

Acceptance of Medical Resume Completion at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital

Penerimaan Pengisian Resume Medis di Rumah Sakit Jiwa Dr. Radjiman Wediodiningrat Lawang

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Abstract

The health system in Indonesia has undergone major changes with the enactment of National Health Insurance program. Medical resume have an important role in health insurance claims, so delayed and incomplete medical resume completion will disrupt the process of insurance claims. This study aimed to determine effects of perceived ease of use, perceived usefulness, and attitude on doctor's acceptance in completing medical resume at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital based on Technology Acceptance Model (TAM). TAM was used as a model in this study because medical resume is one form of information technologies that is still manual. Data collection for this study was conducted in March 2016 by using questionnaires given to 32 doctors at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital. The five-level Likert scale was used to measure each of the variables. The data were analyzed using Partial Least Square. The result showed that in general, physician acceptance at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital against medical resume charging is in the high category and has perceived usefulness and attitude in both categories, while perceived ease of use is in the medium category.

Keywords: Acceptance, health insurance, medical resume

Abstrak

Sistem kesehatan di Indonesia mengalami perubahan besar dengan diberlakukannya program Asuransi Kesehatan Nasional. Resume medis memiliki peran penting dalam klaim asuransi kesehatan, sehingga resume medis yang terlambat dan tidak lengkap akan mengganggu proses klaim asuransi. Penelitian ini bertujuan untuk mengetahui pengaruh persepsi kemudahan penggunaan, persepsi manfaat, dan sikap pada penerimaan dokter dalam menyelesaikan resume medis di Dr Radjiman Wediodiningrat Psychiatric Hospital Lawang berdasarkan *Technology Acceptance Model* (TAM). TAM digunakan sebagai model dalam penelitian ini karena resume medis merupakan salah satu bentuk teknologi informasi yang masih dilakukan secara manual. Pengumpulan data untuk penelitian ini dilakukan pada bulan Maret 2016 dengan menggunakan kuesioner yang diberikan kepada 32 dokter di Rumah Sakit Jiwa Dr Radjiman Wediodiningrat Lawang. Skala Likert lima tingkat digunakan untuk mengukur setiap item variabel. Data dianalisis dengan menggunakan *Partial Least Square*. Hasil penelitian menunjukkan bahwa secara umum, acceptance dokter di RSJ Dr. Radjiman Wediodiningrat Lawang terhadap pengisian resume medis masuk dalam kategori tinggi dan memiliki *perceived usefulness and attitude* yang dalam kategori baik, sedangkan *perceived ease of use* dalam kategori sedang.

Kata kunci: Penerimaan, asuransi kesehatan, resume medis

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Introduction

The health system in Indonesia has undergone major changes since the introduction of a health insurance system called National Health Insurance program. This program is a national program issued by the government on January 1st, 2014. According to Health Minister Decree No. 28 Year 2014, Social Security Agency (*Badan Penyelenggara Jaminan Sosial/BPJS*) is the organizing body of health insurance program as established by Act No. 24 Year 2011. This health insurance is now compulsory for all Indonesian citizens and foreigners who work at least six months in Indonesia.

National Health Insurance payment claims will be paid directly by the government. For hospital inpatient claims there are administrative requirements including a hospitalization permit, participant eligibility letter, medical resume and additional supporting evidences. If a medical record document is incomplete, then the claim will be lower.^{1,2} Currently, BPJS fund claims are submitted to BPJS and will first be verified by BPJS verifier. If approved by the verifier, the fund claims will be delivered to the hospitals.³

The medical resume plays an important role in the current BPJS era as a required document for a claim.⁴ BPJS claims require well-timed and complete medical resume documents as a part of hospital medical records. In practice, however, medical record documents may not have been completed well.

Doctors have an important role in completing medical record documents, including medical resume, which are detailed in Health Minister Decree No. 269 Year 2008 Article 6. This regulation explains that doctors, dentists, and/or certain additional health personnel are responsible for records and/or documents created as a medical record.² In reality, there are many doctors who fill out the medical resume incompletely. A previous study explained that medical record incompleteness was due to physician behavior.⁵⁻⁷

One of the barriers perceived by the hospital is incomplete medical resumes filled out by doctors. Doctors have an important role in completing medical resumes since they can only be filled by a doctor. Doctor's incompleteness in writing diagnoses included in the medical resume is also problematic for the hospital when making insurance claims.⁴

BPJS fund claims of Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital's inpatients unit are delayed each month due to medical resume files being incompletely filled by doctors. Additionally, most patients at the Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital (71% in the first half 2015) used BPJS facilities, so the hospital will suffer deprivation if BPJS fund claims are always later than the specified time.

