

NATIONAL CHENG KUNG UNIVERSITY International Master of Business Administration

A Study on Chi Mei Medical Center's Process for Foreigner's General Check-up

Submitted as a midterm report for Service Operations Management

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1 | INTRODUCTION

1.1 Taiwan Health Care Service Background

The current government-run universal healthcare system for Taiwanese came into effect in 1995. The system gives everybody equal access to healthcare – with a free choice of doctors and no long-term wait time. It has drug benefits, vision care, traditional Chinese medicine, kidney dialysis, inpatient care, outpatient care, and a wide range of other benefits. The system also encourages a lot of competition among medical providers.

Because there is no gatekeeper who controls access to specialists, Taiwanese patients can see specialists immediately without needing to get a recommendation from a general practitioner first. For example, if a person in Taiwan wakes up with shoulder pain, he or she would be able to see an orthopedic specialist the same morning.

To finance the scheme is a national insurance system, which is a single government-run fund forces everybody to join in and pay. After joining, a smart card is issued to each user, which is then needed in order to see a doctor. The doctor puts the smart card into a reader and the patient's history and medications all show up on the screen. The bill goes directly to the government insurance office and is paid automatically. In-patients need to pay about 10% of the total charges and out-patients about 20%.

Although no one goes bankrupt over medical bills, some patients refuse to meet their payment obligations. In that case, the person is referred to a social services counselor who assesses the patient's financial status. The councilor will arrange an appropriate payment schedule contract between the patient and the hospital. In the rare event that a patient still fails to pay the hospital, the hospital may take the patient to court or the hospital may simply absorb the cost itself. The next time that patient goes to the hospital for healthcare, the hospital has the legal right to refuse treatment unless that patient has a life-threatening condition. Because separately-run hospitals do not share information about which patients default on their debt obligations, a "problem patient" could still decide to access health care from another hospital and later refuse to pay the bill.

Another check against abuse of the system has to do with over-usage. If a patient goes to see a doctor or hospital over 20 times a month, or 50 times in a three-month period, then the Information Technology aspect picks that person out. The person then gets a visit from the government in the form of the Bureau of National Health Insurance. The bureau will attempt the problem is to ver-usage is effective.

Taiwan has the lowest administrative cost in the world, at 2%. Total government spending on health care is 6.23% of GDP, compared to 16% in America. Currently, the system is financially unsustainable. Because the Taiwanese government does not have enough money to pay providers, it borrows money from banks. Politicians are reluctant to increase premiums do to possible voter backlash. In order to off-set the imbalance, the government may increase health care spending to 8% of GDP.

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1.2 Chi Mei Medical Center Background

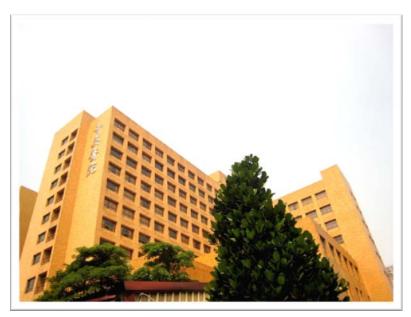


Figure 1-1. Chi Mei Medical Center

1.2.1 Chi Mei Medical Center

- Chi Mei Medical Center is a non-profit organization that provides 25 % of the total medical care in the Tainan area, including Yunlin, Chiayi, and Tainan.
- It is also a teaching and research hospital
- Chi Mei Medical Center has been receiving regional recognition for excellent healthcare services.
- Some figures:
 - Chi Mei Medical Center has 1,300 beds
 - It provides jobs for 3,000 e \bigcirc yees
 - The center services 120,000 outpatients and 4,500 inpatients (with 90% bed occupancy)
 - o It handles 10,000 emergencies per month.
 - 3,600 surgeries are performed in the Center every month, and the average length of hospital stay is 6.7 days.
- Table 1 shows the medical services offered by Chi Mei

1.2.2 Brief History

- Chi Mei Medical Center was formerly known as Father Fox Memorial Hospital.
- It began serving the community with 39 founders in 1968 at Fong-zai Road.



- It started operating with 600 beds facility.
- Father Fox Memorial Hospital was Co-managed by Chi Mei Foundation since 1987.
- Father Fox Memorial Hospital was renamed Chi Mei Foundation Hospital in 1992 and relocated to Yung-Kang City.
- In response to policies of Department of Health, Chi Mei Foundation Hospital was committed to programs such as "Community Care Center" and "Occupational Health Center"
- Chie Mei Foundation Hospital was accredited as a "Medical Center" in the year 2000.



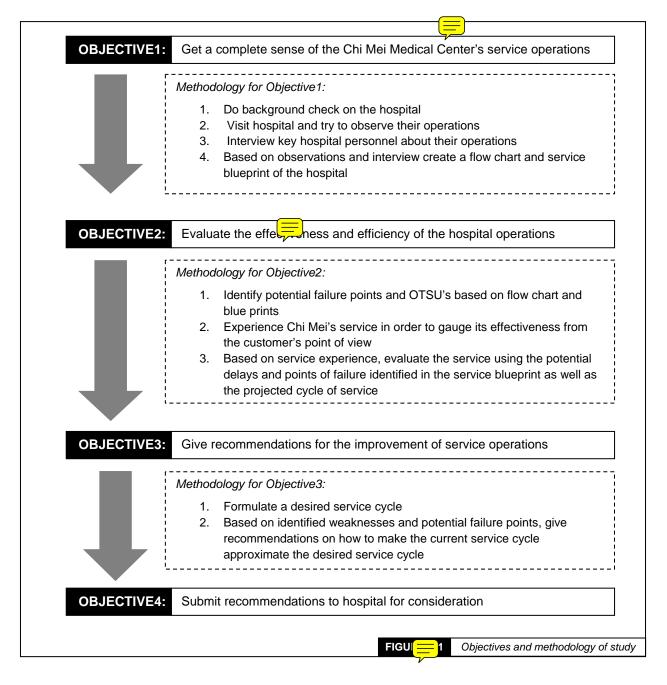


MEDICAL CARE		
Internal Medicine	General Medicine	Cardiology
	Neurology Medicine	Nephrology
	Gastroenterology	Hepatology
	Endocrinology	Pulmonary Medicine
	Hematology & Oncology	Rheumatology & Immunology
	Infectious Diseases & Immunology	
Medical Surgery	General Surgery	Cardiovascular Surgery
	Urology	Neurological Surgery
	Pulmonary Surgery	
	Orthopedic Surgery, Plastic & Reconstru	ctive Surgery
Obstetrics &	Gynecology	Obstetrics
Gynecology	Infertility	High Risk Obstetrics
	Gyneoncology	-
Pediatrics	Pediatric Infectious Diseases	Pediatric Surgery
	Pediatrics Asthma & Immunology	Pediatric Neurology
	Pediatric Cardiology	Pediatric Hematology Oncology
	Pediatric Gastroenterology	Pediatric Metabolism
Acute Medicine	Emergency Medicine	Critical Care Medicine
Otolaryngology	General Otolaryngology	Neck Oncology
Community Care	Family Practice	Preventive Medicine
	Clinic in the Tainan Science-based Indus	strial Park
Rehabiltation Medicine	Physical Therapy	Occupational Therapy
	Speech Therapy	
Dentistry	Oral & Maxillofacial Surgery	Periodontrics
	General Dentistry	Prosthodontics
	Operative Dentistry	Orthodontics
Psychiatry	Orthodontics	Community psychiatry
	Psychiatry Department	Psychosomatic Medicine
	Child and Adolescent Psychiatry	Biological psychiatry
	Geriatric Psychiatry	Forensic psychiatry
	Substance use disorder in psychiatry	
Anesthesiology	Cardiac Anesthesia	Pain service Anesthesia
	General Anesthesia	
Radiology	Radiology	Nuclear Medicine
	Radiation Oncology	
Pathology	Clinical Pathology	Anatomic Pathology
PARAMEDICAL SERVICES		
Pathology Laboratory		
Pharmacy		
Dietetics Service		

TABLE 1-1. Services offered at the Chi Mei Medical Center

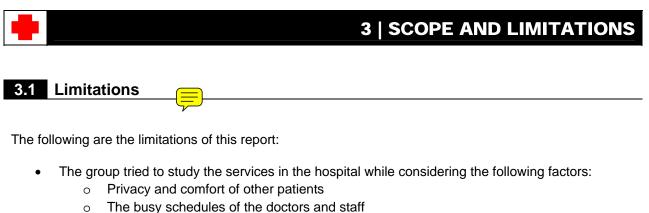


Figure 2-1 specifies the general objectives of the project and the methodology used to achieve these goals.





