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Training on Pivot Tables and Dashboard Creation for Medical Record Professionals at 'Aisyiyah General Hospital Padang

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Abstract

Pivot tables are one of the features found in Microsoft Excel. With pivot tables, data can be presented based on the selected categories. Data in a pivot table is presented in columns or rows. To make the data easily understandable for anyone reading it, the data can be displayed in the form of a dashboard. There is a lot of patient data stored in the database of 'Aisyiyah General Hospital Padang. This data can be utilized by medical record personnel as reports for management decision-making in the hospital. To ensure easy understanding, the data is presented in an attractive dashboard format. However, the professional medical record staff in the hospital and other medical personnel do not yet have the ability to create dashboards using pivot tables. Therefore, training is needed to implement this. The training will be held at 'Aisyiyah General Hospital Padang for two days, consisting of theoretical material as well as practical exercises based on data obtained from the hospital's database. The training conducted should proceed smoothly, and participants should be able to understand pivot tables, dashboards, and how to create them. Initially targeted at medical record personnel, the training program was also attended by other medical staff, including doctors, training department heads, and the hospital director. The training that has been conducted has expanded the participants' understanding of pivot tables, dashboards, and the significant benefits of Microsoft Excel's features. In the future, it is hoped that this training can be extended with a longer duration and cover other cases within the hospital.

Keywords: Medical Record; Dashboard; Pivot Table

INTRODUCTION

A hospital is a healthcare facility that provides inpatient healthcare services and can be managed by either government or private entities (A. Kurniawan et al., 2016). Hospitals offer a wide range of services, including medical care, medical support, patient treatment, rehabilitation, preventive efforts, and health enhancement. Additionally, they serve as educational and training centers for medical professionals. Furthermore, hospitals also function as hubs for research and development in the field of health science and technology. All of these functions aim to mitigate potential health risks and disruptions. Therefore, it is imperative to implement an environmental health management program within hospitals in accordance with applicable health standards.

In the modern era, information is of paramount importance to a hospital. Information represents processed data and serves the purpose of minimizing errors in decision-making (Sarosa et al., 2017). In healthcare facilities such as hospitals, information can originate from the data contained within medical records. Medical records constitute a form of data that can be transformed into valuable information for hospital management (Sanjoyo, 2019).

'Aisyiyah General Hospital Padang is one of the private hospitals that has already implemented the Hospital Information System for its services. With Hospital Information System

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in place, a plethora of data related to hospital activities is consolidated into a single repository. This data is collected and well-organized within a database. Beyond supporting the hospital's operational processes, the data gathered in this database is expected to generate necessary information for the hospital's benefit. Among the myriad data within the Hospital Information System, there is patient outpatient medical record data from those who have sought treatment at 'Aisyiyah General Hospital. However, this outpatient data within the Hospital Information System database has not been fully leveraged as a tool to assist management decision-making within the hospital. Therefore, the need for a supporting tool arises to facilitate users in interpreting the data, making it easier to monitor the organization's performance (Rahardja, Aini, & Khoirunisa, 2018).

A dashboard serves as a visual representation of critical information essential for hospital management (Jayanti & Ani, 2017). Dashboards can aid in monitoring hospital performance by providing alerts when certain indicators or goals are not met (Putri et al., 2019). In operational activities, particularly in processing and presenting patient data for reports, dashboards designed to meet specific needs can enhance the performance of hospital staff in report preparation (Alessandro & Sepadyati, 2019). Besides simplifying report generation, dashboards are also valuable for analyzing data succinctly and making it easily comprehensible for healthcare service heads (Christianto et al., 2020). By implementing dashboards, existing data sources are consolidated and presented in an informative visual format through the user interface, allowing executives to easily understand and analyze the data, thereby facilitating the strategic decision-making process (Wajong, 2015).

A dashboard can be created using Microsoft Excel by utilizing the pivot table feature in combination with the graphical capabilities available in Microsoft Excel. The purpose of using pivot tables includes guiding educators in processing data related to teaching and learning activities and facilitating the presentation of processed results in a report format (Subagyo, 2019). This has several benefits, such as enabling qualitative analysis based on quantitative data processing and automatically enhancing academic reports with tables and graphics.

Based on the preliminary study conducted at 'Aisyiyah General Hospital Padang through interviews with the head of the medical records department, it was determined that there is currently no dashboard in the Hospital Information System used by the hospital, which can serve as a tool to support decision-making by the hospital management. In light of this issue, the author is inclined to conduct training on Pivot Tables and Dashboard Creation for Medical Record Professionals at 'Aisyiyah General Hospital Padang.

METHOD

The community engagement initiative undertaken by Lecturer Apikes Iris is executed collectively, each with distinct topics. The activities are conducted in person at the auditorium of 'Aisyiyah General Hospital Padang for a duration of two days, specifically on Thursday and Friday, October 6-7, 2022. In a broad overview, the stages of this community service project encompass preparation, implementation, and evaluation.

