

# Internal and External Factors That Influence Behaviour of Physicians in Charge of Service (DPJP) within Completeness of JKN Inpatient Discharge Summary in St. Carolus Hospital

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**Abstract:** The incomplete discharge summary can allow inaccuracies in the diagnosis code and affect the INA-CBGs payment rates, thereby impacting the JKN patient claim process. Completeness of filling discharge summaries is the responsibility of Physicians in Charge of Services (DPJP) as a direct implementer of services in hospitals. This study aims to analyze the influence of internal and external factors on DPJP's behavior within completeness JKN inpatient discharge summaries. This research is a quantitative study with a cross-sectional research design. The population in this study is DPJP as many as 46. The sample used a saturated sample. Based on the results of multiple linear regression analysis, internal factors (gender, personality) and external factors (education, work environment) simultaneously have no significant effect on DPJP's behavior in completeness JKN inpatient discharge summaries (p-value 0.070). While partially internal factors (personality) significantly influence DPJP's behavior in filling JKN discharge summaries (p.value 0.033) and other variables do not. In conclusion, there is no influence between internal and external factors simultaneously on DPJP's behavior in filling out discharge summaries. While partially internal factors (personality) significantly influence the behavior of DPJP in filling JKN discharge summaries at Carolus Hospital.

## 1 INTRODUCTION

In early 2014, government had implemented health insurance for the public called JKN. The National Health Insurance (JKN) is carried out using a mandatory social health insurance mechanism based on Law Number 40 of 2004 concerning the National Social Security System with the aim of fulfilling the basic needs of adequate public health provided to everyone who has paid their contributions or contributions paid by the Government. The National Health Insurance (JKN) is organized by the Health Insurance Administering Agency or called BPJS (SJSN Advocacy, 2011).

The problems that occur at this time in the JKN claim process are inseparable from the incompleteness of discharge summaries. The incompleteness of this discharge summary can allow inaccuracies in the diagnosis code and affect the INA-CBGs payment rates, thereby impacting the

obstruction of the JKN patient claim process. In the implementation, the completeness of discharge summaries is the responsibility of the Physicians in Charge of Services (DPJP) as the direct executor of services in hospitals, the compliance behavior in filling out discharge summaries in full is the responsibility of physicians and other health professionals (Menkes, 2014).

Based on previous research related to the completeness of inpatient discharge summary carried out by Ardhika at Mulia Hati Wonogiri Hospital in 2014, it showed that the complete review of reporting information filled in the incoming diagnosis items as many as 58 (70%) resumes filled in, final diagnostic items were 58 (70%), surgery items 53 (64%), historical summary items 35 (42%), examination results and supporting items 28 (34%), development items during treatment 23 (28%), and patient condition items by 50 (60%). The completeness of the authentication review filled in the items date was 32

(38%), the physicians signature item was 33 (40%), and the physicians' name item was 47 (57%) (Ardhika, 2014)

This was also at Fatmawati General Hospital in 2015 by Apriyantini, obtained from 100 documents, 98% were obtained for complete primary diagnosis, 39% for incomplete secondary diagnosis, 95% for the complete primary procedure (Apriyantini, 2016).

Problems related to completing discharge summary form filling also still occur in 2017, conducted by Elvisa at Prof. Orthopedic Hospital Dr. Soeharso Surakarta, showed the completeness of important reports on JKN patient discharge summary forms on the final diagnosis items by 77% and on the history items of disease by 76%, completeness of authentication on JKN patient discharge summary forms on physician's name items by 77%, physicians's signature 71% and date items 75% (Elvisa, 2017).

Some of the previous studies above prove that the problem of incomplete inpatient discharge summary still occurs in several hospitals every year. In implementing this discharge summary form must be filled out by physicians/ dentists who carry out medical practice in accordance with Permenkes No. 269 / MENKES / PER / III / 2008. Thus, problems related to the incompleteness of this discharge summary can be directly influenced by the behavior of the Physicians in Charge of Services (DPJP) in terms of filling out (Permenkes, 2008).

