

Roles of Medical Record and Statistic Staff on Research at the Tawanchai Center

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The medical record and statistic staffs play a crucial role behind the achievements of treatment and research of physicians, nurses and other health care professionals. The medical record and statistic staff are in charge of: keeping patient medical records; creating databases; presenting information; sorting patient's information; providing patient medical records and related information for various medical teams and researchers; Besides, the medical record and statistic staff have collaboration with the Center of Cleft Lip-Palate, Khon Kaen University in association with the Tawanchai Project. The Tawanchai Center is an organization, involving multidisciplinary team which aims to continuing provide care for patients with cleft lip and palate and craniofacial deformities who need a long term of treatment since newborns until the age of 19 years. With support and encouragement from the Tawanchai team, the medical record and statistic staff have involved in research under the Tawanchai Centre since then and produced a number of publications locally and internationally.

Keywords: Medical records, Medical statistics, Cleft lip, Cleft palate and craniofacial anomalies, Roles, Tawanchai center

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Tawanchai Center was established through collaborative teamwork named as "Multidisciplinary management of cleft lip, cleft palate and craniofacial anomalies" by a leader, Associated Prof. Bowornsilp Chowchuen, head of the Plastic and Reconstructive Division, Department of Surgery, Faculty of Medicine, Khon Kaen University. In 1999, "Tawanchai Project" was launched as a special honor to Her Royal Highness Crown Princess Maha Chakri Sirindhorn.

The Center has provided services and developed the system of care for patients with cleft lip-palate and craniofacial deformities in Thailand. It also has functioned in research, and academia.

Cleft lips and cleft palates are common congenital deformities, which affect patients physically and mentally. It also affects the patient's families and their economic status.

The cleft lips and cleft palates (CLP) have the most incidences, exclusively in the Northeast of

Thailand, which is the highest rate in the world. The estimation of CLP incidences was 2.5/1,000 newborns and in Khon Kaen, the incidence of newborns with CLP was 60-70 persons/year⁽¹⁾. However, there were approximately only 20% of the patients with CLP were treated at the Tawanchai Cleft Center.

Due to a small number of patients receiving the services at the Tawanchai Center, the Tawanchai research team together with the medical record and statistic staff investigated epidemiologic data of these patients.

The medical record and statistic division is in charge of collecting every medical document including the patient's history, family, illnesses and treatments. The patient medical record has a various pattern, size and paper-based or electronic files. These data are the medical evidences, which included both quantitative and qualitative data. The medical record and statistic staff is in charge of collecting, sorting and analyzing statistic data in order to develop and provide a report. It is beneficial to identify the incidence and prevalence of diseases in order to improve the quality of medical treatment and services.

The medical record is the treasure of wisdom. As for research since 2008, the medical record and

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medical statistic staff have a vital role as a provider of medical records and also as a researcher under the Tawanchai Cleft Center, Khon Kaen University. The establishment has started with the study of epidemiology in patients with cleft lip-palate who received treatment at the Srinagarind Hospital from 1984 to 2007⁽²⁾ and continued with three more publications⁽³⁻⁵⁾. A project under the Tawanchai Center has many aspects involving epidemiology, health care cost, GIS system, and other aspects related to patients with cleft lip-palate and craniofacial deformities.

The patient medical record is confidential which could not be discovered excepted under legally requirements. The constitution law has definitely covered following the National Health Act 2007, which performed the duties of establishing for health and equality of all members of society (section 56, 57 and 82) and set the guidelines of providing public health services, data, treatment and medical research⁽⁶⁾. There are the definitions, which defined the responsibility of medical records in order to understand more clearly about the role of medical record and medical statistic staff.

The medical records is a chronological written account of a patient and family's medical history, illnesses, a history of drug allergy, medical treatment, consent forms, referral history, the physical findings, the results of diagnostic tests and procedures, medications and therapeutic procedures⁽⁷⁾. These are required in the process of making a medical decision for physicians.

Medical records, therefore, should provide quality patient information. The keeping system should be safe to provide confidential and the quality control should followed the standards of the Healthcare Accreditation Institute, Office of Policy and Strategic, Office of the Permanent Secretary and related interdisciplinary standards. The Medical Council of Thailand, Royal Colleges and Nursing Council have developed guidelines for medical records in Thailand.

The medical record has many versions including paper-based in envelope or microfilm or in a digital version of the traditional paper-based medical record or electronic medical record (EMR). All data related to the treatment can be searched from the medical record. Therefore, medical records should be kept in appropriate and complete patterns since it helps to identify and record what patient underwent⁽⁸⁾.

Medical record officers are in-charge of the patients' medical records. The research of medical record has been conducted in Thailand since 1977 by

Dr. Somporn Ekkarat, a physician at Siriraj Hospital. The Thai medical record system has been divided into;

The medical record system and the circulation of medical document:

The medical statistic system

The medical research system

The Geographic Information System (GIS) and computer

The network and linkage of data.

