

FACTORS AFFECTING THE GROSS MORTALITY RATE (GDR) AND NET DEATH RATE (NDR) IN HOSPITAL

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ABSTRACT

Hospital statistics on patient mortality rates are needed to assess the quality of hospital services. This study aims to determine the factors that influence the Gross Mortality Rate and Net Mortality Rate. The research method used is a literature study. Data analysis was carried out by extracting data and synthesizing data from the various previous research literature. The results showed that the Gross Mortality Rate and Net Mortality Rate changed from year to year, either decreasing or increasing. The factors that influence it are the severity of the disease, facilities and infrastructure, the availability of medical personnel, the performance of health services, and the accuracy of therapy or treatment. The conclusion is that the calculation of the GDR and NDR statistics can be an evaluation of the quality of hospital services. Therefore, hospitals must carry out internal evaluations regularly to reduce the Gross Mortality Rate and Net Mortality Rate so that they can be used in making decisions for hospitals.

Keywords: hospital statistic; gross death rate (gdr); net death rate (ndr)

INTRODUCTION

NDR and GDR are important information in hospitals in evaluating care more than or equal to 48 hours in a certain time period, including the quality of medical services and can be used to plan future health services, these indicators are compared with national standards. The GDR National Standard is < 45 or < 4.5 per year while the NDR national standard is < 25 or < 2.5 per year (Rustiyanto, 2010). The phenomenon that occurs shows that it is rare to get ideal figures and according to the standards set by the Government for these two figures. Many factors influence the death, the severity of a disease, accidents and the readiness of care services, as well as the accuracy of therapy or treatment (Rustiyanto, 2010).

Based on the results of Simanjuntak et al.'s research (2019) using the Indonesian Health Department standard, the GDR value at Sinar Husni Hospital Medan in 2017-2018 was 1.37‰ and 2.02‰, respectively. From these data, the GDR value increased in 2018 by 0.64% in this case the contributing factor was due to the declining quality of hospital services. Meanwhile, for the NDR value, respectively, from 2017-2018, the figures were 5.90‰ and 9.30‰ from the data, the NDR value increased in 2018 by 3.39% in this case it will affect the contributing factor, namely the performance of service officers which decreases. Meanwhile, for the NDR value, respectively, from 2017-2018, the figures were 5.90‰ and 9.30‰ from the data, the NDR value increased in 2018 by 3.39% in this case it will affect the contributing factor, namely the performance of service officers which decreases. This will affect the quality of the hospital, will make patients hesitate in seeking treatment and can make things that are not desirable. Similarly, in other studies that analyzed the value of GDR and NDR, the results obtained that the GDR and NDR numbers had reached the Barber Johnson standard at the Panti Waluyo Hospital Surakarta (Arini, 2020). The contributing factor was the improvement in the quality of services provided by employees to patients. Meanwhile, the NDR rate always decreases per year, the contributing factor is the

improvement in the quality of services provided by employees to patients. This will make the patient more confident in doing treatment at the hospital and will reduce things that are not desired by the patient. Based on these data and facts, it is necessary to conduct a Literature Study of Factors Affecting the Gross Death Rate (GDR) and Net Death Rate (NDR) in Hospital Inpatients to assess and determine the factors causing deaths that occur in hospitals, so that it can be used as a reference material in reducing the high rates of GDR and NDR in hospitals.

METHOD

This type of research uses Literature Review, which is research that reviews various literatures that have been published by academics or other researchers previously related to the topic that we will examine. The data used in this study is secondary data obtained not from direct observation, but from the results of research that has been carried out by previous researchers. The source of research data is primary data in the form of literature articles or journals that are relevant to mortality data based on GDR and NDR. Data collection techniques by means of data search, data screening and quality research. The process of data processing by means of data extraction and data synthesis. And data analysis using descriptive analysis techniques.