Before the community engagement activities commence, thorough preparations are made. This begins with a location survey, determining the materials to be presented, identifying the target participants, outlining the benefits of the activities, organizing the team, drafting the proposal, and obtaining the necessary permits for the engagement project. Additionally, various

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equipment and materials are readied for use during the activity implementation, including event banners, laptops and projectors, wireless pointers, sound systems, attendance records, official reports, and other required supporting documents.

The Community Engagement initiative is carried out by providing training to healthcare professionals, including medical record experts, and other healthcare personnel at 'Aisyiyah General Hospital Padang. The team conducts training sessions and practical exercises on creating dashboards using the pivot table feature in conjunction with the graphical tools available in Microsoft Excel. In implementing the activity, the steps to be taken are as follow:

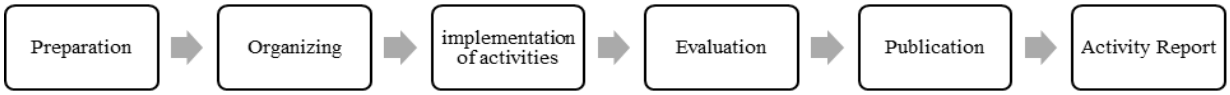

Figure 1. Activity Implementation Process

RESULTS

On the first day, Thursday, October 6, 2022, the activity commenced with an opening address by the moderator, followed by welcoming remarks from the director of 'Aisyiyah General Hospital Padang and the director of Apikes Iris. Subsequently, there was a presentation of materials related to Microsoft Excel, pivot tables, and dashboard creation. The presentation was conducted through a lecture-style method with interactive Q&A sessions. The structured explanation of the materials was accompanied by demonstrations and relevant case examples.

Figure 2. Opening by Moderator

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Figure 3. Presentation of Material By Lecturer

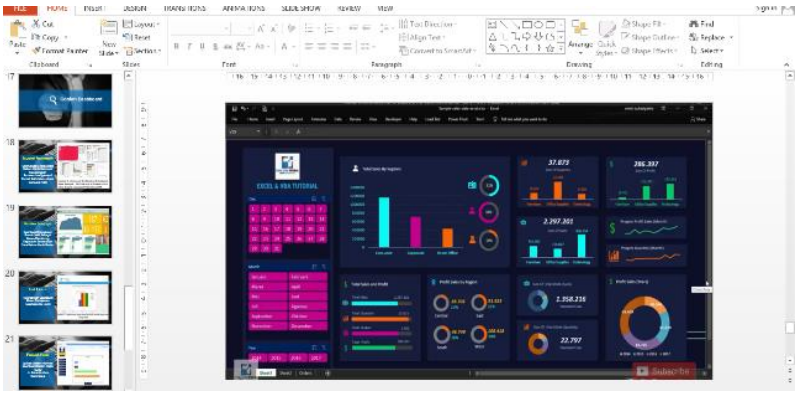

Figure 4. Slide of Material on the First Day

Figure 5. Participants on the First Day

On the second day, an evaluation was conducted by practicing the materials that were explained on the first day. The practice involved processing medical record data obtained from the hospital's database, which had been requested beforehand. This was done to assess the extent to which the materials explained could be implemented by medical record personnel and other participants involved in the community engagement activities. On the second day, several steps were taken, including 1) Preparing hospital patient data in Microsoft Excel format. 2) Performing data analysis, selecting the necessary data to be displayed on the dashboard. 3) Preparing sheets for data analysis, pivot tables, graphs, and dashboards. 4) Dashboard creation.

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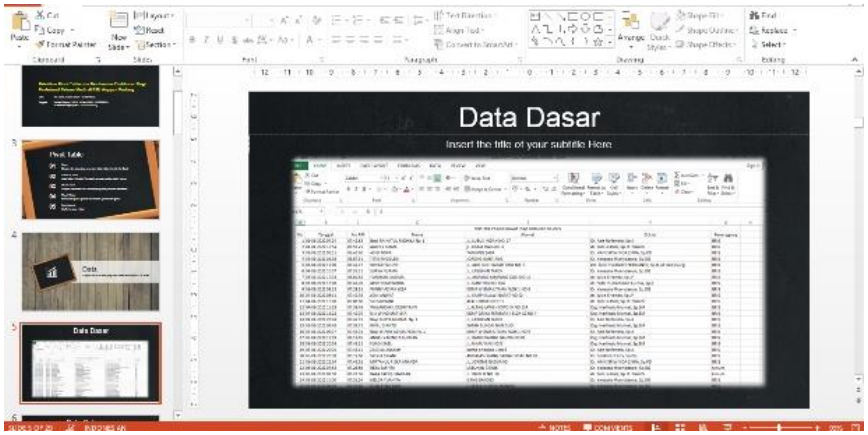

