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APPENDICES

APPENDIX A

BASIC SERVQUAL INSTRUMENT

Directions: Listed below are five features pertaining to Clinics and the services they offer. We would like to know how important each of these features is to you when you evaluate a Clinic's quality of service. Please allocate a total of 100 points among the five features according to how important each feature is to you – the more important a feature is to you, the more points you should allocate to it. Please ensure that the points you allocate to the five features add up to 100.

- | | | |
|--|-------|--------|
| 1. The appearance of the Clinic's physical facilities, equipments, personnel, and communication materials. | _____ | points |
| 2. Clinic's ability to perform the premised service dependably and accurately. | _____ | points |
| 3. Clinic's willingness to help customers and provide prompt service. | _____ | points |
| 4. The knowledge and courtesy of the Clinic's employees and their ability to convey trust and confidence. | _____ | points |
| 5. The caring, individualized attention the Clinics provides its customers. | _____ | points |

TOTAL points allocate	100	points
-----------------------	-----	--------

Which one feature among the above five is most important to you? (please enter the feature's number)

Which feature is second most important to you?

Which feature is least important to you?

Source: Modified from Parasuraman et al. (1990)

Figure A.1: SERVQUAL Importance Weight Questionnaire

Directions: Based on your experiences as a consumer of Healthcare service, please think about the kind of Clinics that would deliver excellent quality of service. Think about the kind of Clinics with which you would be pleased to do business. Please show the extent to which you think such a Clinics would possess the feature described by each statement. If you feel a feature is not at all essential for excellent Clinics such as the one you have in mind, circle the number 1. If you feel a feature is absolutely essential for excellent Clinics, circle 7. If your feelings are less strong, circle one of the number in the middle. There is no right or wrong answers – all we are interested in is a number that truly reflects your feelings regarding Clinics that would deliver excellent quality of service.

	Strongly Disagree \longrightarrow Strongly Agree						
	1	2	3	4	5	6	7
1. Excellent Clinics will have modern-looking equipment.	1	2	3	4	5	6	7
2. The physical facilities at excellent Clinics will be visually appealing.	1	2	3	4	5	6	7
3. Employees at excellent Clinics will be neat-appearing.	1	2	3	4	5	6	7
4. Materials associated with the service will be visually appealing.	1	2	3	4	5	6	7
5. Excellent Clinics will do what they promise by a certain time.	1	2	3	4	5	6	7
6. Excellent Clinics will show a sincere interest in solving problems.	1	2	3	4	5	6	7
7. Excellent Clinics will perform service right the first time.	1	2	3	4	5	6	7
8. Excellent Clinics will provide services at the time they promise.	1	2	3	4	5	6	7
9. Excellent Clinics will insist on error-free records.	1	2	3	4	5	6	7
10. Excellent Clinics' employees will tell customer exactly when services will be performed.	1	2	3	4	5	6	7
11. Excellent Clinics' employees will give prompt service to customers.	1	2	3	4	5	6	7
12. Excellent Clinics' employees will always willing to help customers.	1	2	3	4	5	6	7
13. Excellent Clinics' employees will never be too busy to respond to customers' requests.	1	2	3	4	5	6	7
14. Employees in excellent Clinics will instill confidence in customers.	1	2	3	4	5	6	7
15. Customers of excellent Clinics will feel safe in their transactions.	1	2	3	4	5	6	7
16. Employees in excellent Clinics will be consistently courteous.	1	2	3	4	5	6	7
17. Employees in excellent Clinics will have the knowledge to answer customers' questions.	1	2	3	4	5	6	7
18. Excellent Clinics will give customers individual attention.	1	2	3	4	5	6	7
19. Excellent Clinics will operate convenient hours to all customers.	1	2	3	4	5	6	7
20. Excellent Clinics will have employees who give customers personal attention.	1	2	3	4	5	6	7
21. Excellent Clinics will have the customer's best interests at hearts.	1	2	3	4	5	6	7
22. The employees of excellent Clinics will understand the specific needs of their customers.	1	2	3	4	5	6	7

Source: Modified from Parasuraman et al. (1990)

Figure A.2: SERVQUAL Expectation Questionnaire

Directions: The following set of statements relate to your feelings about PMC. For each statement, please show the extent to which you believe PMC has the feature described by the statement. Once again, circling a 1 means that you strongly disagree that PMC has that feature, and circling a 7 means that you strongly agree. You may circle any of the numbers in the middle that show how strong your feelings are. There is no right or wrong answers - all we are interested in is a number that best shows your perceptions about PMC.

