Implementation of Patient Referral Application between Dentist and General Practitioner with Web-Based Specialist

Gusti Ayu Agung Mas Mahadewi[1], Ratna Wardani[2], Siti Farida[3], Rahmania Ambarika[4]

[1,2,3,4]*Institut Ilmu Kesehatan STRADA Indonesia, Indonesia*
mas.mahadewi@yahoo.co.id

Abstract

The aim of the research is to dissect implementation of patient referral application between dentist and general practitioner with web-based specialist. The method used in this research is through a qualitative approach. Data collection uses purposive sampling with in-depth interview techniques through questions to 10 informants from dentist, general practitioner, and communication technology specialists accompanied by 2 triangulators. Data collection techniques using observation, interview, documentation, and case study. The data analysis technique was carried out by means of data reduction, data presentation, and conclusion drawing. The results show that the implementation of a systemic patient referral application between dentists and general practitioners with web-based specialists is the right solution in the current era, because the manual referral system has constraints in terms of time, geography, and finance.

I. Introduction

Medical referral is a health effort that is oriented to the interests of the patient, one of which is a patient with a systemic disease, which aims to obtain problem solving for both diagnostic, treatment and subsequent patient management purposes and an effort to ask for professional assistance in handling a case of a disease that is being handled by a doctor. dentists and general dentists to specialists in their field of expertise.

In the implementation of medical referrals there are several problems that arise, namely a dentist can carry out treatment safely and with the smallest possible risk related to patients with systemic diseases such as diabetes mellitus, hypertension, heart disease and others. So it is necessary to make a medical referral to find out for sure the patient's general health and whether the patient's condition is safe enough for action, especially those involving moderate or minor surgery, such as tooth extraction or so-called tooth extraction (Larissa, 2017).

Tooth extraction is the process of removing the tooth from the alveolus, where the tooth can no longer be treated. It is an action that has risk factors for complications, including: systemic disease, local conditions of the oral cavity, and the age of the patient.

Thus, the dentist is obliged to conduct an analysis based on the results of the examination that has been carried out for consultation with a specialist. The results are analyzed by specialists to conduct appropriate and accurate evaluations in determining the patient's systemic condition such as disease pathophysiology, signs, and symptoms.

The results of laboratory tests to be continued with the treatment that the patient is undergoing or will undergo as well as recommendations from the relevant Specialist Doctors so that preparatory care can be carried out properly and safely to avoid complications that occur with efforts to make referrals or consultations (Ratnasari, 2018).

The General Medical Practice field stated that in dealing with cases of leprosy that are beyond his competence as a general practitioner who practices in primary care, he can refer patients immediately by utilizing information and communication technology and active participation from doctors who are assigned to primary and secondary services in remote areas and specialist doctors at higher levels of health care (tertiary services) at both the provincial and central levels.

In fact, in Indonesia, referral of patients to a higher level of health care often faces obstacles, including geographical, time and financial barriers. Geographical barriers are the long distance between the initial health service and the health service where the specialist is located and the ignorance of the specialist's practice. This is complicated by the lack of infrastructure that connects one area to another and also information about higher health facilities. Financial constraints in the form of the need for costs for the referral process also burden the patient (Anissa and Menaldi, 2016). The need for referral in a fast time has many obstacles, it can increase patient mortality and morbidity. The patient's condition is critical and must be treated immediately by medical personnel so that the patient gets the right service according to the diagnosis (Tutiany et al., 2017).

Some medical personnel, especially the Gianyar area stated that there were several factors that caused obstacles to the success of the referral letter, namely socio-cultural such as family members who were busy working so they could not deliver the letter, limited time and culture where in Bali, one of which was the city of Gianyar, many traditional activities every day which causes time constraints and also economic factors because the city of Gianyar is one of the arts cities in Bali which is currently affected by the pandemic so that the low economy does not even run well so that manual referral letters cannot run optimally because they require transportation costs and maintenance costs regularly. directly more expensive. In connection with this, a means is needed to overcome the obstacles that become problems such as distance and time in the patient referral process.

The increasing use and development of information and communication technology makes a considerable influence in various aspects of human life. One of the important aspects in human life is health which requires fast, practical, efficient, accurate and reliable information.

The aim of the research is to dissect implementation of patient referral application between dentist and general practitioner with web-based specialist.

II. Research Method

The method used in this research is through a qualitative approach which is defined as a research procedure that produces descriptive data that aims to reveal the in-depth meaning behind a phenomenon (Asyraini et al., 2022; Jibril et al., 2022; Octiva et al., 2021).