RESULTS AND DISCUSSION

Nilai Gross Death Rate (GDR) Dan Net Death Rate (NDR) berdasarkan standar Depkes RI, Barber Johnson dan faktor-faktor yang mempengaruhi

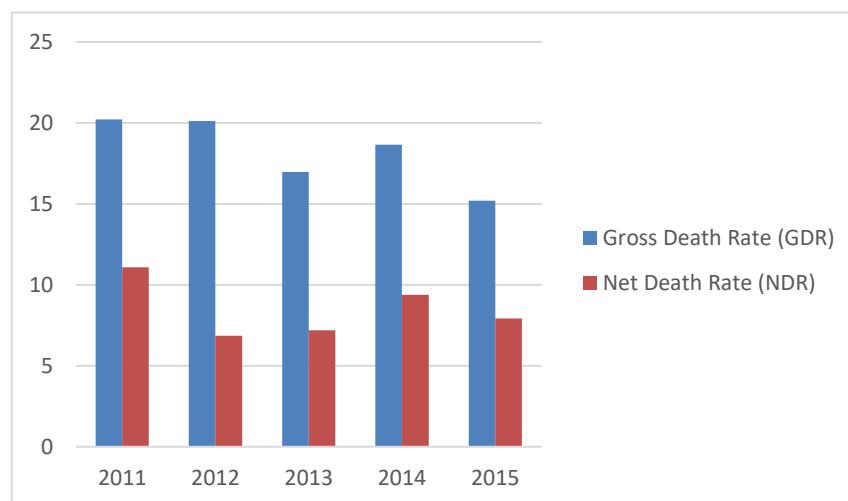


Figure 1. Primary and Pramdi Research Calculation Results (2017)

Based on the results of Pratama and Parmadi's research (2017), it is known that the Gross Death Rate (GDR) and Net Death Rate (NDR) at PKU Muhammadiyah Surakarta Hospital in 2011-2015 obtained GDR numbers, respectively, namely 20.22%, 20.11% , 16.97%, 18.66%, 15.19%. Meanwhile, the NDR values in 2011-2015 were 11.09%, 6.86%, 7.13%, 9.39%, 7.92%. The highest GDR and NDR figures occurred in 2011, but in the following year the GDR and NDR values decreased, this was due to an increase in the quality of services provided by officers to patients.

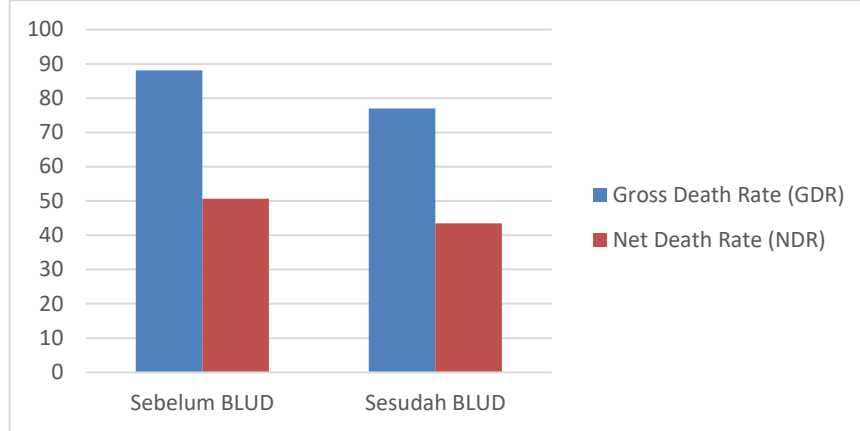


Figure 2. Research Calculation Results Chrishartoyo, et al (2017)

Based on the research of Chrishartoyo, et al (2017) it is known that the Gross Death Rate (GDR) and Net Death Rate (NDR) values at the Dr. Moewardi Surakarta obtained the GDR figure before the BLUD in 2004-2009, the GDR figure was 88.10% and after the BLUD in 2010-2015 it was 76.95%. Meanwhile, the NDR value before BLUD in 2004-2009 was 50.63% and after BLUD in 2010-2015 it was 43.5%. The GDR and NDR values after BLUD on average decreased, this was due to the severity of the disease.