	Strongly Disagree \longrightarrow Strongly Agree						
	1	2	3	4	5	6	7
1. PMC has modern-looking equipment.	1	2	3	4	5	6	7
2. The physical facilities at PMC are visually appealing.	1	2	3	4	5	6	7
3. Employees at PMC are neat-appearing.	1	2	3	4	5	6	7
4. Materials associated with the service are visually appealing.	1	2	3	4	5	6	7
5. PMC does what they promise by a certain time.	1	2	3	4	5	6	7
6. PMC shows a sincere interest in solving problems.	1	2	3	4	5	6	7
7. PMC performs service right the first time.	1	2	3	4	5	6	7
8. PMC provides services at the time they promise.	1	2	3	4	5	6	7
9. PMC insists on error-free records.	1	2	3	4	5	6	7
10. PMC's employees will tell customer exactly when services will be performed.	1	2	3	4	5	6	7
11. PMC's employees give prompt service to customers.	1	2	3	4	5	6	7
12. PMC's employees are always willing to help customers.	1	2	3	4	5	6	7
13. PMC's employees never be too busy to respond to customers' requests.	1	2	3	4	5	6	7
14. Employees in PMC instill confidence in customers.	1	2	3	4	5	6	7
15. Customers of PMC feel safe in their transactions.	1	2	3	4	5	6	7
16. Employees in PMC are consistently courteous.	1	2	3	4	5	6	7
17. Employees in PMC have the knowledge to answer customers' questions.	1	2	3	4	5	6	7
18. PMC gives customers individual attention.	1	2	3	4	5	6	7
19. PMC operates convenient hours to all customers.	1	2	3	4	5	6	7
20. PMC has employees who give customers personal attention.	1	2	3	4	5	6	7
21. PMC has the customer's best interests at hearts.	1	2	3	4	5	6	7
22. The employees of PMC understand the specific needs of their customers.	1	2	3	4	5	6	7

Source: Modified from Parasuraman et al. (1990)

Figure A.3: SERVQUAL Perception Questionnaire

APPENDIX B

PATIENT SATISFACTION QUESTIONNAIRE - III

On the following pages are some things people say about medical care. Please read each one carefully, keeping in mind the medical care you are receiving now. (If you have not received care recently, think about what you would expect if you needed care today.) We are interested in your feelings, good and bad, about the medical care you have received.

How strongly do you **AGREE** or **DISAGREE** with each of the following statements?

(Circle One Number on Each Line)

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
1. If I need hospital care, I can get admitted without any trouble.....	1	2	3	4	5
2. Doctors need to be more thorough in treating and examining me.....	1	2	3	4	5
3. I am very satisfied with the medical care I receive.....	1	2	3	4	5
4. I worry sometimes about having to pay large medical bills.....	1	2	3	4	5
5. It is easy for me to get medical care in an emergency.....	1	2	3	4	5
6. Doctors are good about explaining the reason for medical tests.....	1	2	3	4	5
7. I am usually kept waiting for a long time when I am at the doctor's office...	1	2	3	4	5
8. I think my doctor's office has everything needed to provide complete medical care.....	1	2	3	4	5
9. The doctors who treat me should give me more respect.....	1	2	3	4	5
10. Sometimes it is a problem to cover my share of the cost for a medical care visit.....	1	2	3	4	5
11. The medical care I have been receiving is just about perfect.....	1	2	3	4	5
12. Sometimes doctors make me wonder if their diagnosis is correct.....	1	2	3	4	5
13. During my medical visits, I am always allowed to say everything that I think is important.....	1	2	3	4	5
14. I feel confident that I can get the medical care I need without being set back financially.....	1	2	3	4	5