The behavior of physicians in filling out inpatient discharge summaries is influenced by various factors. Internal and external factors become one of the most fundamental factors in influencing behavior that explains the development of behavior from inside and outside the individual. One of internal factor that influences behavior is gender, this is reinforced in research conducted by Puspito at Hermina Hospital Depok in 2011, the results of the analysis showed that physicians with female gender tended to complete higher discharge summary completion with an average completeness by 84.4% compared to men with an average of 74.4% (Puspitosari, 2011).

This is supported by research conducted by Rina in 2016 at Queen Latifa General Hospital. The results show that there is a significant correlation between gender variables and physician behavior in filling out discharge summaries (p.value = 0.02), alpha 5% (Rina, 2016).

Internal factors that can also influence behavior are personality. Based on research conducted by Nasyroh in 2017, the Pearson correlation between personality (Big Five Personality) and employee performance behavior is 0.362 with a significance

score (p.value = 0.049), alpha 5%. It states that there is a correlation between personality (big five personalities) with employee performance behavior (Nasyroh,2017).

In addition, external factors can also influence the behavior of physicians in filling out discharge summaries, in this case, explained by variables of education and work environment. Based on the results of previous studies conducted by Warsi in RSUD dr. Soeratno Gemolong Sragen in 2012 obtained the results of a statistical test of the correlation between the type of education with the behavior of filling out the discharge summary, showing a significance value (p.value = 0.047), alpha 5%. Therefore, there is a correlation between the type of education with the behavior of filling out discharge summaries (Warsi, 2012).

Then, work environment factors/ work conditions on physicians' behavior, it was proven in previous research conducted by Nelfiyanti at Haji Hospital Medan in 2009 with the results of statistical tests showing significance values (p.value = 0.01), alpha 5%. This shows that there is a correlation between the work environment/ working conditions and physicians' behavior within the completeness JKN discharge summary (Nelfiyanti, 2009).

Based on observations related to completing JKN inpatient discharge summaries in Sint Carolus Hospital in the 2018 period, with an average of 424 JKN inpatient visits each month, in fact, there are still incomplete discharge summaries with an average monthly 31.8% or 135 files for the DPJP category (Specialist), while around 3.3% or as many as 14 files for General Physicians (Carolus, 2018).

Based on the description above, the researcher interested in conducting research with the title "Internal and External Factors That Influence the Behavior of Physicians in Charge of Services (DPJP) in Completeness JKN Inpatient Discharge Summary in St. Carolus Hospital".

## 2 RESEARCH METHOD

This research is a quantitative study with a crosssectional research design. The population in this study is DPJP as many as 46. The sample used a saturated sample. The research hypothesis was tested using multiple regression analysis.

The approach taken in this study is a quantitative approach to the research design using observational descriptive-analytic studies. Describing the internal factors (gender, personality) and external factors (education, work environment), from other aspects,

are analytic because researchers want to know the effect of internal and external factors on DPJP's behavior within completeness JKN inpatient discharge summary in St. Carolus Hospital (Notoatmodjo, 2017).

### 3 RESULT AND DISCUSSION

#### 3.1 Univariate Analysis of Internal Factors (Gender, Personality) and External (Education, Work Environment)

##### 3.1.1 Internal Factors (Gender and Personality)

Table 1: Gender and Age.

| Characteristic |             | N  | Percentage (%) |
|----------------|-------------|----|----------------|
| Gender         | Male        | 29 | 63,0           |
|                | Female      | 17 | 37,0           |
| Age            | 28-49 years | 35 | 76,1           |
|                | 50-60 years | 7  | 15,2           |
|                | 61-71 years | 4  | 8,7            |

Source: Primary Data Analysis, 2019

Based on table 1, a total of 29 (63.0%) respondents were male and 17 (37.0%) female. The majority of respondents have an age range of 28-49 years by 76.1% (35 respondents), 15.2% (7 respondents) aged 50-60 years and 8.7% (4 respondents) aged 61-71 years.

It can be concluded that 46 respondents in St. Carolus are mostly 29 (63%) men and most have an age range of 28-49 years with a total of 35 respondents (76.1%).