Medical resumes are considered as one of the written

information forms. The behavior of doctors in charge of medical resumes will be examined on two aspects of the TAM, the benefits (perceived usefulness) and services (perceived ease of use) to resume charging medical doctor. This model has been used previously by researchers who have applied and tested it both within company and health environments.⁸ This study aimed to determine effects of perceived ease of use, perceived usefulness, and doctor's willingness to complete medical resumes at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital.

Method

This study was quantitative and the study type was explanatory with cross-sectional design. Data collection used a survey method which provided a direct questionnaire with a list of statements to all the medical doctors who filled resumes. Quantitative study was a process of finding knowledge which used data in the form of numbers.⁹ This study was an explanatory survey study that was based on relationship influence, or presence of causal relationship. Indicator variables included perceived ease of use (PEU) which described whether or not the medical resume was easy to learn and use.¹⁰ Another indicators used was the perceived usefulness (PU) which detailed whether medical resume charging aids communication, aids the process of making an insurance claim, protect case law, improve the quality of hospital services, and improves health statistic Attitude indicator (At) that is acceptance, interest behavior. Indicators Acceptance (Ac) is a real use, frequency of use, user satisfaction.¹¹ The study population included specialist and general practice doctors (32 doctors) who worked at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital and who filled medical resumes.

The data source used in this study was the primary data collected through questionnaires given to the respondents. The scale of measurement on the instrument used a Five-level Likert scale where a score of 5 signaled strongly agree (SA), 4 for agree (A), 3 for neutral (N), 2 for do not agree (D), and 1 for strongly disagree (SD).

The study instrument used in this study had previously been tested for validity and reliability. Analysis of the data in this study used Partial Least Square (PLS) with PLS SMART program. PLS was used because it could work efficiently with a smaller sample size compared to Structural Equation Modeling (SEM) for a more complex model. PLS also could analyze the measurement of reflective, formative and latent variables with one indicator without causing problems of identification.

Results

The study results conducted on the doctors who filled out the medical resume at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital showed an overview of age,

sex, education level, and tenure at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital. Respondent characteristics in this study indicated that all doctors were older than 31 years old and the majority (53%) were aged 31-40 years and females (78%). Most respondents attained bachelor degree (47%), and had up to 10 years of work experience. The characteristic features of the respondents were presented in Table 1.

The perceived ease of use variable measurement model determined that easy to learn indicator had the highest loading value (0.729). This showed that easy to learn indicator (X1.1) was the most dominant indicator variable in measuring perceived ease of use. Perceived usefulness measurement model showed that the insurance claim indicator (Y1.2) had the highest loading value (0.890). This showed that insurance claim indicators were the most dominant indicator in measuring perceived usefulness variable. Attitude variable measurement model showed that acceptance indicator (Y2.1) had the highest loading value (0.867). This indicated that acceptance was the most dominant indicator in measuring attitude variable. Acceptance variable measurement model showed that actual usage indicator has the highest

loading value (0.901). This indicated that the actual usage was the most dominant indicator in measuring acceptance. Figure 1 showed the line diagram model of this study.

The contribution of perceived ease of use on perceived usefulness was 8.8%, while the remaining 91.2% was contributed by other variables that were not addressed in this study. This might indicate that attitude diversity was able to be explained by perceived ease of use and perceived usefulness, perhaps 40.1%, or in other words, the contribution of perceived ease of use and perceived usefulness on the attitude was 40.1%, while the remaining 59.9% was contributed by other variables that were not covered in this study. R-square acceptance variable was worth 0.372 or 37.2%. It was clear that the diversity of acceptance was able to be explained by the perceived ease of use, perceived usefulness, and the attitude as high as 37.2%, or in other words, the contribution of ease of use, perceived usefulness and attitude on acceptance was 37.2%, while the remaining 62.8% was contributed by other variables that were not addressed in this study.

Table 2 showed that exogenous variables had a dominant influences on endogenous variables that could be recognized through the highest effect of grand total. The analysis showed that the variable that had the greatest effect of the grand total on attitude was perceived usefulness with a total effect of 0.472. The variable that had the greatest effect of grand total on acceptance was perceived usefulness with a total effect of 0.438. Thus, perceived usefulness had the most dominant influence on doctors' acceptance.