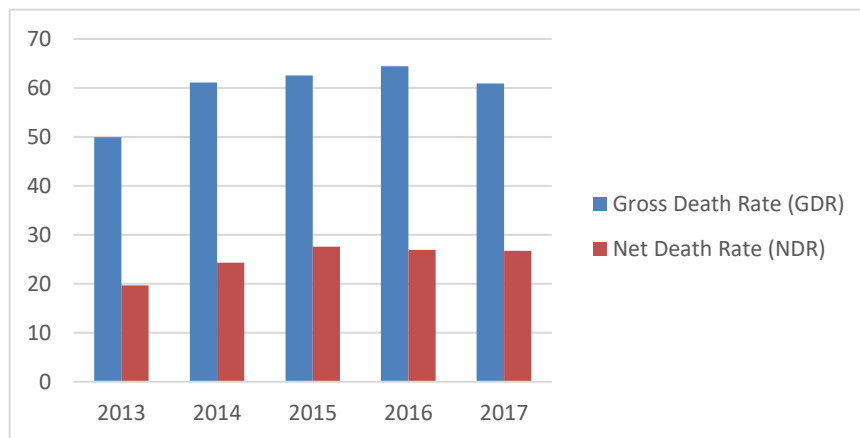


Figure 3. Research Calculation Results Noviar, et al (2019)

Based on the results of research by Noviar, et al (2019), it is known that the Gross Death Rate (GDR) and Net Death Rate (NDR) values of the Waled Regional General Hospital, Cirebon Regency with the population in the form of GDR and NDR records. The GDR figures in a row from 2013-2017 are 49.95%, 61.10%, 62.57%, 64.43%, 60.90%. Meanwhile, the NDR values from 2013-2017 were 19.71%, 24.30%, 27.60%, 26.94%, 26.71%. From the data obtained, the value of GDR and NDR from 2013-2017 always increases, this is due to an increase in the quality of services provided by officers to patients.

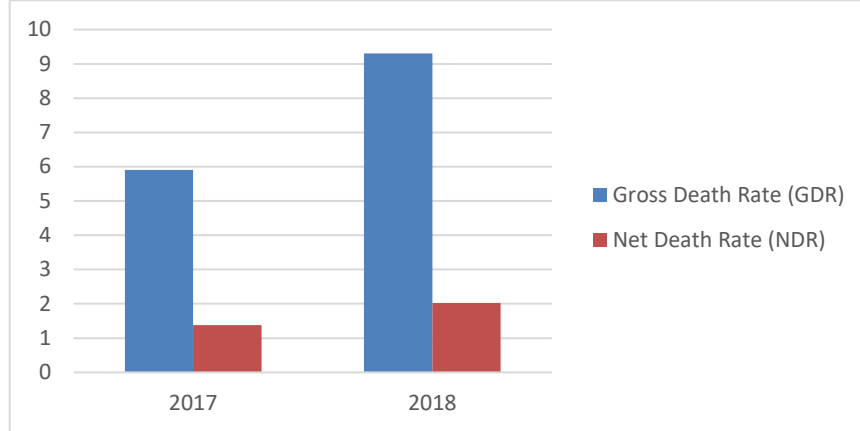


Figure 4. Simanjuntak and Angelia's Research Calculation Results (2019)

Based on the results of Simanjuntak and Agelia's research (2019) with a population of recapitulation data for the 2017-2018 period, it is known that the Gross Death Rate (GDR) and Net Death Rate (NDR) at Sinar Husni Hospital Medan in 2017 the GDR value is 5.91‰ and NDR 1.38‰. Meanwhile, in 2018 the GDR value was 9.30‰ and NDR 2.02‰. From this research, the value of GDR and NDR from 2017-2018 has increased, this is due to an increase in the quality of services provided by officers to patients.

