



## Analysis of Medical Laboratory Technologist Needs Based on Workload at Sentosa Baru Health Center

Cindy Salsabila\*

Administrasi dan Kebijakan Kesehatan, Fakultas Kesehatan Masyarakat, Universitas Islam Negeri  
Sumatera Utara, Kampus IV, Kecamatan Medan Tuntungan, Kota Medan, Sumatera Utara

\*Corresponding Author: [cindy\\_salsabila@gmail.com](mailto:cindy_salsabila@gmail.com)

### Abstract

*Primary Health Care is a technical implementing unit (UPT) from the district or city health office which has responsibility for administering individual health units (UKP) and public health units (UKM). Health providers at puskesmas prioritize and prioritize promotive and preventive efforts in their working areas. Medical Laboratory Technologist (ATLM) is one type of health worker in Law Number 36 of 2014 concerning Health Workers. he purpose of the study was to see how adequate the needs of health workers are, especially the fulfillment of medical laboratory experts at the Sentosa Baru Health Center by using the workload method. This study uses a qualitative method through interviews. The sample/respondents of the study were ATLM institutions at the Sentosa Baru Health Center with a population of the Sentosa Baru Health Center. Data were collected in primary and secondary forms. Based on the findings in the study, ATLM at the Sentosa Baru Health Center has a working time of 37.5 hours/week so that for 1 working day the ATLM is 6.25 hours or rounded up to 6 hours/day. With a total of 2 ATLM employees. The need for medical laboratory experts at the Sentosa Baru Health Center is ideal and the proportion of types of work is good. This is in accordance with the Regulation of the Minister of Health of the Republic of Indonesia No. 37 of 2012 concerning the Organization of the Central Public Health Laboratory.*

**Key Words:**, Workload, Medical Laboratory Technologist, Human Resources of Health

*How to Cite:* Cindy Salsabila. (2024). Analysis of Medical Laboratory Technologist Needs Based on Workload at Sentosa Baru Health Center. *Journal of Media, Sciences, and Education*, 3(1), 1–4.  
<https://doi.org/10.36312/jomet.v3i1.78>



<https://doi.org/10.36312/jomet.v3i3.78>

Copyright©2024, Author (s)

This is an open-access article under the [CC-BY-SA License](#).



## Introduction

Based on the Regulation of the Minister of Health No. 75 of 2014, the definition of a Community Health Center is a technical implementation unit (UPT) of a district or city health office that is responsible for organizing health and health development for individual health units (UKP) and community health units (UKM). Health providers at community health centers prioritize and prioritize promotive and preventive efforts in their work areas. With the responsibility carried out by the Community Health Center as a promotive and preventive organizer in the health sector, the Community Health Center must have qualified health human resources in their respective fields. The goal is to create equality and health welfare in the work area of the Community Health Center. Health Human Resource Planning can be a determinant in the quality of primary health services, in addition to the purpose of this HR planning. The results of work will be of better quality if the human resources are also of better quality. Human resources now play an increasingly important role in the success of a job that is done, because the better the human resources, the more competent and quality the work results produced. Therefore, Human Resources are one of the most vital elements for a job.

The serious efforts made by the government in supporting the implementation of development and health efforts can be seen from the formation of a Law that regulates health workforce planning. Law No. 36 of 2014 concerning Health Workers, Article 14 paragraph 2 states that health workforce planning is arranged in stages (starting from health service facilities, Regency/City Regional Governments, Provincial Regional Governments, to the Government nationally) based on the availability of health workers and the need for health services evenly and comprehensively.

There are many methods that can be used to calculate the need for Health Human Resources, including using the workload method. Workload is the average frequency of each type of work over a certain period of time, in addition, with the workload, you can also see how heavy or light a job is carried out by the employee so that later it can affect the division of labor by superiors. Workload can be seen from the activities or activities carried out by staff while working, both directly and indirectly, as well as other activities such as personal activities and unproductive activities. Medical Laboratory Technologist (ATLM) is one type of health worker in Law Number 36 of 2014 concerning Health Workers. The profession of Medical Laboratory Technologist, previously known as Health Analyst or Medical Analyst, is a health worker who has the competence to analyze human body fluids and tissues to produce information about individual and community health. (8)

The purpose of this study was to see how adequate the needs of health workers are, especially the fulfillment of medical laboratory experts in Health Centers using the workload method. By referring to working hours, work units, and the number of health analyst workers in Health Centers.