Data collection uses purposive sampling. Purposive sampling is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study (Octiva, 2018; Pandiangan, 2018; Pandiangan et al., 2021). With in-depth interview techniques through questions to 10 informants from dentist, general practitioner, and communication technology specialists accompanied by 2 triangulators.

Data collection techniques using observation, interview, documentation, and case study. Observation is used in the social sciences as a method for collecting data about people, processes, and cultures (Pandia et al., 2018; Pandiangan et al., 2018). Interview is a formal meeting at which someone is asked questions in order to find out if they are suitable for a job or a course of study. Documentation is any communicable material that is used to describe, explain or instruct regarding some attributes of an object, system or procedure, such as its parts, assembly, installation, maintenance and use. Case study can be defined as an intensive study about a person, a group of people or a unit, which is aimed to generalize over several units (Octiva et al., 2018; Pandiangan et al., 2022; Tobing et al., 2018).

The data analysis technique was carried out by means of data reduction, data presentation, and conclusion drawing. Data reduction is an activity to summarize, sort out the main and important things, and look for themes and patterns. The presentation of data is carried out with the aim of organizing the data so that it is easier to understand, because it has been arranged in a relationship pattern. Conclusions in this stage are temporary and can change if no strong evidence is found in the next research step, but if the conclusions in the research are supported by valid and consistent evidence, it is considered a credible conclusion (Pandiangan, 2015; Pandiangan, 2022).

III. Results and Discussion

3.1 Location Overview

Research on the condition of the research location, Gianyar Regency is one of the nine regencies/cities in Bali Province. Gianyar Regency consists of seven sub-districts, 64 villages, six sub-districts, 504 banjars/hamlets, and 42 neighborhoods. Gianyar Regency is divided into two regions with different characteristics, the northern part is a undulating area while the southern part is lowlands and coastal areas.

Gianyar Regency has an area of 368 km² or about 6.53% of the total area of Bali Province. The largest part of Gianyar Regency (45.70%) is located at an altitude of 100-500 meters above sea level. There are 12 rivers that pass through the Gianyar region and most of the water is used for irrigation of rice fields and water tourism.

The population in Gianyar Regency itself reaches 515,344 people or 11.94% of the total population of Bali Province. The total population in Gianyar Regency, as many as 50.15% are male while 49.85% are female with a ratio of 101. The population growth rate in 2020 reached 0.90% which experienced a slowdown compared to population growth in the period 2000–2010 ie 1.80%. The productive age population (15–64 years) in Gianyar Regency reaches 71.40%, while the percentage of the elderly population (60 years and over) reaches 13.87%.

The existing health service facilities in the Gianyar Regency area include: seven hospitals, 19 health centers, as well as private practice for other health workers, such as: doctors, dentists, nurses, midwives, dental therapists, and others.

3.2 Implementation of Patient Referral Application

The results show that the implementation of a systemic patient referral application between dentists and general practitioners with web-based specialists is the right solution in the current era, because the manual referral system has constraints in terms of time, geography, and finance.

Specifically, a medical referral is given by a dentist or general practitioner in the condition of a patient who has complaints of pain accompanied by a history of

uncontrolled systemic disease for further examination to a specialist who is more competent in his field.

The purpose of patient referrals is to produce equitable distribution of health efforts in the context of solving health problems in an efficient and effective manner. The purpose of the referral system is to improve the quality, coverage, and efficiency of integrated health services.

From the results of research conducted by direct interview methods to informants and triangulators, it was found that manual referral letters had several obstacles from referring doctors, namely doctors usually did not know the exact time to look after the referred doctor, because patients repeatedly asked for the appropriate doctor's watch schedule with the free time they have. Referring doctors also don't know about their patient's follow-up, so referring doctors don't know for sure whether their patient comes to the referred doctor or not, because usually the patient after being referred goes missing without any news. Likewise, the obstacles from the doctors referred are like patients complaining to them about watch hours, so they have to come back and forth, because specialist doctors have a very tight schedule.

The obstacles from the patient are, for example, the patient does not know the doctor's practice schedule, so the patient has to come back and forth, the patient's time is not in accordance with the doctor's practice schedule, sometimes the patient does not come to the referred doctor because of timing constraints that are not right with the watch schedule doctor, in addition to the patient's manual reference paper that was lost so it had to be returned again.

So that the obstacles faced by referring doctors, referred doctors and referred patients resulted in the level of services provided by doctors and those obtained by patients not being optimal and on time, so it can be said that the health services created were not optimal.