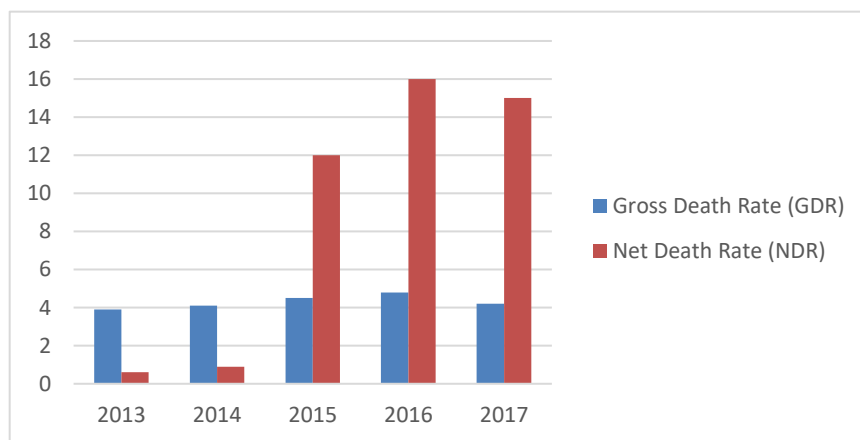


Figure 5. Research Calculation Results Ayuningrum, et al (2019)

Based on the results of Ayuningrum et al.'s research (2019), it is known that the Gross Death Rate (GDR) and Net Death Rate (NDR) at the XYZ Regional General Hospital in 2013-2017 the GDR values are 3.9%, 4.1%, respectively. , 4.5%, 4.8%, and 4.2%. As for the NDR values in a row in 2013-2017, namely 0.6%, 0.9%, 12%, 16%, 15%. The results show that the GDR and NDR values have increased, this is due to an increase in the quality of services provided by officers to patients.

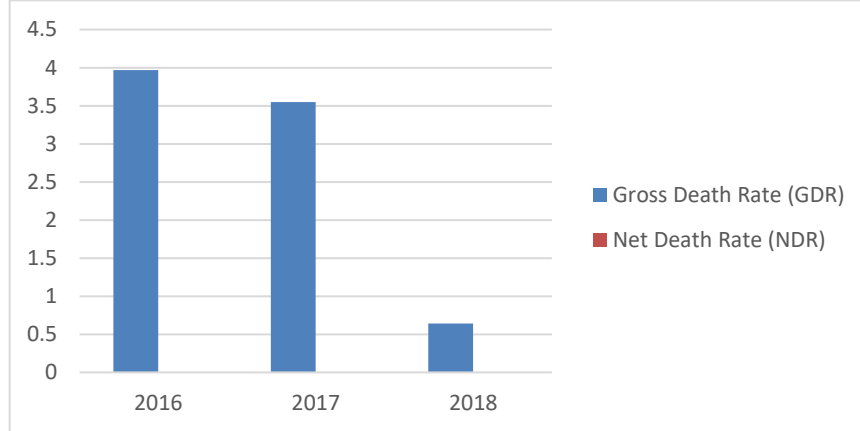


Figure 6. Research Calculation Results Wiguna, et al (2019)

Based on the results of research by Wiguna, et al (2019), it is known that the Gross Death Rate (GDR) and Net Death Rate (NDR) values of RSIA Dwi Sari Lubuklinggau in 2016-2018 the GDR values are 3.97%, 3.55%, respectively. 0.64%. Meanwhile, the NDR value for 2016-2018 is 0%. The results of the study showed that the GDR and NDR numbers always decreased, this was due to the accuracy of therapy/treatment.

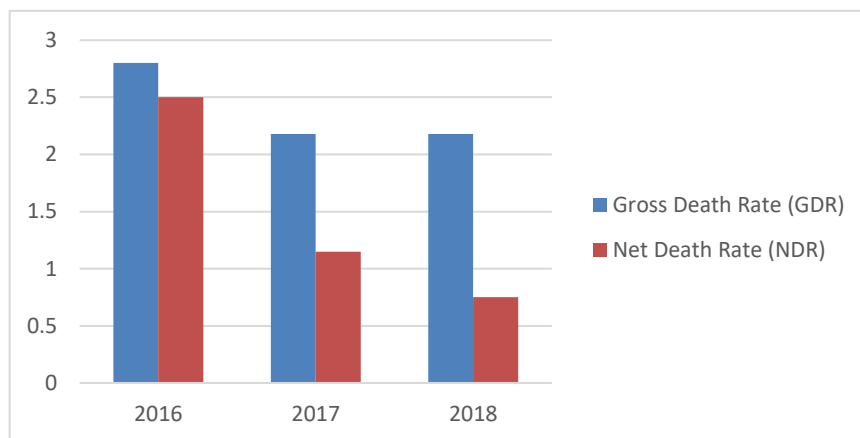


Figure 7. Arini and Nurningtyas Research Calculation Results (2020)