## Research Methods

This study uses a qualitative case study method, based on the workload of medical laboratory technology experts (ATLM) at the Sentosa Baru Health Center. The population in this study was the Sentosa Baru Health Center and the sample or respondent was 1 Civil Servant who had the position of medical laboratory expert at the Sentosa Baru Health Center. This study uses an interview method by taking 1 respondent who works as a medical laboratory technology expert at the Sentosa Baru Health Center.

The data collected in this study used 2 types of data, namely primary data and secondary data. Primary data was obtained from the results of direct interviews conducted with laboratory technology experts at the health center. Secondary data, data obtained or collected from various existing sources. Secondary data in this study were obtained from SISDMK, previous research journals, laws, health regulations, health ministerial decrees (Kepmenkes) and books.

## Research Results

Based on the results of an in-depth interview conducted with an ATLM at the Sentosa Baru Health Center, information was obtained in the form of working hours, main tasks carried out, number of workers and service standards to complete one examination. Working hours are the length of time a person works in a day and each health worker has a normal working time each week ranging from 37.5 - 40 hours. Based on the findings of the study for ATLM at the Sentosa Baru Health Center, the working hours are 37.5 hours/week so that for 1 working day of the ATLM is 6.25 hours or rounded up to 6 hours/day. Usually this ATLM takes 15 minutes to examine the specimen and this also applies during Covid-19.

The main tasks that are usually carried out by ATLM at the Health Center are simple examinations, namely HB, KGD, Uric acid, cholesterol, HIV, hepatitis, planotest. In addition, the ATLM also calibrates the equipment, checks control samples, makes reagents. When Covid-19 ATLM gets additional tasks such as conducting PCR examinations. For ATLM employees in the Puskesmas laboratory, there are 2 people. Then for the standard of examination of a sample, the Puskesmas laboratory has followed the minimum service standards stipulated in Permenkes 43 of 2016. Puskesmas laboratory services during the Covid-19 period refer more to the regulations of the Indonesian Minister of Health Decree of 2020 concerning Guidelines for the prevention and control of Covid-19.

## Discussion

Public Health Services (Puskesmas) human resources consist of Health Workers and

Non- Health Workers. The type and number of Health Workers and Non-Health Workers are calculated based on workload analysis, taking into account the number of services provided, the population and its distribution, characteristics of the work area, the size of the work area, the availability of other first-level health service facilities in the work area, and the division of work hours. Sentosa Baru Puskesmas is a public health center located in Sei Kera Hilir I Village, Medan Perjuangan District, Medan City, North Sumatra Province. The Sentosa Baru Puskesmas was first established in 1975 on Jalan Sentosa Baru Number 22. (1) This Puskesmas has 9 work areas which include:

- a) Sei Kera Hilir I Village.
- b) Sei Kera Hilir II Village.
- c) Sei Kera Hulu Village.
- d) Pahlawan Village.
- e) Pandau Hilir Village.
- f) Sidorame Barat I Village.
- g) Sidorame Barat II Village.
- h) Sidorame Timur Village.
- i) Tegal Rejo Village

Based on the Minister of Health Regulation No. 33 of 2015 concerning the preparation of Human Resource needs planning, one of the methods used to calculate HR needs is by analyzing the workload.(2) Health HR Workload analysis aims to plan Human Resource needs at the service level according to the workload so that adequate Human Resource needs are obtained. Workload analysis is usually also used for planning Human Resource needs in Health facilities. There are 4 factors that influence the workload such as the main tasks of health workers, additional tasks, working hours and the number of patient visits.

There are 8,516 ATLM officers spread across Indonesia/1000 residents and some Health Centers in Indonesia only have 1 medical laboratory expert, which is still unevenly distributed.(3) Based on SISDMK data, there were 544 ATLMs spread across North Sumatra Province/1000 residents. Meanwhile, the sufficiency for ATLM personnel at the Sentosa Baru Health Center is 2 experts. If we look at the Covid-19 case at that time, with 2 experts and a large number of PCR examinations, the Health Center was still experiencing a shortage. This was due to the spike in Covid-19 cases that could not be predicted, for that the Health Center assigned 1 nurse to be employed in the Health Center laboratory section so that specimen results could be sent quickly and the Health Center could immediately provide referrals to a more qualified level of service. Meanwhile, the professional education standard for ATLM at this Health Center is D-III. This is not in line with the research conducted by Sari F and Hatta on the analysis of health analyst needs based on workload. In the study, it was explained that the need for analyst personnel based on the results of the WISN formula calculation was 1 person, while the number of analyst staff/personnel was 3 people and 1 nurse who was also in the laboratory. With an average working hours per day of 7 hours. (4) Looking at the statement that the Sebelat Putri Hijau Nursing Health Center had an excess of laboratory personnel, while the Sentosa Baru Health Center was in the right proportion for the needs of medical laboratory technology experts (health analysts).