15. When I go for medical care, they are careful to check everything when treating and examining me.....	1	2	3	4	5
16. It's hard for me to get medical care on short notice.....	1	2	3	4	5
17. The doctors who treat me have a genuine interest in me as a person.....	1	2	3	4	5
18. Sometimes doctors use medical terms without explaining what they mean.....	1	2	3	4	5
19. Sometime I go without the medical care I need because it is too expensive.....	1	2	3	4	5
20. The office hours when I can get medical care are convenient (good) for me.....	1	2	3	4	5
21. There are things about the medical system I receive my care from that need to be improved.....	1	2	3	4	5
22. The office where I get medical care should be open for more hours than it is.....	1	2	3	4	5
23. The medical staff that treats me knows about the latest medical developments.....	1	2	3	4	5
24. I have to pay for more of my medical care than I can afford.....	1	2	3	4	5
25. I have easy access to the medical specialists I need.....	1	2	3	4	5
26. Sometimes doctors make me feel foolish.....	1	2	3	4	5
27. Regardless of the health problems I have now or develop later, I feel protected from financial hardship.....	1	2	3	4	5
28. Where I get medical care, people have to wait too long for emergency treatment.....	1	2	3	4	5
29. Doctors act too businesslike and impersonal toward me.....	1	2	3	4	5
30. There is a crisis in health care in the United States today.....	1	2	3	4	5
31. Doctors never expose me to unnecessary risk.....	1	2	3	4	5
32. The amount I have to pay to cover or insure my medical care needs is reasonable.....	1	2	3	4	5
33. There are some things about the medical care I receive that could be better.....	1	2	3	4	5

34. My doctors treat me in a very friendly and courteous manner.....	1	2	3	4	5
35. Those who provide my medical care sometimes hurry too much when they treat me.....	1	2	3	4	5
36. Some of the doctors I have seen lack experience with my medical problems.	1	2	3	4	5
37. Places where I can get medical care are very conveniently located.....	1	2	3	4	5
38. Doctors sometimes ignore what I tell them.....	1	2	3	4	5
39. When I am receiving medical care, they should pay more attention to my privacy.....	1	2	3	4	5
40. If I have a medical question, I can reach a doctor for help without any problem.....	1	2	3	4	5
41. Doctors rarely give me advice about ways to avoid illness and stay healthy.	1	2	3	4	5
42. All things considered, the medical care I receive is excellent.....	1	2	3	4	5
43. Doctors listen carefully to what I have to say.....	1	2	3	4	5
44. I feel insured and protected financially against all possible medical problems.....	1	2	3	4	5
45. I have some doubts about the ability of the doctors who treat me.....	1	2	3	4	5
46. Doctors usually spend plenty of time with me.....	1	2	3	4	5
47. Doctors always do their best to keep me from worrying.....	1	2	3	4	5
48. I find it hard to get an appointment for medical care right away.....	1	2	3	4	5
49. I am dissatisfied with some things about the medical care I receive.....	1	2	3	4	5
50. My doctors are very competent and well-trained.....	1	2	3	4	5
51. I am able to get medical care whenever I need it.....	1	2	3	4	5

Source: Modified from RAND (2006)

Figure B.1: Patient Satisfaction Questionnaire – III

APPENDIX C

MODIFIED SERVQUAL INSTRUMENT

Directions: Listed below are five features pertaining to Clinics and the services they offer. We would like to know how important each of these features is to you when you evaluate a Clinic's quality of service. Please allocate a total of 100 points among the five features according to how important each feature is to you – the more important a feature is to you, the more points you should allocate to it. Please ensure that the points you allocate to the five features add up to 100.

- | | | |
|--|-------|--------|
| 1. The appearance of the Clinic's physical facilities, equipments, personnel, and communication materials. | _____ | points |
| 2. Clinic's ability to perform the premised service dependably and accurately. | _____ | points |
| 3. Clinic's willingness to help customers and provide prompt service. | _____ | points |
| 4. The knowledge and courtesy of the Clinic's employees and their ability to convey trust and confidence. | _____ | points |
| 5. The caring, individualized attention the Clinics provides its customers. | _____ | points |

TOTAL points allocate	100	points
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Which one feature among the above five is most important to you? (please enter the feature's number)

Which feature is second most important to you?

Which feature is least important to you?

Source: Modified from Parasuraman et al. (1990)

Figure C.1: SERVQUAL Importance Weight Questionnaire

Directions: Based on your experiences as a consumer of Healthcare service, please think about the kind of Clinics that would deliver excellent quality of service. Think about the kind of Clinics with which you would be pleased to do business. Please show the extent to which you think such a Clinics would possess the feature described by each statement. If you feel a feature is not at all essential for excellent Clinics such as the one you have in mind, circle the number 1. If you feel a feature is absolutely essential for excellent Clinics, circle 7. If your feelings are less strong, circle one of the number in the middle. There is no right or wrong answers – all we are interested in is a number that truly reflects your feelings regarding Clinics that would deliver excellent quality of service.