The results showed that charging resumes doctor in protecting doctors in legal cases, but not so with the smooth running of medical services. Hospital management should ensure that doctors are aware that service fluency, both for amount and timing of services, will be enhanced if medical resumes are fully completed in a

Table 1. Respondent Characteristics

Respondent	Characteristic	Total	Percentage (%)
Age	31-40	17	53.1
	41-50	11	34.4
	51-60	4	12.5
Sex	Male	7	21.9
	Female	25	78.1
Level of education	Doctor of Medicine (MD)	15	46.8
	Master	1	3.1
	Specialist	14	43.7
	Master & Specialist	2	6.4
Tenure	0-10	23	72.0
	11-20	6	18.7
	21-30	1	3.1
	31-40	1	3.1
	>40	1	3.1

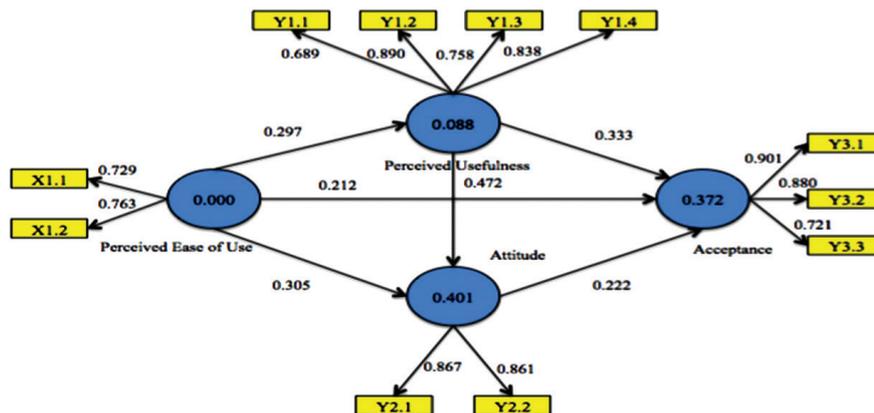


Figure 1. Partial Least Square Line Diagram

Table 2. Conversion Line Diagram

Exogenous	Med1	Med2	Endogenous	Direct	Indirect	Total	Grand Total
PEU			PU	0.297*	-	0.297	0.297
PEU	PU		AT	0.305*	0.140*	0.445	0.445
PU			AT	0.472*	-	0.472	0.472
PEU	PU		AC	0.212*	0.099*	0.510	0.409
PEU	AT		AC		0.068	0.279	
PEU	PU	AT	AC		0.031	0.243	
PU	AT		AC	0.333*	0.105*	0.438	0.438
AT			AC	0.222*	-	0.222	0.222

Note: PEU= Perceived Ease of Use, PU= Perceived Usefulness, AT= Attitude, AC= Acceptance.

timely manner.

The results showed that although most physicians accepted the need and are motivated to fill out medical resumes, the process was still considered a burden. The hospital management party should convince doctors that correct medical resume filling would provide benefits.

Discussion

The doctors who responded to the survey at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital were still relatively young and inexperienced and had worked less than 10 years, and mostly attained a doctor of medicine (MD). Most respondents were female doctors, which in line with a study conducted by Allen which showed that there are more female doctors today.¹² Doctors who were still at their productive age and had attained a high level of education were advantageous for Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital in completing medical resumes because employees at productive age had a greater potential in utilizing information systems. In addition, tenure will improve the perception of benefits a person receives.¹³ Commitment of doctor to maintain complete medical records is absolutely necessary.¹⁴ The longer the working period is, the higher the expectation on doctors to internalize the benefit of filling out medical records well.¹⁵

Perceived usefulness had the most dominant influence on doctors' attitude. This was in line with a previous study which suggested that the perceived usefulness was the most significant factor influencing physicians in using information technology.¹⁶ A person's belief that doing work which provided benefits for themselves will give a positive feeling in doing so.¹⁷

Perceived ease of use had positive and significant effect on perceived usefulness. It was clear that the higher the perceived ease of use, the higher the doctors' perceived usefulness. According to the doctors, completing medical resumes was easy to learn, did not take long time, did not require concentration, but also that it was not easy. Doctors also considered that completing medical resume had not been easy, but was helpful. Simple

form of medical resumes made the doctors complete medical resumes easily. If the hospital could help doctors to facilitate medical resume completion, then the benefits of completing medical resumes would be felt by the doctors.

