ANLY482 – Analytics Practicum
Singapore Management University

Supervisor Meeting Minutes

Date:	4-3-2015 (Wednesday)
Time:	9:30AM – 10:50AM
Location:	Meeting room 4.1
Purpose:	Update Prof Kam

Attendees:

Name	✓	Role	Reasons for Absence
Faris	✓	Project Member	
Marcus		Project Member	MC
Jinq-Yi	✓	Project Member	
Prof Kam	✓	Supervisor	
Prof Kar Way	✓	Sponsor	

Agenda:

1. Project Progress

Discussion:

1. Prof Kam suggested to use statistical analysis to investigate the actual flow. We might not be able to find any meaning by just looking the average LOS and re-entry as the data is all over the place (not associated).
   In EDA process, it is important to select appropriate variables.

Lab	Re-entry: 0 Mean	Re-entry: 1 Mean	Re-entry: 2 Mean	Re-entry: 3 Mean
1	a	a2	a3	a4
2	b	b2	b3	b4

   Each lab (sub group), we should look at the LOS mean and not the medium only.
   Possible scenario from the results above:
   1. We have a conclusive results. Reject the hypothesis because we have a significant statistical difference to show that variable 1 (e.g. lab 1) is important in our model.
   2. If we cannot draw a conclusion, since no significant statistical difference, we might have to exclude some variables and continue to do analysis.
      - It is more convincing to use statistically proven results to exclude data – once we go into greater detail, find the variation and if data is insufficient we not going to use those data as they are not significant.

2. Prof Kam suggested us build an explanatory model to recommend (at the end of our findings) the hospital to monitor more closely the timestamp of the interval in between. However, before jumping into the recommendation / conclusion, we need to test all the observations.

Using ANOVA to see whether the variables/ groups is statistically significant (as we observe the pattern, there might be differences however statically not significant – we can explain that maybe it is due to the small sample size to exclude the particular variable). For AP, we can identify constraints in our model – at the end of the day, it is okay to build a model that is not suitable yet.

3. Prof Kam also said that we have to understand the flow of each parental / non-parental process. Although we don't have the consultation timing for each order. Prof Kar Way suggested us to find out how the triage-date-time associate with order-date-time. Further explore this to find out whether the relationship of the difference of these two variables and LOS. According to the test results, we should look into the difference, investigate the reason for shorter LOS and the relationship of % test clear vs LOS.

4. Prof Kar Way suggested to get more data as some of the variable sample is too small. Instead of testing the distribution using ANOVA, use a non-parametric method as there's no assumption of normality of data.

5.

Action Items:

Item No	Description	Assigned To
1	Compare triage-date-time vs order-date-time	
2	Explore statistical methods – parametric (ANOVA) and non-parametric method to compare results	
3	Record findings and write analysis	
4	Email SGH about next week's meeting on 12 March, change timing to 1500.	