Paper 55

Proposed Improvements in Queuing Process of Obstetric Gynecology Polyclinic Outpatient at RSIA BM

Rizka Ayu Amanda and Aries F. Firman

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Abstract - **As one of the well-known women and children hospitals, RSIA BM already uses advanced technology in its queuing process compared to another hospital that is still using manual processes. However, there are operational issues related to the queuing process in the Obstetrics and Gynecology Polyclinic that triggered dissatisfaction and complaints from the outpatients. In this research, the researcher aims to determine the improvement suggestions in the queuing process by determining the key drivers of customer's satisfaction. The researcher used a qualitative method and conducted secondary data collection from previous studies. Based on the findings, the solutions recommended by the researcher to improve the outpatient queuing process and its technology are to provide clear information, actively follow up patients, and monitor the queuing waiting time.**

Keywords - **Customer Satisfaction, Queuing Process, Hospital Management, Outpatient, Online Reservation**

I. INTRODUCTION

In Indonesia, the healthcare industry is a promising business because it keeps growing and expanding especially as the impact of the Covid 19 pandemic. In the pandemic situation, usually the customer with no symptoms of Covid-19 prefers to visit women and children hospital rather than the general hospital, because the women and children hospital did not accept Covid-19 infected patients. However, there are some market segments that still prefer to visit general hospitals and it becomes a challenge for women and children hospitals to maintain their quality and customer loyalty. RSIA BM has improved a lot since the beginning of their operation but there is still patient dissatisfaction which can make the hospital potentially lose the patient if the hospital did not do any improvement. The main problem faced by RSIA BM was many complaints from the outpatients as the impact of the existing queuing process. Currently, the patient can register themselves through the BM mobile application to book the desired check up schedule and to get the queuing number. When the patient arrives at the hospital on the selected date, they need to do self check in through a machine that is located in the lobby. If the patient arrives earlier or on time, they usually wait for 10 to 15 minutes before the consultation session. However, if the patient arrives late even by 1 second to reconfirm

their status on site, they will be moved to fulfill the next available consultation session and need to wait longer (usually waits for more than 60 minutes). This issue is impacting 70% from the overall offline visit. Wanhua Xie, Xiufeng Yang, Xiaojun Cao, and Peiying Liu (2019) also stated that waiting time in outpatient clinics are regarded as substantial obstacles and need to be reduced. Therefore as one of the well known hospitals in Tangerang Selatan, Indonesia, RSIA BM has to maintain their patients' satisfaction and improve the queuing process, to increase the outpatient satisfaction. In this research, the researcher aims to propose improvements in the queuing process of obstetric gynecology polyclinic at RSIA BM.

II. METHODOLOGY

The research narrowed to find out 2 research questions as below:

1. What drives the customer's satisfaction?

2. How to improve the outpatient satisfaction related to the queuing process in the obstetric gynecology polyclinic at RSIA BM?

The objective of this research is to find out the customer satisfaction drivers related to the overall outpatient queuing process of the obstetric gynecology polyclinic in RSIA BM and to find out the suggestion to improve outpatient satisfaction related to the outpatient queuing process of obstetric gynecology polyclinic in RSIA BM.

The researcher gathers 2 main sources which are primary and secondary data. The primary data is collected through a qualitative method and the secondary data is collected from the previous studies. According to Creswell (2003) the researcher used a qualitative method because it will be more suitable and efficient to collect the reliable information from the relevant stakeholders. Qualitative method is also chosen because currently not much study has been written about this specific topic or the population being studied. The researcher will specifically use interviews data collection type considering the data availability and advantages. The interview is conducted to 9 respondents from 3 respective clusters (outpatient, doctor, and administrative team). To analyze the interview feedback from the respondents, the researcher is using mind mapping based on the theory of Johnny Saldana (2015) about the coding manual for qualitative researchers.

This research cannot be generalized because this research is conducted specifically for a selected industry, selected country, and selected hospital. The research is focused on the queuing operational management and did not cover the financial, expenditure, human resources management, or any other scope. The interview is conducted with selected respondents from the relevant stakeholder clusters and the feedback could be biased because the answer depends on the interviewees point of view. The information is also given in a designated condition not in the natural field setting. Each respondent also has different articulation and perspective.

