

Telephone Clinic Data Report

Dec'09 – Jun'10

Yu Gong

Overview

Purpose:

- ✓ To improve the effectiveness of the telephone visit program

In this report, we will:


- ✓ Evaluate the telephone visit program using appointment data between Dec'09 and Jun'10
- ✓ Find possible solutions to reduce the frequent re-visits of telephone clinic



Questions



- I. How many physicians are needed to staff the after-hours phone clinic?
- II. How effective are the telephone appointments during after-hours ?
- III. What improvement can we make to improve the effectiveness of the phone appointment?



How many physicians are needed to staff the after-hours phone clinic?

What we need:


- ✓ Assuming one doctor can take up to 4 phone appointment per hour.

$$\text{Number of Doctors} = \frac{\text{Number of Appointment per hour}}{4}$$

- ✓ We are only interested in After-hours visits.

After-hours \geq 5:30PM

- ✓ We want to evaluate data on hourly bases.



How many physicians are needed to staff the after-hours phone clinic?

New Data Points:


- ✓ Number of Doctors needed
- ✓ Number of phone visits in time ranges:

5:30-6:30pm

6:30-7:30pm

7:30-8:30pm

8:30-9:30pm



How many physicians are needed to staff the after-hours phone clinic?

Appontment Month	5:30-6:30pm	6:30-7:30pm	7:30-8:30pm	8:30-9:30pm
Dec'09	2.31	1.76	0.69	0.06
Jan'10	2.22	2.15	1.15	0.10
Feb'10	2.55	2.40	1.38	0.08
Mar'10	2.51	2.31	1.32	0.07
Apr'10	2.29	2.11	1.35	0.07
May'10	2.11	1.77	1.27	0.09
Jun'10	2.27	2.36	1.05	0.07
Average Daily Doctors	2.33	2.09	1.18	0.08
Median	2.75	2.00	1.00	0.00

- Between **5:30-6:30pm**, we need 3 doctors.
- Between **6:30-7:30pm**, we need 3 doctors.
- Between **7:30-8:30pm**, we need 2 doctors.
- Between **8:30-9:30pm**, we need 1 doctor.



How effective are the telephone appointments during after-hours ?

What we need:

- ✓ Effective phone appointment does not have follow-up call in 7 days.

Expecting days between two calls from same patient > 7

- ✓ Only patients who showed up at least once at phone clinic are qualified as population.

Show Code = Y



How effective are the telephone appointments during after-hours ?

New Data Points:

- ✓ Visiting category:

 - First Visit

 - Non-Frequent Re-visit

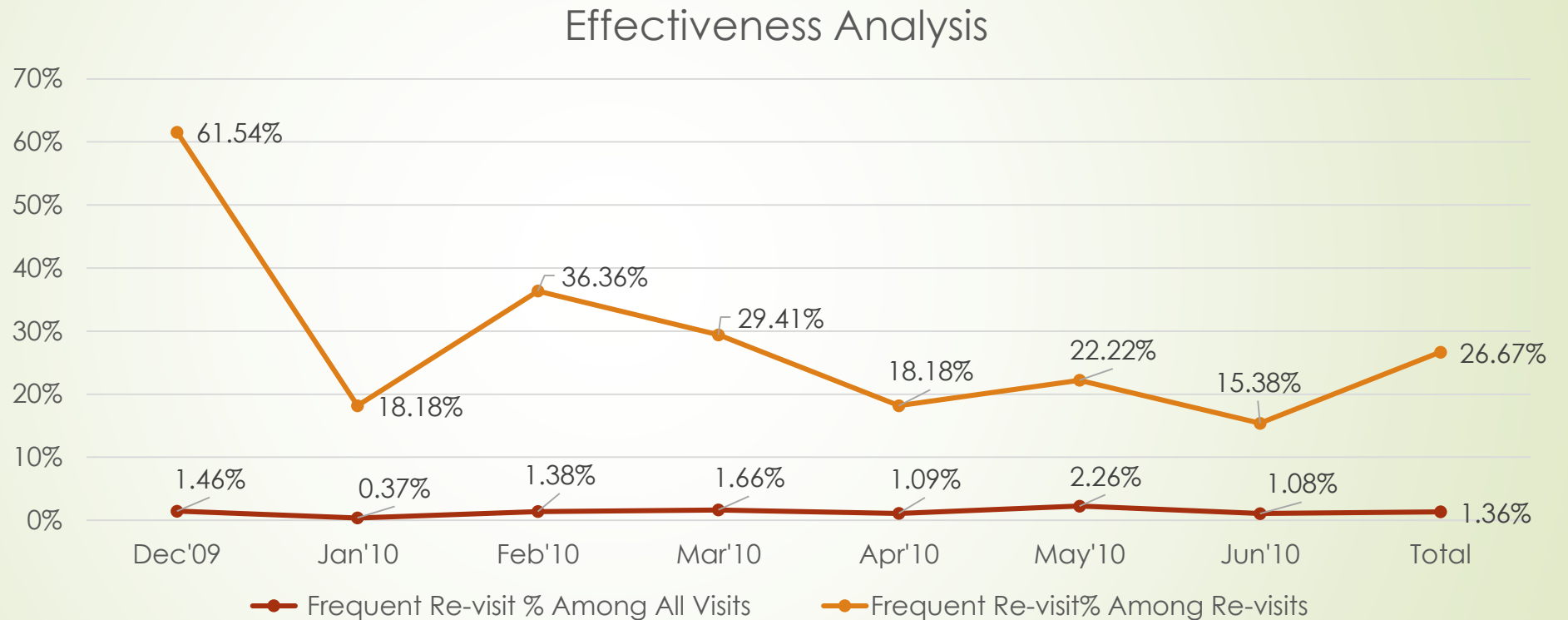
 - Frequent Re-visit

- ✓ Re-visit Conversion Rate:


 - Frequent Re-visit % Among All Visits

 - Frequent Re-visit % Among Re-visits

How effective are the telephone appointments during after-hours ?



In Dec'09, 61.5% follow-up appointment occurred within 7 days of previous phone appointment of the patient.



What improvement can we make to improve the effectiveness of the phone appointment?

What we need:

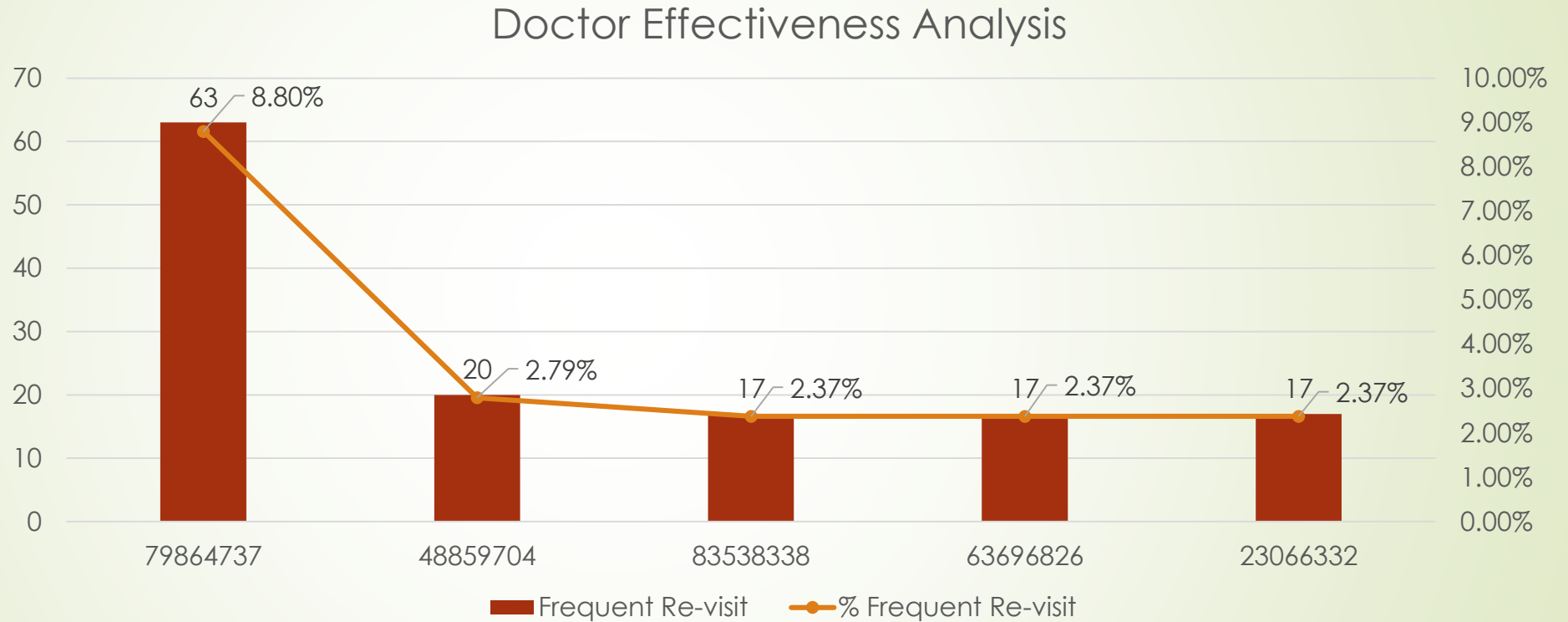
- ✓ Different doctors could affect phone clinic experience of patients.