The distribution of respondents' answers based on statement items related to Personality variables is described in the following table:

Table 2: Distribution of Respondents' answers related to Personality (item 1).

| Statement item 1                                     | Highly Agree | Agree      |
|--|--------------|------------|
| I like to be in groups when I have free time at work | 13 (28,3%)   | 33 (71,7%) |

Source: Primary Data Analysis, 2019

Based on item statement 1, out of 46 respondents there were 33 (71.7%) respondents answered Agree and 13 (28.3%) answered Highly Agree.

Table 3: Distribution of Respondents' answers related to Personality (item 2).

| Statement item 2                        | Highly Agree | Agree      |
|---|--------------|------------|
| I can quickly make a decision if needed | 8 (17,4%)    | 38 (82,6%) |

Source: Primary Data Analysis, 2019

Based on item statement 2, out of 46 respondents there were 38 (82.6%) respondents answered Agree and 8 (17.4%) answered Highly Agree.

Table 4: Distribution of Respondents' answers related to Personality (item 3).

| Statement item 3                        | Highly Agree | Agree      | Less Agree |
|---|--------------|------------|------------|
| I enjoy working with friends to do work | 12 (26,1%)   | 33 (71,7%) | 1 (2,2%)   |

Source: Primary Data Analysis, 2019

Based on item statement 3, out of 46 respondents there were 33 (71.7%) respondents answered Agree, 12 (26.1%) answered Highly Agree and 1 (2.2%) answered Less Agree.

Table 5: Distribution of Respondents' answers related to Personality (item 4).

| Statement item 4                   | Highly Agree | Agree      | Less Agree | Disagree |
|------------------------------------|--------------|------------|------------|----------|
| I always friendly to my co-workers | 11 (23,9%)   | 25 (54,3%) | 9 (19,6%)  | 1 (2,2%) |

Source: Primary Data Analysis, 2019

Based on item statement 4, out of 46 respondents, there were 25 (54.3%) respondents answered Agree, 11 (23.9%) answered Highly Agree, 9 (19.6%) answered Less Agree and 1 (2.2%) answered Disagree.

Table 6: Distribution of Respondents' answers related to Personality (item 5).

| Statement item 5               | Highly Agree | Agree      |
|--------------------------------|--------------|------------|
| I am responsible for what I do | 27 (58,7%)   | 19 (41,3%) |

Source: Primary Data Analysis, 2019

Based on item statement 5 out of 46 respondents there were 19 (41.3%) respondents answered Agree and 27 (58.7%) answered Highly Agree.

Table 7: Distribution of Respondents' answers related to Personality (item 6).

| Statement item 6                                    | Highly Agree | Agree      |
|---|--------------|------------|
| I do every job well as expected by the organization | 19 (41,3%)   | 27 (58,7%) |

Source: Primary Data Analysis, 2019

Based on item statement 6, out of 46 respondents, there were 27 (58.7%) respondents answered Agree, 19 (41.3%) answered Highly Agree.

Table 8: Distribution of Respondents' answers related to Personality (item 7).

| Statement item 7                         | Highly Agree | Agree      |
|--|--------------|------------|
| I always careful in completing every job | 11 (23,9%)   | 35 (76,1%) |

Source: Primary Data Analysis, 2019

Based on item statement 7, out of 46 respondents, there were 35 (76.1%) answered Agree and 11 (23.9%) answered Highly Agree.

Table 9: Distribution of Respondents' answers related to Personality (item 8).

| Statement item 8  | Highly Agree | Agree      | Less Agree | Disagree |
|---|--------------|------------|------------|----------|
| I am calm in dealing with everything that happens at work | 9 (19,6%)    | 27 (58,7%) | 7 (15,2%)  | 3 (6,5%) |

Source: Primary Data Analysis, 2019

Based on item statement 8, of the 46 respondents there were 27 (58.7%) respondents answered Agree, 9 (19.6%) answered Highly Agree, 7 (15.2%) answered Less Agree and 3 (6.5%) answered Disagree.