Based on the research results of Arini and Nurningtyas (2020) it is known that the Gross Death Rate (GDR) and Net Death Rate (NDR) at Panti Waluyo Hospital in 2016-2018 the GDR values are 2.80%, 2.18%, respectively. 2.18%. Meanwhile, the NDR values in a row in 2016-2018 were 2.5%, 1.175%, 0.75%. The results of the study can be seen that the value of GDR and NDR per year has decreased, this is due to an increase in the quality of services provided by officers to patients.

Based on research by Pratama and Parmadi (2017) at PKU Muhammadiyah Hospital in 2011-2015, it is known that the factors that affect the Gross Death Rate (GDR) and Net Death Rate (NDR) are clinical services in the ER, such as the availability of medical personnel & facilities. existing infrastructure as well as an increase in service quality. While the results of the research by Chrishartoyo, et al (2017) at the Dr. Regional General Hospital. Moewardi Surakarta in 2004-2015 it is known that the factors that affect the Gross Death Rate (GDR) and Net Death Rate (NDR) are

delays in treatment time for patients with complaints of serious illness, which then late in getting hospital treatment caused the patient to have died. and the provision of services and treatment to patients. After changing its status to BLUD, RSUD Dr. Moewardi improves the quality of service in various divisions so that it has a positive impact on the hospital. One of the positive impacts is that it can reduce the high average GDR and NDR numbers so that the GDR and NDR values after BLUD are low.

Furthermore, the results of Noviar's research (2019) revealed that the factors that affect the Gross Death Rate (GDR) and Net Death Rate (NDR) values, namely the quality of services provided by employees to patients when patients are hospitalized are still not good. From these factors, it can affect the high GDR and NDR values because the quality of service provided by employees to patients is not good. So that the GDR and NDR values at the Waled Regional General Hospital are still above the ideal standard. Then the results of Simanjuntak and Agelia's research (2019) at Husni Hospital Medan in 2017-2018 it is known that the factors that affect the Gross Death Rate (GDR) and Net Death Rate (NDR) 36 are the service performance of officers who are already good and service quality which is good. In the results of Ayuningrum et al.'s research (2019) at the XYZ Regional General Hospital, it is known that the factors that affect the Gross Death Rate (GDR) and Net Death Rate (NDR) values, namely the quality of service provided by officers to patients are good.

In the results of the research by Wiguna, et al (2019), it is known that the factors that affect the Gross Death Rate (GDR) and Net Death Rate (NDR) are health workers providing appropriate and good services. And finally, the results of research by Arini and Nurningtyas (2020) at the Panti Waluyo Hospital Surakarta in 2016-2018 it is known that what affects the Gross Death Rate (GDR) and Net Death Rate (NDR) are factors that increase the quality of services provided by employees to employees. patients and conducting mandatory training provided to employees, seminars, regeneration of retired employees and employees who are not productive so that the quality of service provided to patients is getting better every year. With these efforts the GDR and NDR values at Panti Waluyo Hospital Surakarta in 2016-2018 are always below the Barber Johnson standard and the value is always low.

CONCLUSION

Based on a literature study of journals with Barber Johnson standards, it can be seen that all Gross Death Rate (GDR) and Net Death Rate (NDR) values based on Barber Johnson standards are ideal, in Ayuningrum et al. (2019), Wiguna, et al. (2019) research, and Arini and Nurningtyas (2020), are in accordance with Barber Johnson's standards. Factors that affect the value of Gross Death Rate (GDR) and Net Death Rate (NDR) are health workers who provide health services, improving good performance in providing services, accuracy of officers in providing therapy or treatment, conducting mandatory training in order to improve quality service.

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