

Development of official statistics models for analysis of population sectoral data in Indragiri Hilir Regency

Achmad Isya Alfassa ¹, Sudrajat ¹, and Djaka Marwasta ^{1*}

¹Doctoral Program of Population Study, Postgraduate School of Gadjah Mada University, Yogyakarta

Abstract. Indragiri Hilir Regency is one of the regencies located in Riau Province which has a population of 658,025 thousand in 2022. The population consists of several groups ranging from children, adolescents, adults and the elderly. Indragiri Hilir Regency has three regional public hospitals, namely the Puri Husada Tembilahan Hospital, the Tenku Sulung Pulau Kijang Hospital, and the Raja Musa Sungai Guntung Hospital. Each hospital has official statistics consisting of sectoral data according to the data owned by the hospital. This study aims to show and analyze the existing official statistics and create an official statistics model for analysis of population sectoral data in health analysis. The method used is explanatory method and descriptive statistical analysis method and descriptive statistical analysis. The results of this study show that every regional public hospital in Indragiri Hilir Regency has official statistics which consist of sectoral data owned by the agency, the official statistics model is the answer to become a reference in carrying out sectoral data analysis for policy making in the field of analysis health.

1 Introduction

Indragiri Hilir Regency is one of the districts located in Riau Province and has a variety of unique features ranging from rich natural resources, tourism and religion. Indragiri Hilir Regency has a population of 658,025 thousand people consisting of various ethnicities and cultures ranging from Malay tribes, Banjar tribes, Minang tribes, and others [1]. The population situation in Indragiri Hilir Regency is very unique and diverse, resulting in the existence of several very unique demographic cultures for data collection in sectoral statistical population data collection.

With the increasingly rapid development of educational science, more and more new knowledge is being born which can then be used by researchers and practitioners. Some sciences that can develop along with the times are statistics and population science. These two disciplines are very closely related, especially in the science of Population Statistics, where the science of population statistics discusses techniques for analyzing and analyzing population data and making it into official population analysis in official statistics or official statistics using population statistical analysis [2].

Official statistics is a branch of statistical learning that explains and explains statistical indicators both nationally and internationally. One of the indicators that can be developed in official statistics is population and demographic indicators. So, to clarify and explain these indicators, it is necessary to develop an official statistical model for population data, especially in the health sector. In Indragiri Hilir Regency, there are three main regional agencies that use population data, especially in providing health services, namely Puri Husada Tembilahan Regional Hospital, Tengku Sulung

Pulau Kijang Regional Hospital, and Raja Musa Sungai Guntung Regional Hospital.

This research aims to examine the official statistics model for analyzing sectoral population data used in the health sector in Indragiri Hilir Regency. This research will show official statistics from Puri Husada Hospital, official statistics from Tengku Sulung Hospital, Kijang Island, official statistics from Raja Musa Sungai Guntung, and official statistics from Sectoral Population Data for Health Analysis in Indragiri Hilir Regency.

Statistics are data obtained by collecting, processing, presenting and analyzing as well as a system that regulates the interrelationships between elements in the administration of statistics [3]. In the government element, statistics are divided into 3 types, namely basic statistics, sectoral statistics and special statistics.

Basic statistics are carried out by an agency where basic statistics are carried out by means of censuses, surveys, administrative product complications, and other methods in accordance with developments in science and technology. Sectoral statistics are statistical data organized by government agencies in accordance with the scope of their duties and functions, either independently or in collaboration with bodies that have duties and functions in the field of statistics. The implementation of sectoral statistics must be carried out jointly with the central statistical agency if the collection of sectoral statistical data is obtained by means of a census. Special statistics are statistical activities carried out by the community, whether institutions, organizations or individuals, either independently or in collaboration with central statistical bodies [3].

Sectoral statistical data is data obtained from the implementation of sectoral statistical activities in accordance with the duties and functions of the

*Corresponding author: jakamar@ugm.ac.id

organizer of sectoral statistical data collection. Sectoral statistical data is data from departments or agencies obtained from various methods such as censuses, surveys, or administrative product complications. In addition, sectoral statistical data is used to create a regional development plan in accordance with field conditions at the location where sectoral statistical data is collected.

Population is a group of people who inhabit a certain place or area at a certain time. Residents of a country or region are defined as people who live in that area or people who are legally entitled to live in that area or people who have official documents to live there. In sociology, a population is a group of people who occupy a certain geographic and spatial area [4]. In Indonesia, the definition of population has been included in the 1945 Constitution where “Indonesian residents are Indonesian citizens and foreign citizens residing in Indonesia” [5].

Population data in general is a collection of datum (information) obtained or obtained from observations of population data in the form of numbers [6]. In Indonesia itself, it is specifically mentioned in Law no. 24 of 2013 article 1 point 9 states that population data is individual data or structured aggregate data as a result of population registration and civil registration activities [7]. Population data is often used in population statistical analysis. Population statistics is a science that studies two branches of science, namely statistics and population science [2].

Official Statistics is an explanation of statistical data indicators used in statistical analysis. Official statistics are also indicator data obtained from data collection using census methods, surveys and administrative product complications. Official statistics are very useful in planning and implementing activities, especially in the health sector.

2 Research methods

This research uses an explanatory method, where the explanatory method is a method that is used to examine the applicability of a particular theory, model or hypothesis. This research is also supported by statistical methods using descriptive statistical analysis and statistical narrative analysis. Descriptive statistical analysis is data in the form of numbers, images, or narratives which aims to explain the general picture of descriptives and is supported by descriptive narrative analysis to explain phenomena in the field.