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- Avoiding being a hindrance to the hospital's critical operations
- Due to the large assortment of medical services with varying degrees of complexity being offered by the Chi Mei Medical Center (not to mention the two week time constraint for the project), the group was unable to document and analyze all the Center's services.
- The group's options for which service to document was limited by the fellewing:
 - The group believes that a thorough analysis of a service required actual service experience
 - o None of the group members had any serious medical conditions, illness or injury
- The group was also at a handicap since only one member was fluent in speaking Chinese and none were able to read Chinese characters
- The group also realizes that the hospital does not primarily cater to foreigners (the hospital's patients are mainly Taiwanese) which is why we tried to limit our recommendations and criticisms to the Foreign Check-up department. The group would like to acknowledge that in making evaluations and recommendations we are constrained by our own cultural biases.

3.2 Scope

Taking into consideration the limitations stated in the previous section, the scope of the report is as follows:

- Focus of study is on the Center's General Check-u = rvice for foreigners
- Methods of collecting data will be based on observation, service experience and interview with director of hospital



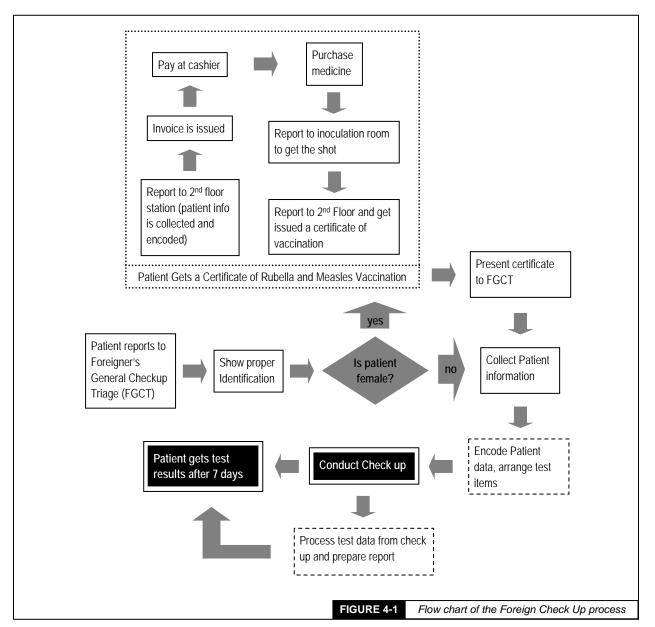
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4 | FINDINGS AND ANALYSIS

4.1 Results of Service Experience

The group made trips to the Chi Mei Medical Center in order to avail of their check-up services for foreigners. The rollowing documents the group's experience during the stages of pre-purchase, service encounter and post-purchase. Figure 4-1 shows the flowchart of the Foreign Check-up process based on the group's service experience

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Pre Purchase Stage

- Check website (<u>http://www.chimei.org.tw/</u>) to get an idea of the following:
 - What services are available
 - o Where to go
 - o What to do
 - How much services cost
- Group was unable to get the needed information from the website

Service Encounter (part 1)





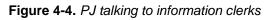
Figure 4-2. The entrance of Chi Mei Medical Center

- Team enters the hospital and doesn't find any clues or directions on what to do (see Figure 4-2)
- There is a booth at the center of the lobby that the group figure correctly is the information booth. The team then inquires in Chinese about where to get a check up (see Figure 4-3 and 4-4)



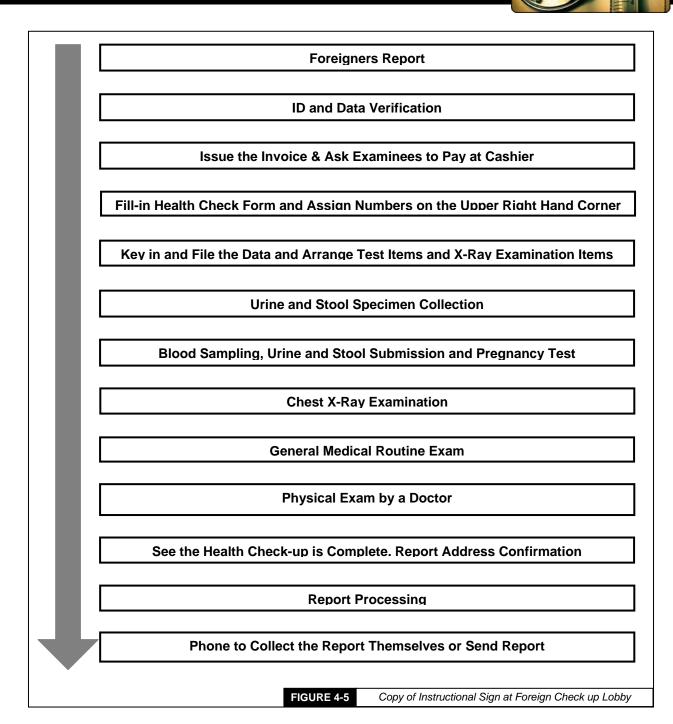
Figure 4-3. Chi Mei's information booth





- The information clerk gives directions to 11th floor for Foreign Check up
- At the 11th floot Foreign Checkup department, the group finds a sign with the steps to follow for a checkup (please see Figure 4-5). The sign some steps omitted and includes some steps that are not performed by patients.

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• At the Foreign Checkup reception area, the group is given a piece of paper with check-up directions and requirements in Chinese (See Figure 4-6)



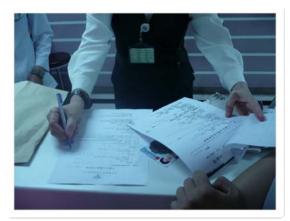


Figure 4-6. Check up directions



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Figure 4-7. Ms. Liu assisting the group

- The receptionists at the Foreign Check-up Department speak very little English and call
- Ms. Liu then informs group of the following:
 - Foreign Check-ups are conducted only on Saturdays 8-11 AM (the group's visit was on a Tuesday afternoon)
 - Female patients have to get a Rubella, Measles and Mumps Vaccination certificate from another department of the hospital
 - Patients must present passport and submit pictures for a checkup
- To maximize time, group decides to get a vaccination certificate. Miss Liu informs the group the floor and room number of the department for this (2nd floor).