Perceived ease of use impacts positively and significantly on doctor's attitude. It was clear that the higher the perceived ease of use, the more positive the attitude of doctors. Doctors at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital considered that completing medical resume was not easy, but doctors accepted the need and were interested in filling out the medical resume. Doctors at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital assumed that completing medical resume was not easy, and there were still some who thought that it interfered with their work, so hopefully, improving the perceived ease of use would improve the attitude in completing medical resume. Better performance results would be obtained if communication technology among doctors was easy to use.^{17,18}

Perceived usefulness affected positively and significantly on doctor's attitude. This explained the observation that the higher the perceived usefulness, the more positive the doctors' attitude. Most doctors said that generally, completing resumes is a useful means of communication, helps the insurance claim, protects against legal cases, sees the quality of hospital services, and helps to calculate the health statistics, but doctors also stated that completing medical resumes did not smoothen any service offered to them. Medical resumes as one of the BPJS claim requirements does not stand alone but as part of the medical record that can assist doctors in legal cases. This is in line with a previous study which suggested that the completeness of medical records can protect patients, doctors, and hospitals.¹⁹ Doctors claimed that completing medical resume disturbed their work, and there were some doctors who hesitated to remind their colleagues to fill the medical resume. Positive feeling would be obtained if someone had felt the benefits for himself.¹⁷

Perceived usefulness affected positively and significantly on doctors' acceptance. The higher the perceived

usefulness was, the higher the doctor's acceptance would be. Several previous studies also suggested that perceived usefulness would have a significant influence on doctors' acceptance.^{10,20} Doctors' perception was that completing medical resume did not aid in smooth delivery of the services, but that completing medical resumes was very beneficial in terms of legal protection. Doctors were willing and accepting the implementation of medical resume completion, but did not do it happily. Doctors possibly felt that they did not have any barriers in granting the services, or otherwise granting the services remained not smooth although medical resume had been filled completely and in a timely way.

Attitude affected positively and significantly on doctors' acceptance. The higher the attitude was, the higher the doctor's acceptance would be. This is line with a previous study that showed that attitude affected doctors' acceptance.¹¹ Most doctors accepted and were interested in filling medical resumes, but the completion process still disrupted the work of doctors, so the implementation was done unhappily. This disruption may be due to a difficult medical resume form or a large patient load. The willingness of doctors to use information technology was influenced by positive perceptions of doctors.²¹

Perceived ease of use impacts positively and significantly on doctors' acceptance. This showed that the higher the perceived ease of use was, the higher the physician acceptance would be. It is in line with a previous study which showed that ease of use affected doctors' acceptance to information technology.²² Most medical doctors stated that completing the resume was understandable and yet not too easy to do, so there were some doctors who were unhappy in completing the medical resumes. The ease in completing medical resume would lead the doctor to have the intention of filling it completely.

The three variables investigated were perceived ease of use, perceived usefulness and attitude affect acceptance. A significant and positive impact from those three variables on acceptance variable was shown. Perceived usefulness was the most dominant influence on acceptance. This gave a sense that to increase acceptance, the hospital management should pay more attention to aspects in perceived usefulness and attitude. The management of Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital must consider that some doctors did not consider that medical resumes increased the smoothness of services. Further investigation could clarify whether services worked more smoothly when insurance claims were running smoothly, or if, as some doctors suggested, services were not delivered smoothly even though insurance claims were running smoothly.

Conclusion

The results showed that in general, physician accept-

ance at Dr. Radjiman Wediodiningrat Lawang Psychiatric Hospital of medical resume charging is in the high category and has perceived usefulness and attitude in both categories, while perceived ease of use is in the medium category. Although acceptance, perceived usefulness and attitude scored in the category of high and good, the real value of all three is still close to the area being (except perceived usefulness that gets most response both), so there is still a need for further improvement.