Table 10: Distribution of Respondents' answers related to Personality (item 9).

| Statement item 9                | Highly Agree | Agree      | Less Agree | Disagree |
|---------------------------------|--------------|------------|------------|----------|
| I able to control emotions well | 17 (37,0%)   | 21 (45,7%) | 5 (10,9%)  | 3 (6,5%) |

Source: Primary Data Analysis, 2019

Based on item statement 9, out of 46 respondents, there were 21 (45.7%) respondents answered Agree,

17 (37.0%) answered Highly Agree, 5 (10.9%) answered Less Agree and 3 (6.5%) answered Disagree.

Table 11: Distribution of Respondents' answers related to Personality (item 10).

| Statement item 10                                       | Highly Agree | Agree      |
|---|--------------|------------|
| I easily accepted the new rules set by the organization | 7 (15,2%)    | 39 (84,8%) |

Source: Primary Data Analysis, 2019

Based on item statement 10, out of 46 respondents there were 39 (84.8%) respondents answered Agree and 7 (15.2%) answered Highly Agree.

Table 12: Distribution of Respondents' answers related to Personality (item 11).

| Statement item 11  | Highly Agree | Agree      |
|--|--------------|------------|
| I am actively looking for information that fits with my work | 20 (43,5%)   | 26 (56,5%) |

Source: Primary Data Analysis, 2019

Based on item statement 11 (I am actively looking for information that fits with my work), of the 46 respondents there were 26 (56.5%) respondents answered Agree and 20 (43.5%) answered Highly Agree.

Conclusions can be drawn from all items related to personality statement, showing that the highest percentage of answers is in item 10 (I easily accepted the new rules set by the organization) with alternative answers Agree of 84.8%. This shows that respondents tend to more easily accept new rules set by the organization, and can be categorized into personality types Openness to a new experience.

### 3.1.2 External Factors (Education and Work Environment)

Table 13: Distribution of Physician Education in St. Carolus Hospital.

| Type of education | Total | Percent % |
|-------------------|-------|-----------|
| Spesialist        | 41    | 89,1      |
| Subspesialist     | 5     | 10,9      |
| Total             | 46    | 100       |

Source: Primary Data Analysis, 2019

Table 13 shows that of the 46 DPJP respondents in St. Carolus, the number of respondents in the type of specialist education had 41 (89.1%), while the number of respondents in the type of subspecialty education was 5 (10.9%). So, it can be concluded that respondents with the type of specialist education in St. Carolus is more than subspecialist respondents.

The distribution of respondents' answers based on statement items related to work environment variables is described in the following table:

Table 14: Distribution of Respondents' answers related to Work Environment (item 1).

| Statement item 1   | Highly Agree | Agree      | Less Agree |
|--|--------------|------------|------------|
| The hospital environment supports the carrying out of discharge summary filling work | 14 (30,4%)   | 31 (67,4%) | 1 (2,2%)   |

Source: Primary Data Analysis, 2019

Based on item statement 1, out of 46 respondents there were 31 (67.4%) respondents answered Agree, 14 (30.4%) answered Highly Agree and 1 (2.2%) answered Less Agree.

Table 15: Distribution of Respondents' answers related to Work Environment (item 2).

| Statement item 2   | Highly Agree | Agree      | Less Agree |
|--|--------------|------------|------------|
| Facilities which available at the hospital supporting the implementation of completeness discharge summary | 15 (32,6%)   | 30 (65,2%) | 1 (2,2%)   |

Source: Primary Data Analysis, 2019

Based on item statement 2, out of 46 respondents there were 30 (65.2%) respondents answered Agree, 15 (32.6%) answered Highly Agree and 1 (2.2%) respondent answered Less Agree.

Table 16: Distribution of Respondents' answers related to Work Environment (item 3).

| Statement item 3   | Highly Agree | Agree      | Less Agree | Disagree |
|--|--------------|------------|------------|----------|
| Physicians office is uncomfortable in carrying out discharge summary filling | 10 (21,7%)   | 27 (58,7%) | 8 (17,4%)  | 1 (2,2%) |

Source: Primary Data Analysis, 2019

Based on item statement 3 (Physicians' workspace settings are less comfortable in carrying out medical resume filling), from 46 respondents there are 27 (58.7%) respondents answered Agree, 10 (21.7%) answered Highly Agree and 8 (17.4%) answered Less Agree and 1 (2.2%) answered Disagree.

