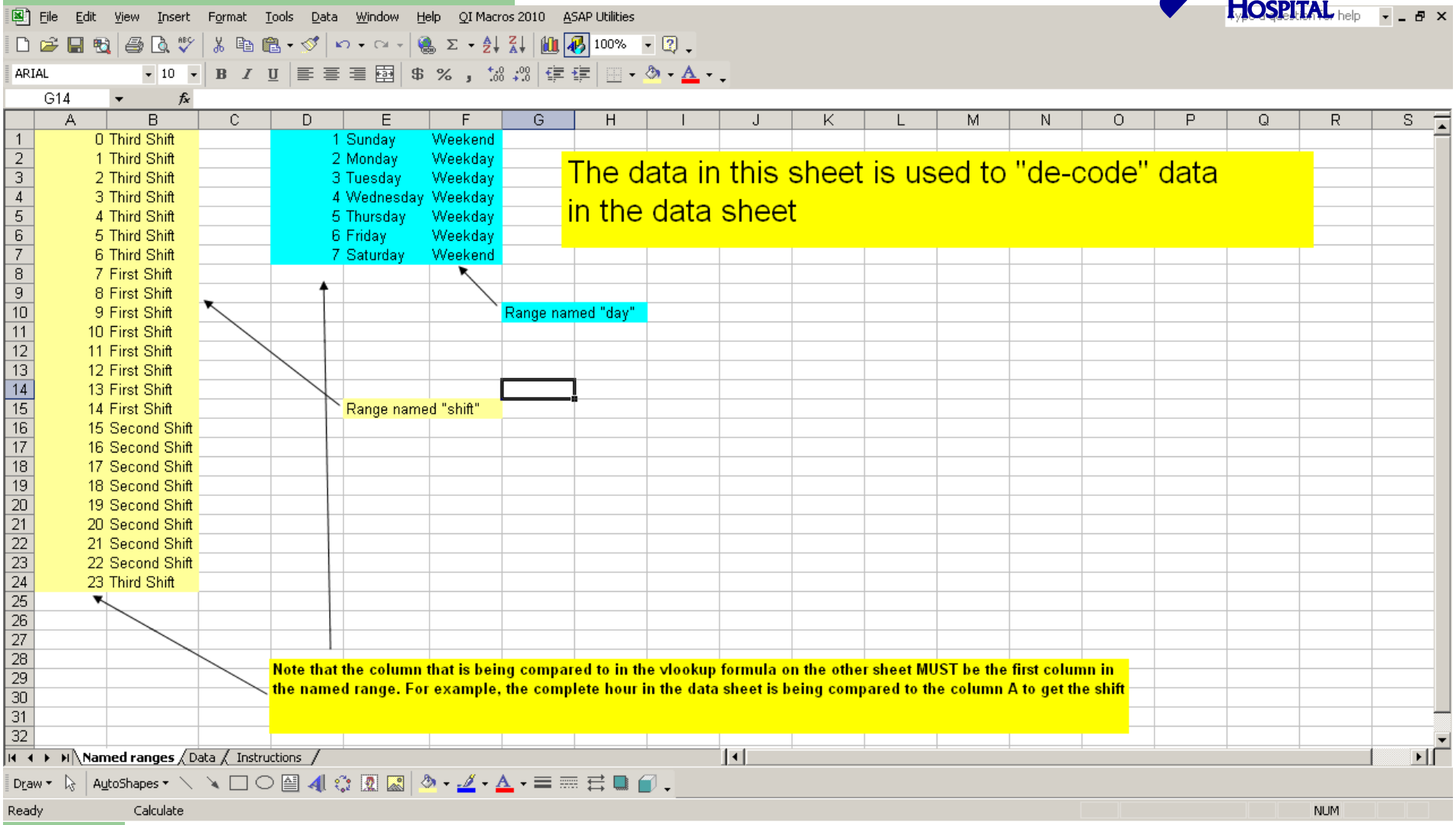

	A	B	D	E	F
1	0	Third Shift	1	Sunday	Weekend
2	1	Third Shift	2	Monday	Weekday
3	2	Third Shift	3	Tuesday	Weekday
4	3	Third Shift	4	Wednesday	Weekday
5	4	Third Shift	5	Thursday	Weekday
6	5	Third Shift	6	Friday	Weekday
7	6	Third Shift	7	Saturday	Weekend
8	7	First Shift			
9	8	First Shift			
10	9	First Shift			
11	10	First Shift			
12	11	First Shift			
13	12	First Shift			
14	13	First Shift			
15	14	First Shift			
16	15	Second Shift			
17	16	Second Shift			
18	17	Second Shift			
19	18	Second Shift			
20	19	Second Shift			
21	20	Second Shift			
22	21	Second Shift			
23	22	Second Shift			
24	23	Third Shift			

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Transport Data

- How many transports were done?
- What's the overall average pending to complete time?
- What's the average pending to complete time by day of week?
- What are the average pending to complete times by delay code?
- Which originating area had the most Nursing delay code?
- What's the pattern of calls, by hour, over a 24 hr period? Graph It!
- What's the volume of transport calls by shift? Graph it!
- How many transports had double transporters?

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Tips on raw data:

- One row per record.
- Data should be stacked. Every column is a field, with the same type of data repeating.
- Dates and times should be in one cell, whenever possible. For example, instead of having the date in cell F2 and the time in G2, it is easier to have both date and time in cell F2.
- Make column heading descriptive. Instead of TurnAroundTime, it should state, OrderToComplete, to remove ambiguity.
- Fully understand all time stamps. What does “Scheduled Time” mean? Is it time that the exam was scheduled ON, or time exam was scheduled FOR.
- Beware of averages; they are heavily influenced by outliers.
- Clean the data as much as you can before you start a pivot table.

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Questions?