Figure 4-8. Doors of clinics in Chi Mei



- Upon finding the correct room for the certification, group is unsure of what to do and only figure out how to get on queue for service after watching what other patients are doing (ie. dropping their insurance cards in slots in the walls of rooms). (See Figure 4-8)
- Group then proceeds to wait for more than an hour and a half until their turn comes. (See Figure 4-9 and 4-10)



Figure 4-9. Waiting to be admitted to clinic



Figure 4-10. Still waiting

- Once their turn comes, the nurse/doctor/technician/clerk does the following:
 - o Collects general information (name, age, allergies, etc.) and encodes it onto a computer
 - o Writes an invoice
 - o Writes an order for vaccine
 - o Directs the patient to the lobby to pay and get inoculations



Figure 4-11. Chi Mei's cashier



Figure 4-12. Queue in the inoculation room

- Upon going to the lobby, the group lines up in the cashier and pays the invoice (See Figure 4-11)
- The next step is to line up to get the vaccine from the pharmacy

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- Pharmacy gives empty envelope to the group and directs them to the inoculation department
- Group queues in the inoculation department (See Figure 4-12)
- Once their turn comes, group discovers that the pharmacy was supposed to give them the medicine to be used
- Group returns the pharmacy and is given the correct medicine



Figure 4-13. Preparation of Innoculation



Figure 4-14. Administration of Vaccine

- Group returns to the inoculation department and receives vaccine (See Figure 4-13 and 4-14)
- Group returns to the Foreign Check-up department to ask if the receipt for the inoculations will serve as proof of inoculation. It turns out it is not and group is directed back to the 2nd floor to ask for a certificate
- The group gets certificate from the 2nd floor and is directed back to the first floor to have the certificate stamped
- The group goes to the second floor and lines up behind a window and gets the certificate stamped

Post Purchase (1)

- Group prepares the necessary requirements for the actual check-up
- Based on first service encounter, group anticipates that the actual check-up will be another lengthy and complicated process

Service Encounter (par(=



Figure 4-15. After Blood Collection

- The group returns on Saturday for actual check up
- The group presents the necessary documents and identification
- An invoice is drafted and one group member (who is not the check-up patient) is instructed to pay the bill in the first floor
- Anton lines up in the first floor and pays invoice
- The patient is then asked to fill out forms.
- The patient is given a flow chart containing station numbers where tests will be conducted and forms to be filled out by personnel conducting tests
- The patient is asked to produce urine and stool samples. The patient is then given containers for the samples (which are transparent) and is directed to a single bathroom
- Bathroom is only for one person and is cluttered but well stocked with sanitation products (soap, alcohol, tissue paper)
- The patient then returns to the lobby with the samples and is directed to a laboratory where the samples will be deposited
- The patient proceeds to go to different stations and get the different tests
- There is hardly any waiting time between stations and the whole check-up is finished in less than half an hour
- The staff informs patients that results will be ready in 7 days and asks if patient would prefer the results to be mailed (to which patient agrees)
- The group leaves hospital

Post purchase (2)

- Group is relieved that the actual checkup went relatively smoothly
- Group waits for results



4.2 Results of Interview



Figure 4-16. During the interview



Figure 4-17. Picture with Dr. Tien and Dr. Lin

In order to further understand the operations of Chi Mei Medical Center, the group interviewed Dr. Hung-Jung Lin the Chief of the Emergency Department and Secretary of Medical Affairs of Chi Mei. The interview consisted of eight main questite that were geared towards learning the details of the hospital's service operations.). Since Chi Mei offers a large variety of medical services and Dr. Lin's time was limited, the group decided to focus the interview on outpatient operations.

Below is the summary of the interview.

Background on Taiwanese Healthcare and Medical Sevices

- The hospitals overall strategy and operations are tied to the subsidy given by the National Health Insurance
 - The NHI has an upper limit to the subsidized expenditure of the hospital, any costs exceeding this limit is fully absorbed by the hospital
 - This budget cap is the major determining factor for the amount of patients that the hospital can admit
 - The NHI smart card is used for computing invoice as well as verifying identification
 - The Center's patient record keeping is also connected the NHI's universal patient database which is used in conjunction with the NHI smart card
- In Taiwan, unlike some Western countries, patients don't usually enlist the services of General Practitioners who act as gatekeepers for all secondary medical services and provide the links between patient and medical specialists.
- Around half of Taiwanese outpatients are usually walk-in patients, meaning they don't set appointments prior to their hospital visit
- Taiwanese outpatients have an average consultation time of 3-10 minutes
 - Usually inpatients only come in for drug reviews and short follow up checkups
 - o Long consultations are not common





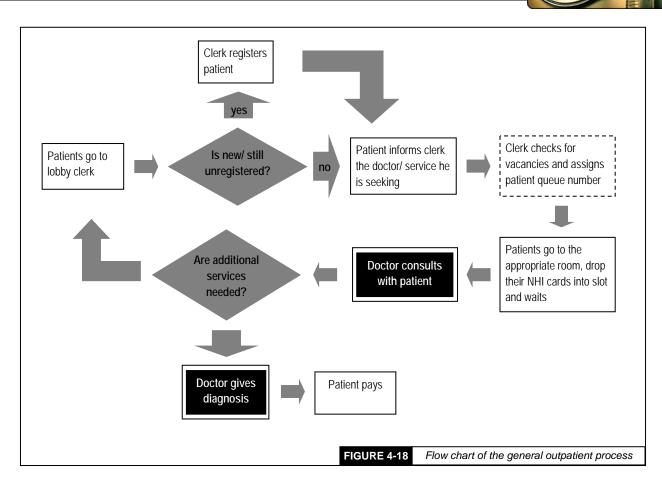
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Description of General Outpatient Process

- 1. Upon coming to the Center, patients must report to the lobby clerk.
 - a. New patients must take an extra step of registering. This involves providing personal information and insurance status
 - b. Registered patients may just fill out form to identify the doctor they wish to see
 - c. Clerk will finish registration if the patient is new. Otherwise, check if there are vacancies for particular doctor, assigns numbers to the patients and direct patient to the correct clinic
 - i. Numbers the multiples of 5 are reserved for patients with prior appointments, and the rest or me numbers are assigned to walk in patients
- Patient goes to the appropriate room and drops NHI card into a small drop box in the door

 Clinic orderlies take cards
- 3. Clinic orderlies use an LED counter to call out the numbers of waiting patients to be admitted
- 4. Doctor admits the patient
 - a. If the patient is new, he is asked for detailed history, complaints, family history, etc
 - Otherwise, the doctor makes his diagnosis and recommends further tests (blood MRI, etc). If no further study or tests are needed, the doctor may just give his diagnosis and prescribe medicine if necessary
 - c. The different test results and analyses are all input into their computerized records
- 5. Patients are issued an invoice based on the NHI price lists
- 6. Patients pay in the first floor

Figure 4-18 shows a flowchart of the general outpatient process.



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Payment and Pricing

- in Taiwan, 96% of population are covered by NHI
- Patients have to pay for registration fee for hospital (Chi Mei is cheapest among large hospitals)
- Patients have to provide co-payment or part of medical services (usually 10% for inpatient, and 20% for outpatient of tests)
- Price for medical services is fixed, usually set by NHI standards, the computer will generate the payment and given by the clerk
- . hospital has charity services handled by department of social service
 - social workers evaluates the patients status. This evaluation will be the basis of hospital's decision to cover patients medical bills (if no pay agreement with hospital)
- For non emergency services, hospital can refuse service to patients with long history of unpaid bills

Management of Operations

- Chi Mei has three shifts throughout the day, morning (9-12), afternoon (2-5) and night(6-9). All other services that aren't within these hours are handled by emergency services
- Due to the different nature of services offered by different departments of the hospital, most processes are department specific
- The Center has a committee that plans and issues new hospital processes and SOPs some of which are cross departmental and cross functional SOPs



- These SOPs are subject to approval of the hospital's executives before being implemented
- These SOPs are communicated via signs and through the Center's intranet site
- SOPs have follow up procedures and supervision is sometimes provided to ensure that they are being followed
- SOPs change frequently, usually as a response to problems and incidents with existing systems
- . Chief of every department overseas operations in their respective department and makes rounds
- Chi Mei has incident reporting systems for different staff levels
 - o Usually, it is the nurses that are most active in reporting incidents
 - o Doctors usually don't report incidents that often
 - Chi Mei has a system where staff can report directly to the Quality Assurance Department