3 Results and discussion

Table 1 is a list of regional general hospitals located in Indragiri Hilir Regency. It is known that Indragiri Hilir Regency has three regional general hospitals located in three different locations. Puri Husada Regional Hospital is located in the Regency Capital, namely Tembilahan, which is the main health center in Indragiri Hilir Regency, Puri Husada Regional Hospital is a referral hospital for several hospitals such as Tengku Sulung

Regional Hospital which is located in Reteh District and Raja Musa Regional Hospital which is located in Kateman District.

Table 1. Number of Regional General Hospitals in Indragiri Hilir Regency.

No	Nama	Lokasi	Status
1	RSUD Puri Husada	Tembilahan	State Hospital
2	RSUD Tengku Sulung	Pulau Kijang	State Hospital
3	RSUD Raja Musa	Sungai Guntung	State Hospital

Source : Primary Data, 2023

Official statistics at Puri Husada Tembilahan Regional Hospital consist of 4 main data sectors, where these four data are used as sectoral data analysis, especially at Puri Husada Regional Hospital in explaining the condition of population demographics recorded in data collection at the population registration service at Puri Husada Tembilahan Regional Hospital with the territorial area of Tembilahan City. and surrounding.

Table 2. Official Statistics RSUD Puri Husada Tembilahan.

No	Main Data	Data Type	Data Code	Utility
1	Human Resources Data	Numerical	Sort it out	Increasing Human Resources Quality
2	Service Coverage Data	Numerical	Sort it out	Increasing Services
3	10 Biggest Inpatient Diseases data	Numerical	Sort it out	Increasing treatment
4	10 Biggest Causes of Death	Numerical	Sort it out	Increasing treatment

Source : Gender and Children sort it out data RSUD Puri Husada Tembilahan [7]

Official statistics from Tengku Sulung Island Kijang Regional Hospital provide 3 main indicator data where the territorial area of Tengku Sulung Island Kijang Regional Hospital is in the southern part of Indragiri Hilir Regency which is centered in Reteh District.

Table 3. Official Statistics RSUD Tengku Sulung Pulau Kijang.

No	Main Data	Data Type	Data Code	Utility
1	Human Resources Data of RSUD Tenku Sulung Pulau Kijang	Numerical	Sort it out	Increasing Human Resources Quality
2	10 Biggest Inpatient Diseases	Numerical	Sort it out	Increasing Treatment
3	Patient Visits Data	Numerical	Sort it out	Increasing Services

Source : Gender and Children sort it out data RSUD Tengku Sulung Pulau Kijang

Tabel 4. Official Statistics RSUD Raja Musa Sungai Guntung.

No	Main Data	Data Type	Data Code	Utility
1	Human Resources Data of RSUD Tenku SULung Pulau Kijang	Numerical	Sort it out	Increasing Human Resources Quality
2	10 Biggest Inpatient Diseases	Numerical	Sort it out	Increasing Treatment
3	Patient Visits Data	Numerical	Sort it out	Increasing Services

Source : Gender and Children sort it out data RSUD Raja Musa Sungai Guntung

Official statistics from Raja Musa Sungai Guntung Regional Hospital provide 3 main indicator data where the territorial area of Raja Musa Sungai Guntung Regional Hospital is in the northern part of Indragiri Hilir Regency which is centered in Kateman District.

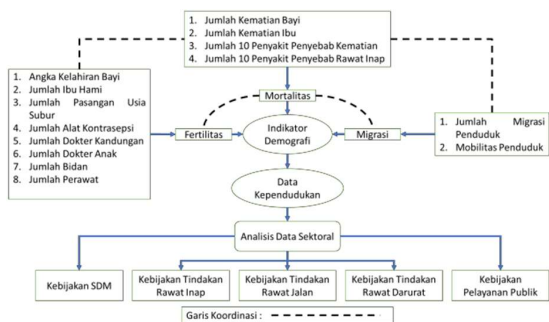


Fig. 1. Official statistics model for sectoral population data analysis for health analysis.

Figure 1 shows the official statistics model for analyzing sectoral population data for health analysis. The official statistics model aims to show the relationship between sectoral data, especially in the population sector, for health analysis in achieving government program implementation targets, especially in public services at regional general hospitals in Indragiri Hilir Regency.

The Official Statistics model can be used as a reference by government institutions, especially hospitals which directly have duties and functions in implementing public services in the health sector based on data. Sectoral data analysis aims to help the implementation of activity programs to be more structured and focused and to achieve the expected goals.

This research was supported by a final project recognition grant (*Hibah RTA*) from University of Gadjah Mada. Thank you to UGM and the parties involved in this research.

References

1. Anomimous, Indragiri Hilir in Figures for 2022. (2022)
2. Alfassa, A. I., Journal of Demography, Ethnography and Social Transformation, **2** (2), 76-85. (2022)
3. Anomimous, Law Number 16 of 1997 concerning Statistics (1997)
4. Sugiharyanto and Satya, N., Geographic Information System Application to Create Digital Population Map (Case of Tawangmangu Sub-District), (2006)
5. Anomimous, 1945 Constitution Article 26 Paragraph 2, (No Date)
6. Al Fassa, A. I. Self Organizing Maps and Webgis Application using R and QGIS for Population Analysis of 100 Countries in the World. (2018).
7. Anomimous, Law no. 24 of 2013, (2013)
8. Anomimous, Gender and Children Disaggregated Data at Puri Husada Tembilahan Regional Hospital (2022)
9. Anomimous, Gender and Children Disaggregated Data at RSUD Tengku Sulung Pulau Kijang (2022)
10. Anomimous, Gender and Children Disaggregated Data at RSUD Raja Musa Sungai Guntung (2022)