In fact, in Indonesia, referral of patients to a higher level of health care often faces obstacles, including geographical, time and financial barriers. The need for referral in a fast time has many obstacles, it can increase patient mortality and morbidity. The patient's condition is critical and must be immediately treated by medical personnel so that the patient gets the right service according to the diagnosis.

So the researchers implemented a patient referral application between dentists and general practitioners with web-based specialists with standards according to the contents of manual referral letters, but designed web-based that can make it easier for referring doctors and referred doctors to communicate with each other, know the patient's watch schedule and of course can find out follow-up or progress of patients who are being referred or in the care of a referring doctor, as well as can make it easier for patients to know the schedule of the doctor they want to visit so that it will be more efficient, effective, precise, and accurate in improving the quality of optimal health services.

This web-based online reference which will be implemented is called www.merujuk.com, there are complete menus such as manual references, and have been shown to informants who later become actors from users of this web system starting from how to register, log in and how to apply. Not only that, this web is also equipped with a special menu for reply letters, incoming letters, and for doctor profiles there are details ranging from biodata, doctor's profession, practice address, doctor's complete schedule, and this web-based application is already connected directly via the doctor's email concerned both the referring doctor and the referred doctor, when the doctor gets this online referral letter it will directly enter via email notification so that it will facilitate the referral process for this patient, by utilizing today's information technology.

The increasing use and development of information and communication technology makes a considerable influence in various aspects of human life. One of the important aspects in human life is health which requires fast, practical, efficient and accurate and reliable information. One of the uses of technology is that the use of the web to access information is increasingly being used because it is easy to get the information needed in a relatively fast time.

According to the researcher, manual referral letters for systemic patients do have obstacles from referring doctors, referred doctors and patients. These obstacles are in terms of time, distance and costs incurred causing delays in the treatment that must be obtained by the patient, so that the treatment achieved cannot be achieved automatically optimally even if the patient is urgent with uncontrolled systemic disease and late help can also increase patient mortality and morbidity.

So with the implementation of a systemic patient referral application between dentists and general practitioners with web-based specialists, it is expected to be able to facilitate the system for referring systemic patients so that it can improve the quality of service for patients optimally.

IV. Conclusion

The results show that the implementation of a systemic patient referral application between dentists and general practitioners with web-based specialists is the right solution in the current era, because the manual referral system has constraints in terms of time, geography, and finance.

The suggestions in this research are:

1. Based on the results of this study, it can be suggested that further research be carried out by developing the implementation of a systemic patient referral application between dentists and general practitioners with web-based specialists on a wider scale so as to optimize the quality of health services.
2. Based on the results of this study, it can be suggested that the results of this study are expected to assess satisfaction in the use of applications that can facilitate access for medically-compromised patients in web-based health services.

References

Asyraini, Siti, Fristy, Poppy, Octiva, Cut Susan, Nasution, M. Hafiz Akbar, & Nursidin, M. (2022). Peningkatan Kesadaran Protokol Kesehatan di Masa Pandemi Bagi Warga di Desa Selamat Kecamatan Biru-biru. *Jurnal Pengabdian Kontribusi (Japsi), 2*(1), 33-36.

Anissa & Menaldi. (2016. *Aplikasi Telemedicine dalam Merujuk Pasien dari Daerah Rural*.

Jibril, Ahmad, Cakranegara, Pandu Adi, Putri, Raudya Setya Wismoko, & Octiva, Cut Susan. (2022). Analisis Efisiensi Kerja Kompresor pada Mesin Refrigerasi di PT. XYZ. *Jurnal Mesin Nusantara, 5*(1), 86-95.

Larissa, Rosafina. (2017). *Kecamatan Medan Petisah Periode Januari s/d Februari 2017*.

Octiva, Cut Susan. (2018). *Pengaruh Pengadukan pada Campuran Limbah Cair Pabrik Kelapa Sawit dan Tandan Kosong Kelapa Sawit terhadap Produksi Biogas*. Tesis. Medan: Fakultas Teknik, Program Studi Teknik Kimia, Universitas Sumatera Utara. https://repositori.usu.ac.id/bitstream/handle/123456789/12180/157022002.pdf?sequence=1&isAllowed=y.

Octiva, C. S., Irvan, Sarah, M., Trisakti, B., & Daimon, H. (2018). Production of Biogas from Co-digestion of Empty Fruit Bunches (EFB) with Palm Oil Mill Effluent (POME): Effect of Mixing Ratio. *Rasayan J. Chem., 11*(2), 791-797.