Figure 6. Slide of Material on the Second Day

Figure 7. Presentation of Materials on the Second Day

Figure 8. Participants on the Second Day

CONCLUSIONS AND RECOMMENDATIONS

The community engagement held at 'Aisyiyah General Hospital Padang was not limited to medical record personnel alone; it also involved participation from other healthcare staff,

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doctors, the head of training, and the hospital director. A total of 19 participants attended on the first day, and 14 participants attended on the second day. All participants received training on pivot tables and dashboards, including practical examples of dashboards. The first day of the event focused on explaining pivot tables and dashboards. On the second day, participants were trained in creating pivot tables from data obtained from the hospital. Each participant was instructed on how to create pivot tables using Microsoft Excel. During this training, the hospital staff learned data input, data editing, pivot table creation, and dashboard development. After completing the pivot table and dashboard training, the hospital staff gained knowledge about creating pivot tables and dashboards, which can lead to increased efficiency in hospital data reporting. It is recommended that healthcare professionals and employees at 'Aisyiyah General Hospital Padang also utilize pivot tables to create dashboards tailored to their specific needs and roles within the hospital. As a result, this material will prove highly beneficial for all participants involved in this activity.

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AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

REFERENCES

Alessandro, A., & Sepadyati, N. (2019). Perancangan Dashboard SPC Excel Sebagai Alat Analisis Kinerja Mesin Filling Pada PT SMART Tbk. *Jurnal Titra*, 7(2), 161–166.

Christianto, H. A., Trisnawarman, D., & Sutrisno, T. (2020). Pembuatan Dashboard Penjualan Dan Pembelian Hevindo Sport. *Jurnal Ilmu Komputer Dan Sistem Informasi*, 8(1), 69. https://doi.org/10.24912/jiksi.v8i1.11471

Ilyas, I. U., & Setiaji, H. (2021). Pengembangan Dashboard Untuk Monitoring Sistem Informasi Manajemen Presensi (Studi Kasus di Fakultas Teknologi Industri Universitas Islam …. In Automata. *https://journal.uii.ac.id/AUTOMATA/article/view/17359*

Jayanti, E. D., & Ani, N. (2017). Pembangunan Dashboard Untuk Visualisasi Analisa Keuangan. Format, 6(2), 57–66.

Kurniawan, A., Lestari, T., & Rohmadi. (2016). Analisis Pemanfaatan Data Sensus Harian Rawat Inap Untuk Pelaporan Indikator Pelayanan Rawat Inap Di Rumah Sakit Umum Daerah Dr. Soeroto Ngawi. *Jurnal Kesehatan*, IV(2), 62–87. https://ejurnal.stikesmhk.ac.id/index.php/rm/article/view/10/8

Kurniawan, A. W., Widjajanto, B., Studi, P., Informatika, T., Nuswantoro, U. D., Studi, P., Informasi, S., & Nuswantoro, U. D. (2021). Pelatihan Pemanfaatan Pivot Tabel Untuk Pembuatan dan Analisa Laporan Kependidikan Pada Kelompok Kerja Guru (KKG) Kelompok I Kecamatan Ngaliyan. 4(3), 304–310.

https://doi.org/10.35568/abdimas.v6i4.4056

Volume: 6, Issue:4, October, 2023; pp: 4506-4512
E-ISSN: 2614 - 8544

Putri, I. F., Nuryani, M., & Sari, Y. (2019). PEMBANGUNAN SISTEM DASHBOARD HUMAN RESOURCES UNTUK PEMANTAUAN KINERJA KARYAWAN PT X BERBASIS WEB. *Majalah Ilmiah UNIKOM*, 17(1). https://doi.org/10.34010/miu.v17i1.2236

Rahardja, U., Aini, Q., & Khoirunisa, A. (2018). Monitoring Kinerja User Akuntan Menggunakan Dashboard pada Web Based Accounting Online di Perguruan Tinggi. *SATIN - Sains dan Teknologi Informasi*,, Vol. 4, No. 2.

Sanjoyo, R. (2019). Dashboard manajemen rumah sakit sebagai sistem pendukung keputusan berdasarkan data rekam medis pasien. Berita Kedokteran Masyarakat, 3. https://journal.ugm.ac.id/bkm/article/view/45130/0

Sarosa, Y. E., Syamsuri, & Prabowo, R. (2017). Perancangan Dashboard Kinerja Perusahaan Menggunakan Metode Balance Scorecard Dan Key Performance Indicator di PT. X. *Prosiding SNST Ke-8 Tahun 2017*.

S. Subagyo, "Manfaat Fitur Pivot Table dari Microsoft Office Excel Untuk Pengolahan Data Statistik Perpustakaan," *Jurnal Psutakawan Indonesia*, vol. 10, p. 2019.

Wajong, A. M. (2015). Applying Performance Dashboard in Hospitals. *International Journal of Software Engineering and its Applications*, 9(1), 213-220. Retrieved 8 25, 2019, from http://sersc.org/journals/ijseia/vol9_no1_2015/19.pdf

https://doi.org/10.35568/abdimas.v6i4.4056