Hospital Feedback

- . The hospital has installed a number of feedback mechanisms for their patients
 - o There is a box located in the hospital where patients can leave their complaints
 - o The Chi Mei website has a section for leaving complaints
 - Chi Mei has a direct line for mplaints (these channels are heavily utilized according to the director)
 - The hospital has two social workers dedicated to answering and following up complaints if the complainants leave their names and addresses
- The most common positive feedback to Chi Mei is the efficiency of their service
- The most common negative feedback are long queueing times

Some Operations Issues Currently Being Faced By Chi Mei

- . There is still an issue of long queues which the hospital is still struggling with
 - Hospital closely monitors queues (intranet site has real time information on the number of people queued per department and how many patients have already been serviced)
 - Hospital uses "just in time" methods, where the orderlies make a rough estimate of how long a patient has to wait on queue (based on the number of people currently on queue and the estimated time time of each consultation) and informs patients to just come back to the hospital after the estimated wait time
 - The center has noted that some hospitals use mobile messaging to inform patients when their turn in the queue has come
- The well established and most reputable doctors have a heavier load than most doctors (more than 100 patients in 3 hour shifts)
 - How to assure quality service despite the large volume of patients



5 | EVALUATION

5.1 Evaluation of Service Based on Met and Unmet Customer Expectations

After going through a check up, the group was able to draft a cycle of service in order to evaluate the service from a customer's perspective. Table 5-1 show the results of the cycle of service and indicate which aspects of the overall service met, exceeded or failed the groups expectations.

Based on the experience, the group was able to conclude the following:

- Most of the failed expectations from the service cycle took place not during the actual Check-up itself, but during the process of figuring out what to do and obtaining the prerequisite inoculations
- On the whole, the process seemed to be efficient and met expectations, but there were fewer instances of moments of truth that exceeded expectations
- The instances of failed expectations were relatively minor and did not have any serious repercussions, although they did provide a lot of inconvenience for the group

Moments of Truth	Meets Expectations	Exceeds Expectations	Fails Expectations
Pre-Purchase Stage			
	There is an English version of the website		English version of website is not as informative as Chinese site
Checking website for information	There are patient instructions in Chinese		No information pertaining schedules and prices that will
	The website has a map to the hospital (please refer to Figure 4-1)		help patients prepare for visit
Getting to the Hospital	Hospital is accessible (a few blocks from a train station)		
1 st Service Encounter:	Figuring out What to Do		
Entering the Hospital: Figuring out what to do and where to go	 Clean, spacious lobby with pleasing ornaments Presence of security guards 		 Information counter does not stand out and is not within close proximity to the entrance No signs that instruct patients what to do or where to go
Talking to Information Personnel	 Personnel was able to provide information needed (in Chinese) They were able to direct group to the correct room 		 One of the women was carrying a baby that wasn't hers. It was a bit distracting Unable to speak English

Table 5-1. Evaluation of Met and Unmet Expectations for Each Moment of Truth



Going to the Foreign Check-up Departmen	 There were some signs indicating where to go Halls were clean and quiet 		
Foreign Checkup Reception	 There was a sign in English which explained the check-up process Reception was knowledgeable about requirements and schedules 	 A supervisor (Alison Liu) walked the group through the whole process in detail, answered questions and did necessary translations to English The personnel were extremely pleasant and helpful. Even providing contact numbers 	 The document containing instructions and schedules of the clinicwere in Chinese Orderlies could speak limited English Extremely limited schedule for foreigners (only 3 hours on Saturdays) There were additional steps that were not listed in their instructions
1 st Service Encounter:		les and Mumps Vaccinatio	
Waiting room	 There were sufficient seating There was a TV to keep patients entertained There was good ventilation The process is actually quite simple and efficient once a patient has figured it out The rooms were clearly numbered The LED lights that clearly indicated when a patients number was up 		 The group was queued for almost two hours There were no instructions on how to get queued, the group initially didn't know what to do
Patient Information Collection, Issuance of Invoice and Vaccine Prescription	 The office was clean The staff was properly attired The staff was pleasant and gave clear instructions 	 The whole process was fast and painless Allowed a friend to be in room with patient 	
Paying at the Cashier	 The line was not very long The whole process was relatively fast 		
Purchase Medicine from Pharmacy	The pharmacy was conveniently located near the cashier		 The vaccine wasn't provided at first This was only realized after the group queued for the inoculation room and resulted in a lot of unnecessary movement
Getting the Inoculation	 Friendly and pleasant staff Clean room Proper administration of medicine Proper cleaning of wounds Minimum pain and discomfort 	Allowed group to take pictures	Difficult to figure out how to get on queue for Inoculation





Issuance of Vaccination Certificate	 Issuance was relatively fast No queuing necessary 		 Additional payment Group had to go to a different floor to get the certificate stamped
Get Certificate Stamped	No queues, process is relatively fast		
2 nd Service Encounter	: The Actual Check-up		
Reporting to the Reception	 The staff was pleasant The staff provided a step by step process for check-up (piece of paper with the room numbers and order of the tests to be conducted) 	 The staff remembered the group from last visit The place was clean and spacious, and included a cafeteria and a nice waiting area 	steps were in Chinese (only numbers were not in Chinese)
Verification of Patient Identity and Papers	The staff informed the group before hand of the identification requirements	The process was fast	
Invoice Issuance		The issuance was fast	
Cashier	The place was clean and The lines were not long	The staff maximized the time by having the patients companion take care of the payment while patient continued with the check-up	 it was a bit of hassle to have to go down 11 floors to pay (unnece) movement)
Collection of Patient Information	Minimal form filling Process was relatively fast		
Urine & Stool Collection		 Washroom was well stocked with various disinfectants Design of specimen collectors made the step easier Provided specimen production facilitators 	 Had to wait in the lobby for a few minutes carrying clear bottles with specimen samples Bathroom was a cluttered
Blood Sampling	 Orderlies were skilled enough that the process produced minimum pain and discomfort The process was fast 		The blood was taken in the same room where stool and urine samples were deposited
Chest X-ray	 The process was fast The patient was given sufficient privacy The directions were clear 		
General Medical Routine	The process was fast The directions were clear The orderly was sufficiently pleasant		
Physical Exam by Doctor	The process was fast The directions were clear The orderly was sufficiently pleasant		



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Check-up Conclusion	 Patient information was verified to avoid any mistakes The time to process the check-up results was clearly stated Methods of retrieving check- up results was clear 	The whole check-up took less than half an hour	
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5.2 Evaluation of Service Based on Service Blueprint

The group also made blue prints of the process of getting a foreign check-up to find out potential failure points throughout the service process. Initially, the group planned only to make a blueprint for the actual check-up (Figure 5-2-1 to 5-2-3). However, it was decided to include the blueprint based on the outpatient service cycle experienced by the group since, for females at least, this formed a part of the check-up service (Figure 5-3-1 to figure 5-3-2).