Research into the efficiency by doctors.


- ✓ Different days of the week may affect patients decision.

Research into the preference of the appointment day of the week.

What improvement can we make to improve the effectiveness of the phone appointment?



- It shows the top 5 doctors who had the most frequent follow-up visits.
- By reducing the working hours of the doctors with high frequent re-visits, the effectiveness of phone clinic will increase.



What improvement can we make to improve the effectiveness of the phone appointment?

Day of Week	First Visit	Frequent Re-visit	Non-Frequent Re-visit	Total	% Frequent Re-visit
Sat	3147	248	135	3530	34.64%
Sun	2757	203	125	3085	28.35%
Mon	1031	78	60	1169	10.89%
Fri	821	66	44	931	9.22%
Wed	657	43	43	743	6.01%
Thu	593	40	23	656	5.59%
Tue	612	38	37	687	5.31%
Total	9618	716	467	10801	100.00%

- The most frequent follow-up visits occurred on Saturday and Sunday.
- Patients usually have more free time during weekends, so they choose to see doctor on weekends more often.
- By reducing the appointment timeslot available during weekends, the number of frequent re-visits will decrease.



Appendix.A

Sql Query Used to clean data : Question1

- SELECT
- ad.appointment_date,
- ad.appointment_time,
- ad.appointment_type
- from
- [APPOINTMENT DATA] ad
- where
- ad.appointment_time>=#17:30#
- and ad.appointment_type="Telephone Visit"
- order by 1,2

Appendix.B

Sql Query Used to clean data : Question2

- SELECT
- ad.appointment_date,
- ad.appointment_time,
- ad.patient_id
- from
- [APPOINTMENT DATA] ad
- where
- ad.appointment_time>=#17:30#
- and ad.show_code="Y"
- and ad.appointment_type="Telephone Visit"
- order by 3,1,2

Appendix.C

Data Chart: Question2

Appointment Month	First Visit	Non-rapid Re-visit	Rapid Re-visit	Grand Total	Re-visit % Among All	Re-visit% Among Re-visits
Dec'09	534	5	8	547	1.46%	61.54%
Jan'10	527	9	2	538	0.37%	18.18%
Feb'10	556	14	8	578	1.38%	36.36%
Mar'10	570	24	10	604	1.66%	29.41%
Apr'10	517	27	6	550	1.09%	18.18%
May'10	478	42	12	532	2.26%	22.22%
Jun'10	172	11	2	185	1.08%	15.38%
Total	3354	132	48	3534	1.36%	26.67%

Appendix.D

Data Chart: Question3

Doctor ID	First Visit	Frequent Re-visit	Non-Frequent Re-visit	Total	% Frequent Re-visit
79864737	671	63	32	766	8.80%
48859704	102	20	15	137	2.79%
83538338	65	17	6	88	2.37%
63696826	72	17	8	97	2.37%
23066332	149	17	11	177	2.37%



The End