Table 17: Distribution of Respondents' answers related to Work Environment (item 4).

| Statement item 4   | Agree    | Less Agree | Disagree   | Strongly Disagree |
|--|----------|------------|------------|-------------------|
| Workflow in the hospital causes the implementation of completeness discharge summary not optimal yet | 4 (8,7%) | 5 (10,9%)  | 31 (67,4%) | 6 (13,0%)         |

Source: Primary Data Analysis, 2019

Based on item statement 4, of the 46 respondents there were 4 (8.7%) respondents answered Agree, 5 (10.9%) answered Less Agree, 31 (67.4%) answered Disagree and 6 (13.0%) answered Strongly Disagree.

Table 18: Distribution of Respondents' answers related to Work Environment (item 5).

| Statement item 2  | Highly Agree | Agree     | Less Agree | Disagree   | Strongly Disagree |
|---|--------------|-----------|------------|------------|-------------------|
| Hospital Management had been monitoring the completeness of filling out discharge summary documentation | 1 (2,2%)     | 9 (19,6%) | 5 (10,9%)  | 25 (54,3%) | 6 (13,0%)         |

Source: Primary Data Analysis, 2019

Based on item statement 5, from 46 respondents there were 9 (19.6%) respondents answered Agree and 1 (2.2%) answered Highly Agree, 5 (10.9%) answered Less Agree, 25 (54.3%) answered Disagree and 6 (13.0%) answered Strongly Disagree.

The respondents' distribution above shows the highest percentage is in item 1 (The hospital environment supports in carrying out of discharge summary filling work) with alternative answers

Agree of 67.4%. It can be concluded that 46 respondents tended to agree that the hospital environment was supportive in carrying out of discharge summary filling work.

The highest percentage for alternative answers Disagree is in item 4 (Workflow in the hospital causes the implementation of completeness discharge summary not optimal yet) of 67.4%. It can be concluded that about 31 (67.4%) of respondents disagreed that the workflow in the hospital causes the implementation of completeness discharge summary not optimal yet.

The statement of Disagreement is also found in item 5 (Hospital Management had been monitoring the completeness of filling out discharge summary documentation) by 25 (54.3%). It can be concluded that 46 respondents tended to disagree that hospital management monitored the completeness of filling out discharge summary documentation.

### 3.2 Regression Model of Internal Factors and External on DPJP's Behavior within Completeness JKN Discharge Summary

Regression analysis was performed using multiple linear regression analysis. This analysis was conducted to see the predictions and effects of each independent variable on DPJP's behavior within the completeness JKN discharge summary simultaneously. The best model selection is chosen by the backward method.

Based on the selection for multivariate modeling, there are several variables that enter the regression model as follows:

Table 19: Multiple Regression Linear Model.

| Variable    | B      | Sig   |
|-------------|--------|-------|
| Constant    | 38,571 | 0,000 |
| Gender      | 1,559  | 0,204 |
| Personality | 0,400  | 0,033 |

Source: SPSS Output, 2019

Interpretation on Table 19. above, the value (a) = 38,571 and regression coefficient value (b1) = 1,559, regression coefficient (b2) = 0,400.

$$Y = a + b_1.X_1 + b_2.X_2$$

Based on the results above, the equation can predict DPJP's behavior within the completeness

discharge summary by using gender and personality variables. The meaning of the coefficient, as follows:

1. Gender does not significantly influence DPJP's behavior within the completeness JKN discharge summary, with a significance of 0.204. So, there is no contribution of the influence given by gender to DPJP's behavior.
2. Personality has a significant effect on DPJP's behavior within the completeness JKN discharge summary, with a significance of 0.033. Each personality value increases by 1 point and other variables are considered fixed, then the DPJP's behavior within the completeness discharge summary will increase by 0,400.

It can be concluded that personality variables have the biggest influence on DPJP's behavior within the completeness JKN discharge summary with a value of B = 0,400.

Table 20: Anova.

| Model | F     | Sig.  |
|-------|-------|-------|
|       | 2,832 | 0,070 |

Based on Table 20. F test results (simultaneously) it can be seen that the significance value (P-value) is equal to = 0.070. P-value is 0.070 > 0.05, it can be concluded that there is no significant effect between internal and external factors simultaneously on DPJP's behavior within completeness JKN inpatient discharge summary.