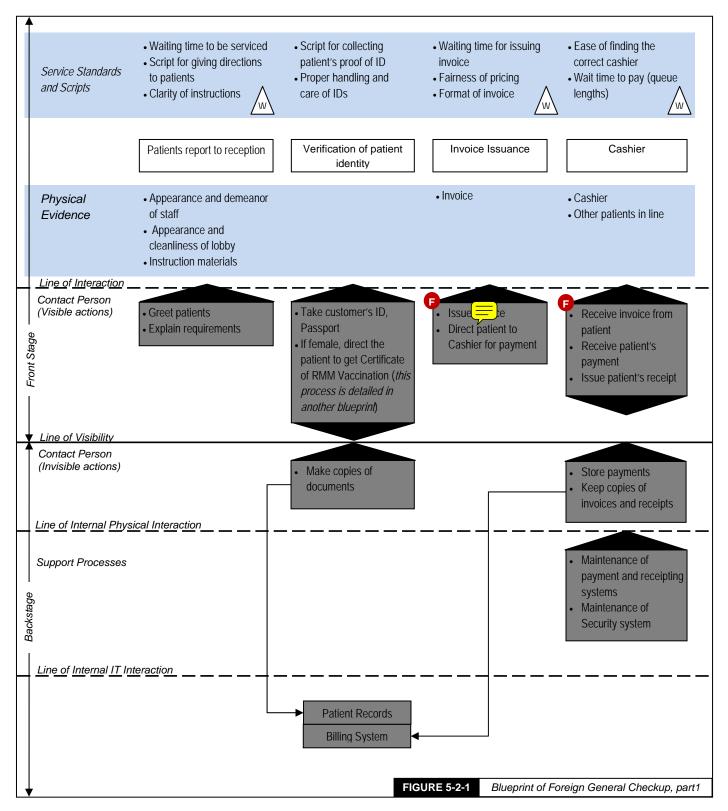
Based on the blue prints, the group identified the potential failure points, or OTSUs, and potential delays within the service process. OTSUs are the steps in the process marked with $\stackrel{\frown}{\bullet}$ and the potential delays are marked with $\stackrel{\frown}{\bullet}$. It should be noted that in both the Check-up and out patient service, almost all steps of the service process are potential failure points and potential causes for delay. This underscores the need for proper planning and streamlining of the hospital process to maintain customer satisfaction.

Table 5-2 summarizes and elaborates the potential failure and delay points illustrated at the blueprints. The OTSUs and potential delays colored in **orange** are those that the group actually experienced.

The most common potential delays occurring throughout the blueprint were the waiting time due to lines and queues. These seem to be some of the more obvious problems of a Medical center of Chi Mei's size and that caters to a large volume of patients. These issues were acknowledged during the interview with Dr. Lin. Although Chi Mei seems to consider these serious problems and is taking measures to try and resolve, a definitive solution seems is yet to be found and implemented.

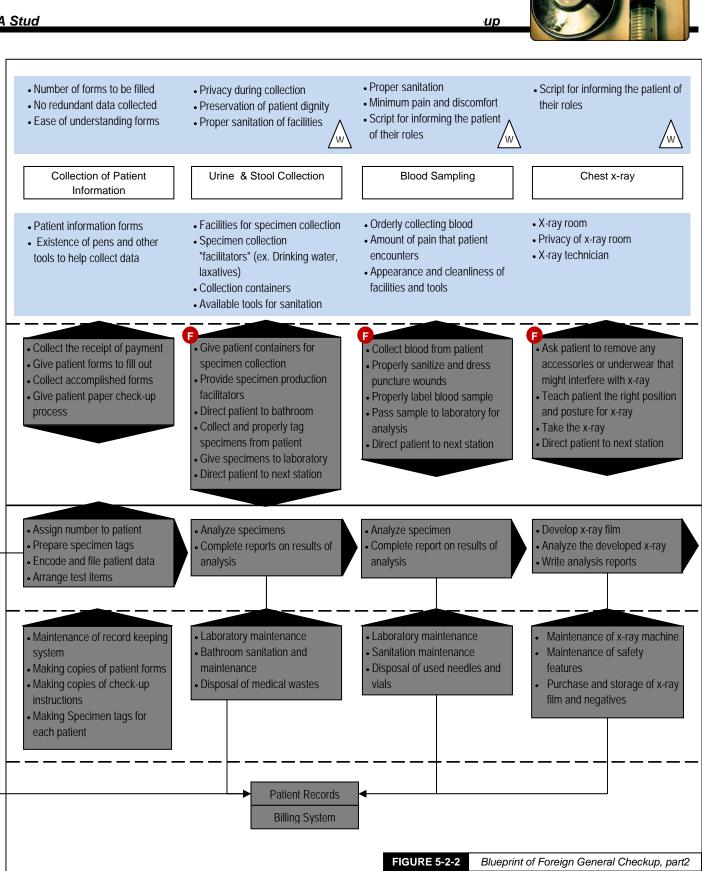
The recurring potential failure points are the ones that are caused by personnel incompetence and the patients' inability to properly play out their parts of the service script. From the group's experience, most of the hospital staff seemed quite competent and skilled at what their job. Also from the interview, the group learned of the company's incident reporting system and patient feedback system that ensured that any mistakes on the part of the staff can be reported to the hospital Quality Assurance Department and dealt with accordingly. From this, it can be said that patients who are not properly educated in their roles in the service script pose a bigger risk to the overall service process.





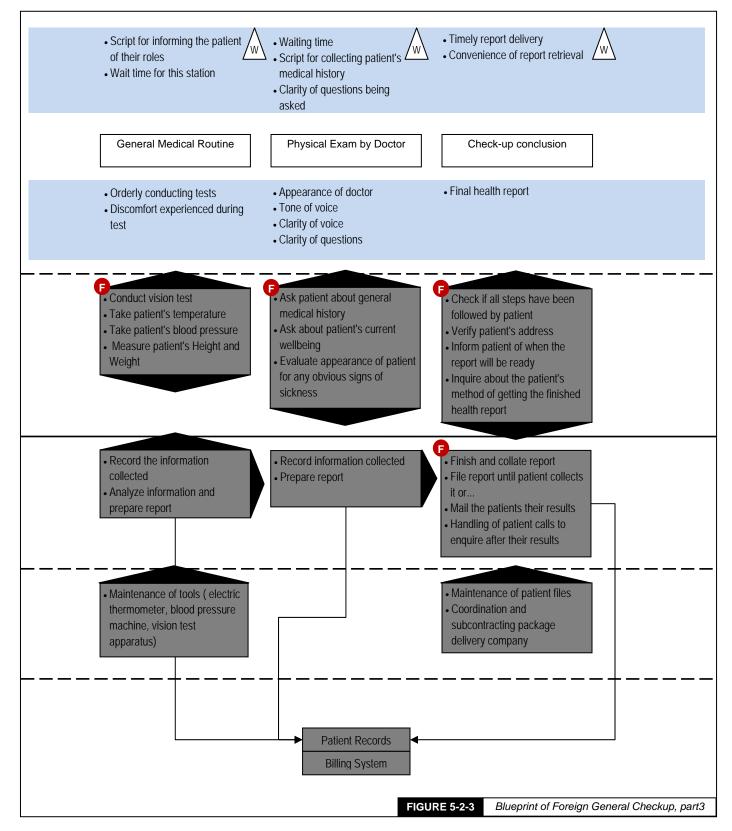
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A Study on Chi Mei Medical Center's Process for Foreigner's General Check-up





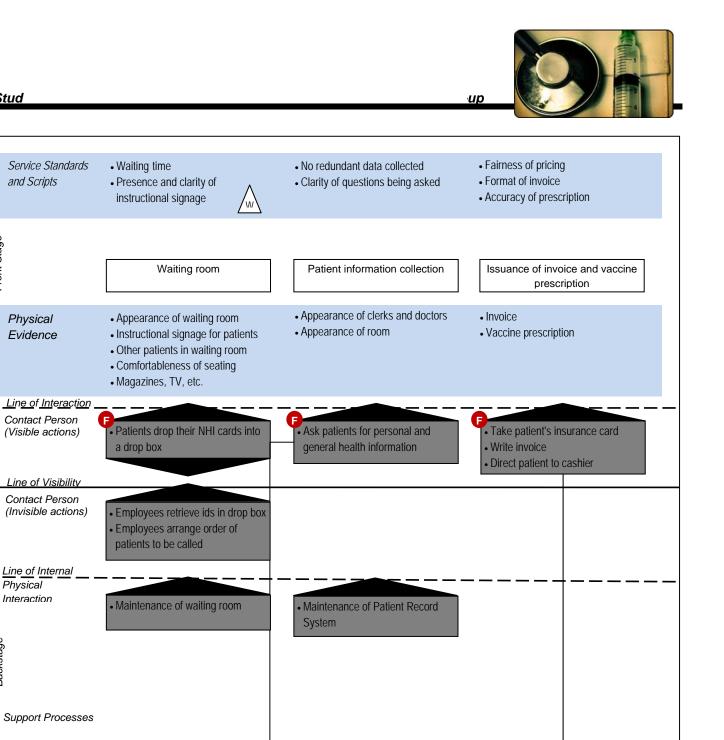
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Front Stage