	Strongly Disagree \longrightarrow Strongly Agree						
1. Excellent Clinics will have modern-looking equipment.	1	2	3	4	5	6	7
2. The physical facilities at excellent Clinics will be visually appealing.	1	2	3	4	5	6	7
3. Employees at excellent Clinics will be neat-appearing.	1	2	3	4	5	6	7
4. Materials associated with the service will be visually appealing.	1	2	3	4	5	6	7
5. Excellent Clinics will provide sufficient private environments.	1	2	3	4	5	6	7
6. Excellent Clinics will do what they promise by a certain time.	1	2	3	4	5	6	7
7. Excellent Clinics will show a sincere interest in solving problems.	1	2	3	4	5	6	7
8. Excellent Clinics will perform service right the first time.	1	2	3	4	5	6	7
9. Excellent Clinics will provide services at the time they promise.	1	2	3	4	5	6	7
10. Excellent Clinics will insist on error-free records.	1	2	3	4	5	6	7
11. Excellent Clinics' employees will tell customer exactly when services will be performed.	1	2	3	4	5	6	7
12. Excellent Clinics' employees will give prompt service to customers.	1	2	3	4	5	6	7
13. Excellent Clinics' employees will always willing to help customers.	1	2	3	4	5	6	7
14. Excellent Clinics' employees will never be too busy to respond to customers' requests.	1	2	3	4	5	6	7
15. Employees in excellent Clinics will explain illness until no doubt.	1	2	3	4	5	6	7
16. Employees in excellent Clinics will instill confidence in customers.	1	2	3	4	5	6	7
17. Customers of excellent Clinics will feel safe in their transactions.	1	2	3	4	5	6	7
18. Employees in excellent Clinics will be consistently courteous.	1	2	3	4	5	6	7
19. Employees in excellent Clinics will have the knowledge to answer customers' questions.	1	2	3	4	5	6	7
20. Customers of excellent Clinics will recognize reasonable expenses.	1	2	3	4	5	6	7
21. Excellent Clinics will give customers individual attention.	1	2	3	4	5	6	7
22. Excellent Clinics will operate convenient hours to all customers.	1	2	3	4	5	6	7
23. Excellent Clinics will have employees who give customers personal attention.	1	2	3	4	5	6	7
24. Excellent Clinics will have the customer's best interests at hearts.	1	2	3	4	5	6	7
25. The employees of excellent Clinics will understand the specific needs of their customers.	1	2	3	4	5	6	7

Source: Modified from Parasuraman et al. (1990)

Figure C.2: SERVQUAL Expectation Modified Questionnaire

Directions: The following set of statements relate to your feelings about PMC. For each statement, please show the extent to which you believe PMC has the feature described by the statement. Once again, circling a 1 means that you strongly disagree that PMC has that feature, and circling a 7 means that you strongly agree. You may circle any of the numbers in the middle that show how strong your feelings are. There is no right or wrong answers - all we are interested in is a number that best shows your perceptions about PMC.

	Strongly Disagree \longrightarrow Strongly Agree						
	1	2	3	4	5	6	7
1. PMC has modern-looking equipment.	1	2	3	4	5	6	7
2. The physical facilities at PMC are visually appealing.	1	2	3	4	5	6	7
3. Employees at PMC are neat-appearing.	1	2	3	4	5	6	7
4. Materials associated with the service are visually appealing.	1	2	3	4	5	6	7
5. PMC provides sufficient private environments.	1	2	3	4	5	6	7
6. PMC does what they promise by a certain time.	1	2	3	4	5	6	7
7. PMC shows a sincere interest in solving problems.	1	2	3	4	5	6	7
8. PMC performs service right the first time.	1	2	3	4	5	6	7
9. PMC provides services at the time they promise.	1	2	3	4	5	6	7
10. PMC insists on error-free records.	1	2	3	4	5	6	7
11. PMC's employees will tell customer exactly when services will be performed.	1	2	3	4	5	6	7
12. PMC's employees give prompt service to customers.	1	2	3	4	5	6	7
13. PMC's employees are always willing to help customers.	1	2	3	4	5	6	7
14. PMC's employees never be too busy to respond to customers' requests.	1	2	3	4	5	6	7
15. Employees in PMC explain illness until no doubt.	1	2	3	4	5	6	7
16. Employees in PMC instill confidence in customers.	1	2	3	4	5	6	7
17. Customers of PMC feel safe in their transactions.	1	2	3	4	5	6	7
18. Employees in PMC are consistently courteous.	1	2	3	4	5	6	7
19. Employees in PMC have the knowledge to answer customers' questions.	1	2	3	4	5	6	7
20. Customers of PMC recognize reasonable expenses.	1	2	3	4	5	6	7
21. PMC gives customers individual attention.	1	2	3	4	5	6	7
22. PMC operates convenient hours to all customers.	1	2	3	4	5	6	7
23. PMC has employees who give customers personal attention.	1	2	3	4	5	6	7
24. PMC has the customer's best interests at hearts.	1	2	3	4	5	6	7
25. The employees of PMC understand the specific needs of their customers.	1	2	3	4	5	6	7