III. RESULT

Based on the respondents feedback, the researcher found 41 keywords stated or interpreted by the respondents such as waiting time, mobile application system, provides clear information, bounced waiting line, on time schedule, sudden cancellation, queuing notification availability, actively follow up, hospital collaboration, self check in, insurance coverage, customer complaint trigger, call center contact point, walk in registration, technical difficulties, flexible appointment, pandemic safe area, hassle registration process, on site confirmation, realtime queuing number, outpatient preference, doctor's emergency situation, snowball effect queuing, spacious waiting room, loyalty, manual data completion, manageable schedule, online confirmation, differentiatie consultation session length, doctor's branding, first come first serve, new equipment or hospital, location movement, promotion, advanced equipment, provides comforting session, patient recommendation, feedback collection, costly registration, define clear SOP, and actively suggest next appointment.

In order to answer the research questions, the researcher used mind mapping analysis, fishbone diagram, and SWOT analysis to be able to find out the customer satisfaction drivers related to the overall outpatient queuing process of the obstetric gynecology polyclinic in RSIA BM and to give the suggestion to improve outpatient satisfaction related to the outpatient queuing process of obstetric gynecology polyclinic in RSIA BM.

The mind mapping analysis refers to Johnny Saldana (2015) and highlighted the top 10 factors which were mentioned frequently by the respondents. The number of keywords repetition that frequently mentioned by the respondents showed the importance of each statement or keyword as below:

Sub Sub-Category	Total	Total in %	Contribution	Contribution In %
Waiting Time	25	8%	8	89%
Mobile Application System	20	6%	9	100%
Provides Clear Information	18	6%	8	89%
Bounced Waiting Line	17	5%	7	78%
On Time Schedule	16	5%	8	89%
Sudden Cancellation	14	5%	7	78%
Queuing Notification Availability	13	4%	7	78%
Actively Follow Up	12	4%	8	89%
Hospital Collaboration	11	4%	7	78%
Self Check In	10	3%	8	89%

Figure 1. Top 10 Interview Findings

The researcher interprets the statement into 3 main categories which are major challenge, key attraction, and solution recommendation. Major challenges to increase the customer satisfaction are waiting time and bounced waiting lines that were highlighted by more than 70% respondents. Key attractions that can contribute to the customer satisfaction are mobile application system, on time schedule, sudden cancellation, queuing notification availability, hospital staff collaboration, and self check in service. Solution recommendations that gathered from the top 10 findings table above is to provide clear information and to actively follow up outpatient.

The researcher also uses a fishbone diagram of Ishikawa (1968) to show the cause and effect relationship. The fishbone diagram is divided into two diagrams to answer each research questions as shown in the figure 2 fishbone diagram below:
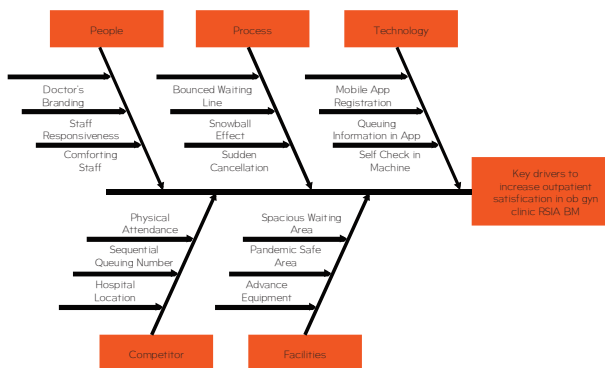

Figure 1. Top 10 Interview Findings

The fishbone diagram in figure 2 shows 5 main variables such as people, process, technology, competitor, and facilities that have cause and effect relationship to increase the outpatient satisfaction in RSIA BM.

People variables include doctor's branding, staff responsiveness, and comforting staff. The stronger these factors, the higher the outpatient satisfaction.

Process variables include a bounced waiting line, snowball effect, and sudden cancellation. Any issue related to the waiting line and snowball effect will create lower outpatient satisfaction, while the sudden cancellation of the other outpatient will help to shorten the queuing process and increase the satisfaction.