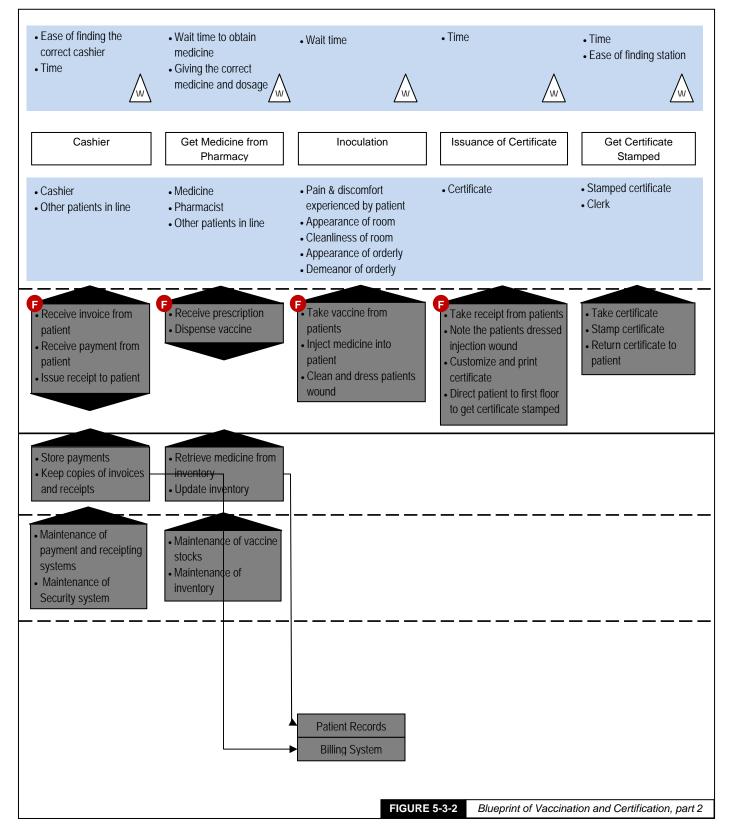
Backstage

Line of Internal IT Interaction



Patient Records









	OTSU	Potential Delay
Vaccination and Certification		
Waiting Room	 Patients not knowing how to get on queue Patients may wait on wrong room 	Long waits if queues are long
Patient information collection	 Rude staff Patient misund high information needed Patient providing wrong information Staff encoding the wrong information into record 	
Issuance of Invoice and Vaccine Prescription	Wrong computation of bill Wrong medicine or dosage prescribed Unintelligible prescription or invoice	
Cashier	Wrong change Asking the wrong amount of payment	Delays due to long lines
Get Medicine from Pharmacy	Giving out of wrong medicine or dosage Not giving out any medicine at all	Delays due to long lines
Inoculation	 Improper administration of vaccine Administration of wrong vaccine Lack of proper hygiene Process is made more painful and uncomfortable than necessary 	Delays due to long queues
Issuance of Certificate	Mistakes made in the certificate	Delays if creating a certificate takes an undue length
Get Certificate Stamped		Delays due to long lines
Actual Check-up		
Patients Report at Reception		Delay due to long queues
verification of patient identity		
Invoice Issuance	Wrong charges incurred	
Cashier	Wrong change Wrong charge	Delay due to long lines
collection of patient info	 Rud f Patient misunderstanding information needed Patient providing wrong information Staff encoding the wrong information into records 	
Urine & stool collection	 Making patients unduly embarrassed and uncomfortable Wrong tagging of samples Mishandling samples 	 Delay due to there being only one washroom Patients inability to perform his part of the service script
Blood Sampling	 Incorrect analysis of specimens Making patients go through an inordinate amount of pain and discomfort Wrong tagging of samples Mishandling samples Incorrect analysis of specimens 	Delay due to long queue
Sieda outribuille	• montou analysis of specimens	

Table 5-2. Summary of Potential Delays and Failure Points





	Wrong x-ray taken	Delay due to long queue
	Patient exposure to too much radiation	
	 Not providing enough privacy for 	
	changing	
	 Not providing proper directions to 	
	patient	
Chest X-ray	 Wrong analysis of x-ray 	
	Wrong administration of tests	Delay due to long queue
General Medical Routine	Wrong analysis of tests	
	Rude doctors	Delay due to long queue
Physical Exam by Doctor	 Wrong analysis of patient 	
	 Not telling patient when to expect 	 Improper coordination with mail
	results	company
	 Not delivering results on the right day 	Delay in analysis
Check-up conclusion	Providing the wrong results	

5.3 Conclusions

Overall, the group made the following concrasions regarding Chi Mei Medical Center's service operations:

- The quality of service Chi Mei delivers is heavily reliant on its patients' cooperation and knowledge of their roles in the service script
 - o Chi Mei provides high contact service
 - o Chi Mei a large volume of patients and limited staff
 - The Center has a large variety of services offered, the operations of Chi Mei is divided into many departments each with their own standard processes
 - Despite the previous tick, for the Foreign Check-up Department at least, the hospital doesn't seem to sufficiently educate their patients on what needs to be done
 - \circ $\,$ The foreign check-up department has instructional material that is in Chinese
 - o The foreign check-up department has information collection forms that are in Chinese
 - The one instructional sign that was in English was not quite accurate in the sense that it includes steps in the service that should be invisible to the customer already
 - Chi Mei has efficient operations within each department, as proven by the short time it took to complete the physical check up. However, it seems to be the cross functional processes that incur the most delay and where patients make a lot of unnecessary (from the customer's perspective) movement and perform repetitious steps
 - Based on the service experience and interview, the group concluded that Chi Mei's service is quite effective and efficient. The group's check-up went fairly smoothly and the group learned about a lot of initiatives in the hospital put in place to try and make operations more efficient. However, what the hospital does seem to lack is a strong customer focus.
 - Most of the processes are designed according to what is efficient for the hospital instead of what is efficient for the customer
 - According to the director, changes in SOPs are triggered by issues and incidents, suggesting that operations design is more reactive than active

up

6 | RECOMMENDATIONS

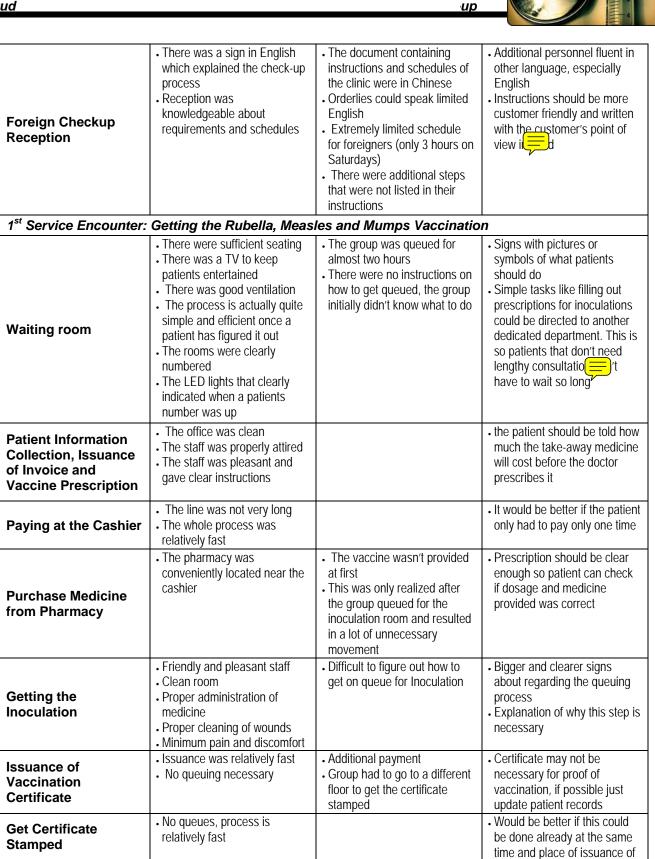
6.1 Meeting Failed Expectations and Exceeding Met Expectations

The group formulated some recommendations based on the service cycle detailed in Table 5-2. The recommendations were aimed to making moments of truth that failed expectations and making those that were met exceed expectations.