Octiva, Cut Susan, Indriyani, & Santoso, Ari Beni. (2021). Effect of Stirring Co-digestion of Palm Oil and Fruith for Biogas Production to Increase Economy Benefit. Budapest *International Research and Critics Institute-Journal, 4*(4), 14152-14160. DOI: https://doi.org/10.33258/birci.v4i4.3521.

Pandia, S., Tanata, S., Rachel, M., Octiva, C., & Sialagan, N. (2018). Effect of Fermentation Time of Mixture of Solid and Liquid Wastes from Tapioca Industry to Percentage Reduction of TSS (Total Suspended Solids). *IOP Conference Series: Materials Science and Engineering, 309*, 012086. DOI: 10.1088/1757-899X/309/1/012086.

Pandiangan, Saut Maruli Tua. (2015). *Analisis Lama Mencari Kerja Bagi Tenaga Kerja Terdidik di Kota Medan*. Skripsi. Medan: Fakultas Ekonomi dan Bisnis, Program Studi Ekonomi Pembangunan, Universitas Sumatera Utara. https://www.academia.edu/52494724/Analisis_Lama_Mencari_Kerja_Bagi_Tenaga_Kerja_Terdidik_di_Kota_Medan.

Pandiangan, Saut Maruli Tua. (2018). *Analisis Faktor-faktor yang Mempengaruhi Penawaran Tenaga Kerja Lanjut Usia di Kota Medan*. Tesis. Medan: Fakultas Ekonomi dan Bisnis, Program Studi Ilmu Ekonomi, Universitas Sumatera Utara. http://repositori.usu.ac.id/bitstream/handle/123456789/10033/167018013.pdf?sequence=1&isAllowed=y.

Pandiangan, Saut Maruli Tua, Rujiman, Rahmanta, Tanjung, Indra I., Darus, Muhammad Dhio, & Ismawan, Agus. (2018). An Analysis on the Factors which Influence Offering the Elderly as Workers in Medan. *IOSR Journal of Humanities and Social Science (IOSR-JHSS), 23*(10), 76-79. DOI: 10.9790/0837-2310087679. http://www.iosrjournals.org/iosr-jhss/papers/Vol.%2023%20Issue10/Version-8/K2310087679.pdf.

Pandiangan, Saut Maruli Tua, Resmawa, Ira Ningrum, Simanjuntak, Owen De Pinto, Sitompul, Pretty Naomi, & Jefri, Riny. (2021). Effect of E-Satisfaction on Repurchase Intention in Shopee User Students. *Budapest International Research and Critics Institute-Journal, 4*(4), 7785-7791. DOI: https://doi.org/10.33258/birci.v4i4.2697.

Pandiangan, Saut Maruli Tua, Oktafiani, Fida, Panjaitan, Santi Rohdearni, Shifa, Mutiara, & Jefri, Riny. (2022). Analysis of Public Ownership and Management Ownership on the Implementation of the Triple Bottom Line in the Plantation Sector Listed on the Indonesia Stock Exchange. *Budapest International Research and Critics Institute-Journal, 5*(1), 3489-3497. DOI: https://doi.org/10.33258/birci.v5i1.4016.

Pandiangan, Saut Maruli Tua. (2022). Effect of Packaging Design on Repurchase Intention to the Politeknik IT&B Medan Using E-Commerce Applications. *Journal of Production, Operations Management and Economics (JPOME), 2*(1), 15–21. http://journal.hmjournals.com/index.php/JPOME/article/view/442.

Ratnasari, D. (2018). Analisis Pelaksanaan Sistem Rujukan Berjenjang Bagi Peserta JKN di Puskesmas X Kota Surabaya. *Jurnal Administrasi Kesehatan Indonesia, 5*(2), 145. https://doi.org/10.20473/jaki.v5i2.2017.145-154.

Tobing, Murniati, Afifuddin, Sya'ad, Rahmanta, Huber, Sandra Rouli, Pandiangan, Saut Maruli Tua, & Muda, Iskandar. (2018). An Analysis on the Factors Which Influence the Earnings of Micro and Small Business: Case at Blacksmith Metal Industry.

Academic Journal of Economic Studies, 5(1), 17-23. https://www.ceeol.com/search/article-detail?id=754945.

Tutiany, Lindawati, & Krisanti, P. (2017). *Bahan Ajar Keperawatan: Manajemen Keselamatan Pasien*. Pusat Pendidikan Sumber Daya Manusia Kesehatan Kementerian Kesehatan Republik Indonesia.