## Conclusion

After conducting research on the need for ATLM personnel based on the workload method at the Sentosa Baru Health Center, data was found that the need for medical laboratory health experts at the Sentosa Baru Health Center was ideal and the proportion of types of work was good. This is in accordance with the Regulation of the Minister of Health of the Republic of Indonesia No. 37 of 2012 concerning the Implementation of Public Health Center Laboratories.(2)

## Reference

1. Sari F, Hatta M. Analisis Perencanaan Kebutuhan Sumber Daya Manusia Kesehatan (Tenaga Analisis) Berdasarkan Beban Kerja Dengan Metode Workload Indicators of Staffing Need (WISN) Di Puskesmas Keperawatan Sebelat Putri Hijau. J Kesehat STIKes Prima Nusantara Bukittinggi [Internet]. 2017;8(1):27–32. Available from: <http://ejurnal.stikesprimanusantara.ac.id>
2. Sinurat D. Universitas Sumatera Utara Poliklinik Universitas Sumatera Utara. J Pembang Wil Kota. 2018;1(3):82–91.
3. Permenkes No. 33 Tahun 2015 Tentang Pedoman Penyusunan Perencanaan Kebutuhan SDM Kesehatan.
4. Romadhona YS, Siregar KN. Analisis sebaran tenaga kesehatan puskesmas di indonesia berdasarkan peraturan menteri kesehatan nomor 75 Tahun 2014 tentang Puskesmas. Jurnal Kesehatan Manarang. 2018 Dec 30;4(2):114-21.
5. Sari F, Hatta M. Analisis Perencanaan Kebutuhan Sumber Daya Manusia Kesehatan (Tenaga Analisis) Berdasarkan Beban Kerja Dengan Metode Workload Indicators of Staffing Need (WISN) Di Puskesmas Keperawatan Sebelat Putri Hijau. J Kesehat STIKes Prima Nusantara Bukittinggi [Internet]. 2017;8(1):27–32. Available from: <http://ejurnal.stikesprimanusantara.ac.id>
6. Pamungkas G, Kusmiati E. Analisis Beban Kerja Sumber Daya Manusia (SDM) Kesehatan di Puskesmas Ciwidey Kabupaten Bandung Menggunakan Metode Workload Indicators Of Staffing Need (WISN). Jurnal Sehat Masada. 2021 Jan 14;15(1):93-101.
7. Permenkes No. 33 Tahun 2015 Tentang Pedoman Penyusunan Perencanaan Kebutuhan SDM Kesehatan.
8. <http://sisdmk.kemkes.go.id/home>
9. Undang-Undang No. 36 Tahun 2014 Tentang Tenaga Kesehatan.
10. Permenkes Republik Indonesia No. 75 Tahun 2014 Tentang Pusat Kesehatan Masyarakat
11. Arifin, A., & Sjaaf, A. C. (2018). *Analisis Kebutuhan Tenaga Ahli Teknologi Laboratorium Medik Berdasarkan Beban Kerja di Unit Laboratorium Klinik Rumah Sakit Santa Maria Pekanbaru*. Jurnal ARSI: Administrasi Rumah Sakit Indonesia, 4(3), Article 4. <https://doi.org/10.7454/arsi.v4i3.4013>
12. Noor, H. L., Darul Ridzuan, I. S., & Isnaini, V. J. (2024). *Analysis Calculating of Hospital Labor Requirements Using the Workload Analysis Method*. Proceedings of the International Conference on Nursing and Health Sciences, 5(1). <https://doi.org/10.37287/picnhs.v5i1.2786>
13. Amiroh, K., & Tahono. (2013). *Workload analysis in Laboratory Installation*. Indonesian Journal of Clinical Pathology and Medical Laboratory, 20(1), 64-69
14. Susanto, F. (2024). *Analysis of Workload in Hospital: A Bibliometric Study*. Jurnal Aisyah: Jurnal Ilmu Kesehatan. (vol/issue)
15. Use of the WISN method to assess the health workforce requirements for the high-volume clinical biochemical laboratories. Stankovic, S. & Santric Milicevic, M. (2022). *Human Resources for Health*, 19(Suppl 1), 143. <https://doi.org/10.1186/s12960-021-00686-w>