Table 6-1 lists the recommendations

Table 6-1. Recon	nmendations for	improvement
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Moments of Truth	Meets Expectations	Fails Expectations	Suggestion for Improvement
Pre-Purchase Stage			
Checking website for information	 There is an English version of the website There are patient instructions in Chinese The website has a map to the hospital (please refer to Figure 4-1) 	English version of website is not as informative as Chinese site No information pertaining schedules and prices that will help patients prepare for visit	 Include open hours for service Map/ floor plan of the hospital Include e-mail, quick for e-mailing or contacting information
1 st Service Encounter:	Figuring out What to Do		
Entering the Hospital: Figuring out what to do and where to go	 Clean, spacious lobby with pleasing ornaments Presence of security guards 	 Information counter does not stand out and is not within close proximity to the entrance No signs that instruct patients what to do or where to go 	 Provide a big hospital map or floor plan in front of the Building more signage for direction, using easy to understand symbols or English strategic placement of information booth near entrance
Talking to Information Personnel	 Personnel was able to provide information needed (in Chinese) They were able to direct group to the correct room 	 One of the women was carrying a baby that wasn't hers. It was a bit distracting Unable to speak English 	 Preferably English speaking personnel are present Information shopped by distracted Information personnel should not do things that are distracting
Going to the Foreign Check-up Department	 There were some signs indicating where to go Halls were clean and quiet 		Bigger, more obvious signs



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			certificate			
2 nd Service Encounter	2 nd Service Encounter: The Actual Check-up					
Reporting to the Reception	 The staff was pleasant The staff provided a step by step process for check-up (piece of paper with the room numbers and order of the tests to be conducted) 	steps were in Chinese (only numbers were not in Chinese)	There should be signs showing the accurate requirements and steps of the Check-up procedure			
Verification of Patient Identity and Papers	The staff informed the group before hand of the identification requirements		 Perhaps only one kind of identification card is needed for verification of identity 			
Invoice Issuance						
Cashier	The place was clean and The lines were not long	 it was a bit of hassle to have to go down 11 floors to pay (unnecessary movement) 	 If possible, have payment and invoicing in one step and in the same department Another possibility is to schedule the payment when patient is already in the same vicinity as bashier anyway 			
Collection of Patient Information	Minimal form filling Process was relatively fast		Data already in the IDs provided are no longer requested in forms			
Urine & Stool Collection		 Had to wait in the lobby for a few minutes carrying clear bottles with specimen samples Bathroom was a cluttered 	 bathroom should be as orderly as possible bottled specimens should be deposited into a collection area shielded from public view Explanation is provided of process and why it is necessary 			
Blood Sampling	 Orderlies were skilled enough that the process produced minimum pain and discomfort The process was fast 	The blood was taken in the same room where stool and urine samples were deposited	 Separate room for blood collection and storage of urine and stool samples Explanation is provided of process and why it is necessary 			
Chest X-ray	 The process was fast The patient was given sufficient privacy The directions were clear 		 provide lead-filled protective gear to guard the body against unnecessary radiation exposure Explanation is provided of process and why it is necessary 			
General Medical Routine	 The process was fast The directions were clear The orderly was sufficiently pleasant 		 nursing staff's English should be improved Explanation is provided of process and why it is necessary 			

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up

Physical Exam by Doctor	The process was fast The directions were clear The orderly was sufficiently pleasant	the doctor should do more of a thorough physical and psychological examination, instead of just asking questions hoping that the answers are honest
Check-up Conclusion	 Patient information was verified to avoid any mistakes The time to process the check-up results was clearly stated Methods of retrieving check- up results was clear 	 Provide a document containing the date of when patient should expect the results and numbers to call for inquiries

6.2 Desired Service Cycle

The group first drafted what we considered the ideal service cycle for foreign check-ups as a guide to the kind of service we believe the hospital should aim to have. It is the group's opinion that improvements to operations should be geared towards achieving this service cycle or something that is similar to it. This also addresses the failed expectations and potential points of failure in delay stated in the previous section.

The group believes that in the future, it would be beneficial for the hospital to actively redesign their services to meet and anticipate customer needs rather than making modifications to their current service to address each incident or problem that crops up.

The key ideas in formulating this ideal service cycle are as follows:

- Minimize unnecessary customer movement
- Minimize points of contacts
- Process transparency
- Processes that create win-win situations between patient and hospital (processes that are efficient for both hospital and patient)

Table 6-2 details the steps in the group's ideal service cycle.

Steps	Desired Services/ Outcomes	Why is thir <u>;</u> n-win?
Patient Checks Website	 website contains schedule and procedure of desired service website contains map of hospital website contains price and requirements of service website has English version that is equally informative as Chinese 	 This helps parents prepare for service encounter and reduce perceived risk This reduces the load on information booth since patients are already informed before coming to the hospital This will reduce billing errors (ie, patient doesn't have enough money or patient is charged incorrectly without knowing)

Table 6-2. Ideal Service Cycle

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Patient Enters Hospital	 Somebody greets patients at the doorway Information desk is immediately visible and has attention grabbing signs There are big informational signage and immediately accessible floor plans 	 This reduces unnecessary movement from patients Reduced number of patients walking around makes the hospital look more orderly Reduces the time staff has to spend on answering queries on directions
Information Booth/ Lobby Clerk	 No babies being carried by information personnel, limited distracting elements personnel are pleasant and sufficient english skills or body language skills to direct patients clerk asks if you have existing certification for RMM vaccination if you are female if yes, proceed to 11th if no, pass by family doctor's office for a vaccine prescription (or better yet have a family doctor in the Foreign Check-up department) 	 The patients are saved unnecessary movement (ie going to one department only to find that they should have gone to another department first) Department clerks are saved time explaining directing patients to other departments If a family doctor is already in the Foreign Check-up department, this will reduce the load of the family doctor that caters to regular outpatients
Go to the Foreign Check-up department	 Clear step by step patient instructions and signs If schedule is just 3 hours for one day in a week, put multilingual employee or translator at reception draft invoice and pay at the reception 	 The signs will reduce the amount of time the reception clerks spend on explaining process to the patients The process becomes clearer to the patient without having to ask personnel A translator will make communication between staff and patients faster. This in turn will lessen the waiting time for other patients on queue
Issuance of Invoice and Payment	 clerk has a list of services and prices (similar to information presented in website) Issuance of invoice and payment are included in one step at the reception 	 This reduces patient's unnecessary movement Reduces utilization of elevators which seem to be always full This reduces lines in the lobby area cashier
Information is Collected, Identification is Verified	 ARC is enough, no more passport required just one form is filled out, and information already in ARC should not be asked for in form 	 Reduces the number of documents patient has to bring to the hospital Reduces the time it takes for information collection Reduces patient queuing
Rubella Measles and Mumps Vaccination Verification	 if female patient already has certification, proceed to other tests if no, administer the vaccination there, no need for certification or any proof since they administered it themselves 	 This reduces patient's unnecessary movement This reduces queues from regular outpatient inoculation department and simplifies the process This reduces the waste of resources (like paper and printer ink) This reduces the queuing in the regular outpatient family doctor who would normally have to issue the certificate
Explanation of Process	 patients are given clear documents containing step by step process of check-up, in English 	 Patients are informed and processes are transparent This frees up personnel that would otherwise be occupied in repeatedly answering questions of confused