Technology variables include mobile application registration, queuing information in mobile application, and self check in machine. In RSIA BM, the technology for the queuing process is quite advanced because the patient can reserve consultation sessions through mobile application, check queuing waiting lines in the mobile application, and do self check in in a machine without queuing in the registration desk. Therefore the more technology variables available, the higher the customer satisfaction.

The competitor variables are also the key drivers of outpatient satisfaction because the better the competitor, the lower the satisfaction to hospital.

For facilities, as one of the key drivers to increase the outpatient of obstetric gynecology polyclinic RSIA BM satisfaction, the respondent highlighted the contribution of facilities to the patient satisfaction, especially the needs of Covid-19 friendly facilities such as spacious area that makes the patient feel safe and secured.

The researcher also uses the SWOT analysis framework to analyze the strengths, weaknesses, opportunities, and threats of the existing queuing process in RSIA BM compared to the other hospital. Therefore the hospital can be more focused not only in maintaining the strength and capturing the opportunity, but also improving the weaknesses and being aware of the threat from the other hospital. The SWOT analysis as below:

Strength: Compared to another hospital, RSIA BM implements advanced technology in the registration process. RSIA BM provides a mobile application that has a feature to check doctor's availability, make a booking, and to check queuing number live updates.

Weakness: The bounced waiting line has been mentioned by most of the respondents and counted as the top contributors to outpatient dissatisfaction and long queuing waiting time. The other hospital did not experience a similar issue because the other hospital still relies on the physical attendance basis.

Opportunity: RSIA BM can still improve the existing process to gain the outpatient satisfaction and improve the overall queuing process, for example by providing clear information and actively following up the patient.

Threat: RSIA BM needs to keep improving the technology continuously because the technology keeps improving and the other hospitals can replicate the existing technology of RSIA BM.

IV. DISCUSSION

The researcher also gathered the outpatient satisfaction key drivers and queuing process contributor factors from the previous studies or literature review. Yuping Li, Weijuan Gong, Xiang Kong, Olaf Mueller, and Guangyu Lu (2020) mentioned 3 factors associated with outpatient satisfaction which are patient social-demographic factors, medical staff factors, and hospital indoor hygiene, facilities, and process management factors.

Communication is also related to customer satisfaction because in the healthcare industry, clear communication between doctor and patient, between the administration team and patient, or between the doctor and administration team is useful to ensure each party has the same understanding of the information given. This statement is aligned with Haran Ratna (2019) that stated healthcare literacy as one of the components of effective communication in the healthcare industry. Health literacy is the ability of the patient to obtain, to comprehend, to communicate and to understand the healthcare information and services, especially the basic ones.

Long queuing time also causes outpatient dissatisfaction. Hajar Ariff, M Ghazali Kamardan, Suliadi Sufahani, Maselan Ali (2018) mentioned that the queuing in many hospitals has been a big issue to the public. The queuing management is influenced by the registration and attendance management and the queuing supporting facilities. Dereje Mesfin and Tadiwos Gintamo (2019) also mentioned short waiting time is one of the significant variables of patient satisfaction.

According to Wenjun Cao, Yi Wan, Haibo Tu, Fujun Shang, Danhong Liu, Zhijun Tan, Caihong Sun, Qing Ye, and Yongyong Xu (2011), implementing a website-based registration system can effectively reduce patient waiting times and can significantly increase patient satisfaction with the registration process.

V. CONCLUSION

Based on the discussion of the findings in the interview, researcher's observation, root cause analysis, literature review, and benchmarking from the previous research, the researcher determined the root cause or significant challenges related to the outpatient satisfaction of the queuing process of obstetric gynecology polyclinic in RSIA BM. This conclusion relates to the initial research questions as follows:

1. What drives the customer's satisfaction?

2. How to improve the outpatient satisfaction related to the queuing process in the obstetric gynecology polyclinic at RSIA BM?