References

1. Bouaud J, Séroussi B, Falcoff H, Venot A, editors. Design factors for success or failure of guideline-based decision support systems: an hypothesis involving case complexity. American Medical Informatics Association Annual Symposium Proceedings: American Medical Informatics Association. 2006.
2. Siti U. Hubungan kelengkapan dokumen rekam medis terhadap persetujuan klaim Jamkesmas oleh verifikator dengan sistem INA CBGs periode triwulan IV tahun 2011 di Rumah Sakit Islam Sultan Agung [Skripsi]. Semarang: Fakultas Kesehatan Universitas Dian Nuswantoro; 2013.
3. Dyah HN. Analisa keakuratan kode diagnosa utama pada pasien BPJS yang tidak terverifikasi di Rumah Sakit Permata Medika Semarang bulan Januari tahun 2014 [Skripsi]. Semarang: Fakultas Kesehatan Universitas Dian Nuswantoro, 2014.
4. Tyas A. Faktor-Faktor yang melatarbelakangi penolakan klaim BPJS oleh verifikator BPJS di RSJD DR. Amino Gondohutomo Provinsi Jawa Tengah Tahun 2015 [Skripsi]. Semarang: Fakultas Kesehatan Universitas Dian Nuswantoro; 2015.
5. Sugiyanto Z. Analisis perilaku dokter dalam mengisi kelengkapan data rekam medis lembar resume rawat inap di Rumah Sakit Ungaran tahun 2005 [Thesis]. Semarang: Program Pasca Sarjana Universitas Diponegoro; 2006.
6. Indar I, Naiem MF. Faktor yang berhubungan dengan kelengkapan rekam medis di Rumah Sakit Umum Daerah H. Padjonga DG. Ngalle Takalar. *Jurnal Admistrasi & Kebijakan Kesehatan Indonesia*. 2015; 2(02): 10 - 8.
7. Indriani D, Josef HK. Sistem pendukung keputusan klinis dalam pelaksanaan INA-CBG di RSUP DR. Sardjito Yogyakarta (model penerimaan teknologi oleh klinisi). *Jurnal Forum Informatika Kesehatan Indonesia*. 2014; 1.
8. Chismar WG, Wiley-Patton S, editors. Does the extended technology acceptance model apply to physicians. *System Sciences, 2005 Proceedings of the 36th Annual Hawaii International Conference on*; 2005: IEEE.
9. Darmawan D. Metode penelitian kuantitatif. Bandung: PT Remaja Rosdakarya; 2014: p.37
10. Saputra E. Analisis penerimaan sistem informasi manajemen rumah sakit umum daerah Bangkinang menggunakan metode technology acceptance model (TAM). *Jurnal Sains dan Teknologi Industri*. 2014;10(2): 229-35.
11. Hu PJ, Chau PY, Sheng ORL, Tam KY. Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*. 1999; 16(2): 91-112.
12. Allen I. Women doctors and their careers: what now. *British Medical*

- Journal. 2005; 331(7516): 569-72.
13. Santoso B. Pengaruh perceived usefulness, perceived ease of use, dan perceived enjoyment terhadap penerimaan teknologi informasi (studi empiris di Kabupaten Sragen). *Jurnal Studi Akuntansi Indonesia*. 2012; 1-15.
 14. Indriani D, Kusnanto H, Mukti AG, Kuntoro K. Dampak biaya laboratorium terhadap kesenjangan tarif INA-CBGs dan biaya riil diagnosis leukemia. *Kesmas: Jurnal Kesehatan Masyarakat Nasional*. 2013; 7(10): 440-6.
 15. Akbar FHN, Kirana S. Hubungan antara masa kerja dokter dengan kelengkapan pengisian data rekam medis oleh dokter yang bertugas di Puskesmas Kecamatan Karawang Barat Kabupaten Karawang Periode 1-31 Oktober 2011 [Thesis]. Semarang: Fakultas Kedokteran Universitas Diponegoro; 2012.
 16. Walter Z, Lopez MS. Physician acceptance of information technologies: role of perceived threat to professional autonomy. *Decision Support Systems*. 2008; 46(1): 206-15.
 17. Sari MW, Baridwan Z. Sikap penggunaan mobile commerce: modifikasi teori technology acceptance model. *Jurnal Ilmiah Mahasiswa FEB*. 2013; 1(2): 1-21.
 18. McGowan BS, Wasko M, Vartabedian BS, Miller RS, Freiherr DD, Abdolrasulnia M. Understanding the factors that influence the adoption and meaningful use of social media by physicians to share medical information. *Journal of Medical Internet Research*. 2012; 14(5): e117.
 19. Atika RR. Analisa kualitatif dan kuantitatif ketidaklengkapan pengisian dokumen rekam medis pasien rawat inap kasus bedah pada tindakan herniotherapy di RSUD Tugorejo Semarang Periode Triwulan 1 Tahun 2014 [Skripsi]. Semarang: Fakultas Kesehatan Universitas Dian Nuswantoro; 2014.
 20. Gagnon MP, Ghandour EK, Talla PK, Simonyan D, Godin G, Labrecque M, et al. Electronic health record acceptance by physicians: Testing an integrated theoretical model. *Journal of Biomedical Informatics*. 2014; 48: 17-27.
 21. Hsiao JL, Chen RF. Critical factors influencing physicians' intention to use computerized clinical practice guidelines: an integrative model of activity theory and the technology acceptance model. *BioMed Central Medical Informatics and Decision Making*. 2016; 16(1): 1.
 22. Pynoo B, Devolder P, Voet T, Sijnave B, Gemmel P, Duyck W, et al. Assessing hospital physicians' acceptance of clinical information systems: a review of the relevant literature. *Psychologica Belgica*. 2013; 53(2).