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		patients
Stool and Urine Sample	 Collection tools are designed to make collection mess and hassle free Collection bottles are opaque, provide wrapping materials/ bag to hide collections Bathrooms are clean and uncluttered, and private, with air fresheners and ocean sounds if explanation is given as to why this is necessary without being asked 	 Patients become more comfortable with the process This step is looked on with less embarrassment Comfortable patients are more cooperative Will reduce delay due to bashful and unwilling patients
Blood Collection	 Minimum pain and discomfort soothing music Hygiene Brief explanation of and reason for process is given without customer asking for it 	 Patients are informed, relaxed and more cooperative throughout the process This makes it easier for staff to do their job
X-Ray	 lead protective wear to shield other parts of the body from radiation if explanation is given as to why this is necessary without being asked 	 Patients are informed and more cooperative Makes it easier for staff to do their job Less risk of getting safety complaints
Check-up Conclusion	 If they give a slip containing the day you expect your results and numbers to call for inquiry Pleasant goodbye from the staff Maybe a cookie or some refreshments are provided 	 Patients know when to expect results Less anxiety in patients This will reduce inquiries to the hospital Patients will leave in a pleasant mood and more likely to spread good word of mouth





GRONROOS, C. (2000). Services Management and Marketing (2nd Ed). USA: Chichester, Wiley

LOVELOCK, C., (2005) Services Marketing in Asia (2nd Ed). New York: Prentice Hall.

MAHESH, V. & STANWORTH, J. (1995). Service Concept Delivery Through System Design: The Case of Anglian Water Services. IN ARMISTEAD, C. & ZEARE R. (Eds) *Service Management- New Direction, New Perspectives*. London: Cassel

THE GROUP YOU ARE ASSESSING: MIGHTY MEATY YOUR GROUP NAME: DE-TERMINATORS		Save your file. Use this format: group being assessed your group.doc So an example would be TIV Voltes5.doc – where TIV is the group being assessed and Voltes5 is your group.	
А	В	С	D
Are ideas presented connected with the aim of the presentation?	Are the ideas presented clearly supported with evidence and logical argument?	Is it easy to follow & to understand? (Are the slides clear and easy to follow e.g. use of new pictures, words, graphs)	Overall impression (is it a group presentation etc.?)
40%	30%	20%	10%

40%	25%	15%	10%	
Slow to get into the meat of the subject/theory which made the speeded up version hard to follow clearly. Perhaps to much for the time available.				
Grade (%) 90%				

THE GROUP YOU ARE ASSESSING: MIGHTYMEATY YOUR GROUP NAME: TIGERS		Save your file. Use this format: group being assessed your group.doc So an example would be TIV Voltes5.doc – where TIV is the group being assessed and Voltes5 is your group.	
A Are ideas presented	B Are the ideas presented	C Is it easy to follow & to	D Overall
connected with the aim of the presentation?	clearly supported with evidence and logical argument?	understand? (Are the slides clear and easy to follow e.g. use of new pictures, words, graphs)	impression (is it a group presentation etc.?)
40%	30%	20%	10%

5%	5%	5%	5%
5%5%5%Comments (space will expand as you type)-Interesting historical statistics-Benefitted from personal experience-Clean, well structured slides-Enjoyed colour coding of the Cycle of Service-Liked the small blueprint packages that were distributed prior to the presentation			
Grade (%) 95%			

THE GROUP YOU ARE ASSESSING:MIGHTY MEATYYOUR GROUP NAME:THE ESSAYS		Save your file. Use this format: group being assessed your group.doc So an example would be TIV Voltes5.doc – where TIV is the group being assessed and Voltes5 is your group.	
A Are ideas presented connected with the aim of the presentation?	B Are the ideas presented clearly supported with evidence and logical argument?	C Is it easy to follow & to understand? (Are the slides clear and easy to follow e.g. use of new pictures, words, graphs)	D Overall impression (is it a group presentation etc.?)
40%	30%	20%	10%

35%	30%	20%	10%	
Comments (space will expand as you type)				
Good presentation and ppt. Unfortunatelly the time was not enough.				
Grade (%) 95%				

THE GROUP YOU ARE ASSESSING: MIGHTY _MEATY YOUR GROUP NAME: NALUWAN		Save your file. Use this format: group being assessed your group.doc So an example would be TIV Voltes5.doc – where TIV is the group being assessed and Voltes5 is your group.	
A Are ideas presented	B Are the ideas presented	C Is it easy to follow & to	D Overall
connected with the aim of the presentation?	clearly supported with evidence and logical argument?	understand? (Are the slides clear and easy to follow e.g. use of new pictures, words, graphs)	impression (is it a group presentation etc.?)
40%	30%	20%	10%

35%	25%	20%	10%		
Comments (space will expand as you type)					
Grade (%) 80%					

The group you are assessing: Mighty Meaty Your group name: Fresh		Save your file. Use this format: group being assessed your group.doc So an example would be TIV Voltes5.doc – where TIV is the group being assessed and Voltes5 is your group.	
А	В	С	D
Are ideas presented connected with the aim of the presentation?	Are the ideas presented clearly supported with evidence and logical argument?	Is it easy to follow & to understand? (Are the slides clear and easy to follow e.g. use of new pictures, words, graphs)	Overall impression (is it a group presentation etc.?)
40%	30%	20%	10%

35%	25%	20%	10%			
Comments (space will expand as you type) Good presentation and information.						
Grade (%) 90%						

PROJECT FEEDBACK

GROUP: MIGHTY MEATY

PJ	Mark	Theresa	Tet		
Good	Good	Good	<u>Good</u>	<u>Weak</u>	<u>Weak</u>

Comments on the presentation

- Avoid 'my left' it is everyone else's right!
- Bring the points on line/bullet by bullet
- Mark some points that you are talking about (interesting) but aren't on the PPT not so easy to follow. Also practise your slot before so you make sure your hitting the times (same true for whole group)
- Limitations use a table e.g., limitation, impact, attempt to mitigate
- Slide choice has overtones of blood splatter!
- Instructional signs on the slide too small to see.
- PJ slides are dancing around. Use the print out to know what is coming.
- Cycle of service slides work well
- Conclusion getting there 'more help to customer to perform their role'
- Cross department services see the Harvard article
- •
- QU What is the 'just in time ' method?
- QU what steps in place?

Other comments

•

Comments on the report

Comprehensive, detailed and thorough report that arrives at clear actionable suggestions. The objectives are not clear and are misleading: should be sharper and focused. Use of diagrams and summary tables communicates maximum information efficiently and have powerful impact. Combine the tables at the end – so much information becomes confusing and distracting i.e., recommendation plus win-win. Note my suggestions for the recommendations and else where. Then prepare a cover letter and a clear, precise executive summary and deliver to the hospital.

- More use of bullet points would make report easier to read. E.g., p.23 This would also help to highlight key information
- No. failure points otherwise hard to read and connect up.
- Some blank pages in the report.
- Photos useful but would have even more impact if you added them into the

blueprint.

• Relabel table heads as they break over pages.

•

Grade: 94%