Based on the findings, the researcher interprets the research result into 2 highlights, which are key drivers of customer's satisfaction and the suggestions to improve the outpatient satisfaction related to the queuing process in the obstetric gynecology polyclinic at RSIA BM, that explained below:

a.   The key driver of customer's satisfaction

The researcher defines the key driver of customer's satisfaction into 3 main parts, which are major challenges, key attractions, and other contributing factors to the outpatient customer satisfaction.

o Major challenges to increase the customer satisfaction are waiting time and bounced waiting lines that were highlighted by more than 70% respondents. Besides those major challenges, the respondents also defined competitor advantages such as hospital strategic location, active follow up, and insurance coverage partners as a challenge to increase RSIA BM customer satisfaction.

o The main key attractions that can contribute to the customer satisfaction are mobile application system, on time schedule, sudden cancellation, queuing notification availability, hospital staff collaboration, and self check in service. In addition to that, doctor's branding, staff responsiveness, spacious waiting area, pandemic safe area, and advanced equipment also contribute to the customer satisfaction.

o The other contributing factors are Doctor's availability and snowball effect, because when the doctor is suddenly unavailable, the overall queuing process can be long or even canceled. Competitor uniqueness also contributes to the outpatient satisfaction in the queuing process, because the outpatient will naturally compare the better hospital service.

b.   How to Improve the Outpatient Queuing Process

In order to improve the outpatient satisfaction related to the queuing process in obstetric gynecology polyclinic in RSIA BM, the respondents highlighted several improvement that can be implemented by RSIA BM, which are:

o Active follow-up outpatient to remind patient's reservation, to ensure patient attendance, and to engage with the patient more by offering to reschedule the canceled appointment and by suggesting to book an appointment for the next check up session.

o Providing clear information are needed to increase the outpatient satisfaction related to the queuing process

o Ensure the snowball effect is prevented and the waiting time is maintained short, because these variables are significant and counted as the contributing factors of the outpatient dissatisfaction in the queuing process.

o RSIA BM has to regularly assess the hospital's queuing process SWOT and compare the competitive advantage of RSIA BM queuing process to the other hospital, in order to sustain the business.

To conclude the research, The researcher highlighted several suggestions to improve the outpatient satisfaction within the queuing process as below:

a.   Provides Clear Information

o Clear information for the next step is needed after the patient finishes their online registration, especially for the new outpatient that has never been to RSIA BM, for example:

o Your registration has finished, for the next step you must come to the hospital at least 30 minutes before your scheduled time, to prevent a bounced waiting line (late by 1 minute will be moved as the last queue). After you arrive at the hospital you may do self check-in through a machine that is located on the first floor near the registration desk.

o After you arrive in the hospital you may check insurance validity in the registration desk that is located in the first floor

o The queuing number can be monitored through the mobile application and will be updated by the polyclinic administrative team.

b.   Actively Follow Up Stakeholder

Active follow up by administrative team is divided into several parts below:

o   To prevent sudden cancellation on the D-day and to prevent the snowball effect, the administration staff should actively follow up the outpatient to ensure their availability and attendance minimum in D-1 and actively follow up the doctor on D-day to ensure they can arrive on time. For any doctor's unavailability, the administrative team should also inform the outpatient actively and give new consultation estimation time to get outpatient understanding.

o   The administrative team should also offer to reschedule the appointment if the outpatient cancels their appointment due to personal reasons or disappointed due to doctor's unavailability.

o   After the consultation session finished, the administrative team may actively asking the outpatient to book the next appointment in polyclinics obstetric gynecology, especially if the patient needs regular control for their pregnancy

c.   Waiting Time Monitoring

Since waiting time is the most mentioned keyword and the most major challenge to increase customer satisfaction, the researcher suggests the hospital should regularly monitor and improve the queuing waiting time SLA continuously as an improvement for the queuing process in the obstetric gynecology polyclinic at RSIA BM.

Based on the suggestions above, there are managerial implications that could be impacted. For example the management would need to add additional manpower to conduct active follow up to stakeholders and waiting time monitoring. The hospital would also need to create additional standard operational procedures or SOP to cover the new implemented process. The hospital would also need to invest in the system or technology development to be able to implement all of the suggestions given.

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