Source: Modified from Parasuraman et al. (1990)

Figure C.3: SERVQUAL Perception Modified Questionnaire

APPENDIX D

DATA COLLECTION WORKSHEET

PRIMARY INFORMATIONSECTION			
Customer ID		Doctor Name	
Date		Appointed (Y/N)	
Time		Appointed Time	
DATA COLLECTION SECTION			
REGISTRATION		LABORATORY	
Functional Activity	Time	Functional Activity	Time
Collect general required information		Restore data and lab request items	
Diagnose the symptom of disease		Collect blood or liquid from patient	
Issue medication service document		Label tubes to clarify blood and liquid	
Arrange customer historical folder		Record lab information in log book	
Forward all of documents to OPD		Operate the first machine for serum	
OPD		Separate lab request by machines	
Functional Activity	Time	Analyze serum by different machines	
Check the daily appointment list		Save lab information in computer	
Prepare all medication documents		Print lab result summary for OPD	
Conduct patients' ordinary tests		Verify and approve lab result	
Record primary symptom information		X-RAY	
Arrange appointment queue in order		Functional Activity	Time
Provide medication service by doctor		Restore data and X-Ray request items	
Document medication information		Setup X-Ray equipments for patient	
Provide related service by nurse		Operate X-Ray according to doctor	
Print next appointment for patient		Analyze the films by professionals	
Save medication data in computer		Verify and approve X-Ray result	
FINANCE		PHARMACY	
Functional Activity	Time	Functional Activity	Time
Check all medical related documents		Insert medicine list in the computer	
Calculate expenses of medication		Calculate medicine costs for Finance	
Collect money from customers		Collect medicine according to order	
		Match label with medicine container	
		Explain medicine & medication advice	

Figure D.1: Data Collection Worksheet for Baseline Information



BIOGRAPHY

Peerapatana Ketboonchoo was born in Samutprakarn province which states nearby Bangkok, the capitol of Thailand, on 25 April 1978. He finished the primary study or grade six from Anusasana Wittaya Samutprakarn School in 1990 which is in his hometown and ended the secondary study or grade twelve in 1995 from Ratchawinit Bangkaeo School where he received the King Scholarship which had been dedicated to the top ten students for five consecutive years. At King Mongkut's Institute of Technology North Bangkok, he completed a Bachelor of Engineering in Mechanical Engineering in 1999 with his final dissertation about the study of mathematics equations for automobile movement characteristics through the Simulation Model.

Peerapatana started his career path at Delta Electronics (Thailand) Public Company Limited as the Mechanical Design Engineer who managed global account projects, designed and validated mechanical parts for electronics components, cooperated with production and engineering on work instructions and implemented ERP-SAP project in head quarter and Thailand facility for two years before moving to Johnson and Johnson (Thailand) Limited as the Ergonomics/Machine Safety Engineer in 2001. He accounted for conducting ergonomics and safety programs for Pharmaceutical, Medical and Consumer Products divisions for Asia-Pacific region, implementing Six Sigma concepts to improve manufacturing outcomes and improving maintenance resources to maximize process efficiencies.

Peerapatana have made a decision to join Thailand Productivity Institute in 2004 as the Productivity Consultant. His key responsibilities are to manage training services mainly for Quality Management productivity tools and techniques, provide consulting services for Business Process Improvement projects, execute Corporate Strategic Planning and Business Plan Analysis, design applications for organizational TQA Self Assessment and develop Knowledge Inventory for Training and Consulting department. At the same time, he also extends his graduate education profile by enrolling in the Master of Engineering in Engineering Management at Chulalongkorn University and the Master of Science in Engineering Business Management at University of Warwick.