## 4 CONCLUSIONS

Characteristics of respondents with male gender in St.Carolus Hospital were more in number with 29 (63.0%) compared to 17 (37.0%) women. The majority of respondents work in St. Hospital. Carolus in the age range of 28-49 years, amounting to 35 (76.1%).

Based on the distribution of respondents' answers related to Personality. This shows that most of DPJP in St. Carolus Hospital has the personality type of Openness to new experience as many as 39 (84,8%).

The type of education at St Carolus Hospital tends to be dominated by a specialist with a total of 41 (89.1%) compared to subspecialists who only amount to 5 (10.9%).

Based on the distribution of respondents' answers related to the Work Environment, most respondents at St. Carolus Hospital agreed that the work

environment of the hospital was supportive in carrying out discharge summary filling work with a percentage of 67.4%.

However, this has not been supported by the hospital management in monitoring the completeness of filling out discharge summary documentation, as many as 25 (54.3%) of 46 respondents answered Disagree.

The conclusion from the results of multiple linear regression test shows that there is no simultaneous influence of internal factors (gender, personality) and external factors (education, work environment) on DPJP's behavior within completeness JKN discharge summary in St. Carolus Hospital with a significance value of 0.070. While partially Personality variables have a significant effect on DPJP's behavior within completeness JKN inpatient discharge summary with a significance value of 0.033.

## 5 SUGGESTION

In improving the performance of health practitioners, especially the Physicians in Charge of Services (DPJP) related to the completeness of clinical documentation, especially discharge summary, it needs a process of monitoring and evaluation as well as improving workflow so that it can launch a clinical documentation implementation system at St. Carolus Hospital.

A strict policy is given regarding discipline and physicians' compliance in filling out discharge summary, both in the form of reward/punishment. This will be easy because it is supported by the personality type of DPJP's behavior in St. Carolus Hospital who tends to easily accept the new rules set by the organization.

It was expected that further research development, should be focusing more on the influence of behavior which affects the performance.

## REFERENCES

- Advocacy, SJSN, 2011. Handbook of JKN Socialization within SJSN. Jakarta
- Menkes, 2014., INA-CBG System Technical Instruction. J Craniofac Surg. 2014;19(4):1089–91.
- Ardhika, 2014, Analysis of Discharge Summary Completion for Patient of Hyperplasia of Prostate. Middle Java: Mulia Hati Wonogiri Hospital.
- Apriyantini, D., 2016. Correlation Analysis of Discharge Summary Completion toward INA-CBG's Bills

- Standard in Teratai Inpatient Installation. Jakarta: Fatmawati Hospital. 2016; 2:194–203.
- Elvisa, 2016. Analysis of Completeness of JKN Inpatient Discharge Summary in Orthopaedic Hospital Prof. Dr. Soeharso. Surakarta
- Permenkes, 2008. 269 Menkes/Per/III/2008. About Medical Record. Jakarta
- Puspitosari, D., 2011. Analysis of Individual Characteristics and Extrinsic Motivation on Physicians Performance in Completion Discharge Summary. Jakarta: Hermina Hospital Depok
- Yulida, Rina, 2016. Correlation of Physicians Characteristics with Completeness of Operation Report. Yogyakarta: Queen Latifa Hospital.
- Nasyroh, Muslim, 2017. Correlation between Personality (Big Five Personality Model) with Employee Performance. Jakarta: Polytechnic APP.
- Maryati, Warsi, 2014. Correlation between Physicians Characteristics with Completeness of Discharge Summary. Surakarta: APIKES Citra Medika.
- Nelfiyanti., 2009. The Effect of Nurse Knowledge and Motivation on Completeness of Nursing Care Form. North Sumatera: Haji Medan Hospital
- Carolus S., 2018. Recapitulation of Incompleteness of JKN Inpatient Discharge Summary in Period of 2018. Central Jakarta.
- Notoatmodjo, 2017. Research Design. Jakarta: PT Rineka Cipta.