The medical record is the heart of medical health centre because the effectiveness of treatment can be monitored through the medical records.

There are many available guidelines for recording and utilizing the medical records. For examples, the medical record guidelines of Karn Jermuangphon, January 2008⁽⁶⁾; the medical record audit guidelines⁽⁹⁾; the medical record guidelines for physicians, Office of Policy and Strategic, Office of the Permanent Secretary, Ministry of Public Health⁽¹⁰⁾; the summary of diseasing codes, Office of Compensation Audit and Quality Services, Office of Universal Health Care Coverage⁽¹¹⁾; Coding and Medical Record Audit Guidelines and Office of Universal Health Care Coverage⁽⁹⁾. Guidelines that have been published by medical health centre such as "Coding Guideline of pregnancy and infant", department of medical record and statistic, Srinagarind Hospital, Faculty of Medicine, Khon Kaen University.

Data in medical records such as patient's history, examination, diagnosis, medical procedures, treatment, medications monitoring and follow-ups, must be accurate and complete. The quality of data in medical record is very vital. Not only the recorder has an important role but the medical record and medical statistic staff is also important to maintain the quality of data in medical records.

The main purpose of this paper is to present the roles of medical records and statistics staff who help the research team. The medical statistical analyses involve both quantitative and qualitative data. The medical statistical analyses propose mathematical analyses in order to summarize and provide medical reports⁽¹²⁾.

The scientific research is divided into an academic and specific application by applying the scientific disciplines from composing the curiosity.

The researchers should have good human relations. It is because research is necessary to collaborate with many groups of people. Moreover, the researchers need to keep the confidential because research is related to the content or confidential fact

that should not be discovered. The medical record is one of an important source of confidential medical research.

Communication between researchers and medical record and statistic staff is crucial to achieve the researchers' needs and purposes. The researchers should inform the medical record and statistic staff on which information should be provided. There are some misunderstandings or unclear about the data in medical records. The researchers sometimes received a number of patients' visits instead of a number of patients. Therefore, this may lead to the wrong numbers of episodes of the diseases or frequencies of the follow-ups. Hence, the researchers should understand the method of data collection in order to receive the correct and complete data.

The responsibility of medical record and statistic staff are to collect, keep and provide the medical information related to the patients in order to present the report. The summary of roles of medical record and statistic staff consisted of:

Recording the demographic data by interviewing personal background and making history of patients' treatment.

Providing support and suggestions.

Recording medical record: complete, correct and revise using international abbreviation.

Collecting and keeping medical records as a valuable treasure and preventing the loss.

Learning the record procedures, the necessity of complete and correct medical record and approved with name and date in order to assure the data.

Collecting, analyzing, evaluating, classifying/ categorizing, summarizing and presenting of patient data. These data included diseases, birth and death rates, number of patients receiving services and length of hospital stay for each disease.

Presenting those data to the administrators monthly and yearly in order to make a decision for administering the hospital, medical treatment, teaching and further research.

The important qualifications of the medical record and statistic staff are dignity, realizing that medical record is valuable and confidential, having a good attitude, providing suggestions, explanations and correcting disease codes following ICD-10 and ICD-9-CM of WHO (World Health Organization)⁽¹⁰⁾. The retrospective or ex-post factor research usually uses data from medical records. If the record is not complete, the researcher may lose the opportunity to receive quality data for interpreting. The data collection will be

valuable, complete and correct if the researcher has a well plan for data collection. On the other hand, the medical record data can be used in case studies and other prospective studies. In order to prevent human' errors, the interdisciplinary, involving physicians, nurses, dentists, pharmacists, physical therapists and audiologists should record all patient data in the medical record. Therefore, the researcher has also to manage, design and plan to collect data in order to receive a complete data.

Conclusion

The medical record and statistic staff has the critical role behind the research in terms of providing information, GIS and medical records according to the requests of researchers under the Center of Cleft Lip-Palate, Khon Kaen University. According to the support from the Cleft Center, medical record and statistic staffs have developed the personal and research work. There were previous three national and international publications and three running projects. The medical record and statistic staffs have planned to develop the databases in order to support the needs of researchers provide data for research. These provide the valuable outcomes, which would impact organization and the nation in the future. The comprehensive support of medical record and statistic staff will be lead to the quality of research under the Cleft Center and Tawanchai center continually.

What is already known on this topic ?

This article presented authors' experiences. As a result, the author has learned the important role of medical record and statistic staff in the research. Moreover, the author found an opportunity to improve and continue the research.

What this study adds ?

The collaboration between the Tawanchai center and medical records and statistics division has been increased in this study. Realizing the role of medical record and statistic staff help to coordinate between the researchers and medical record and statistic staffs; therefore, it will fill up the gap of misunderstandings.

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Potential conflicts of interest

None.

Reference

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บทบาทผู้ปฏิบัติงานด้านเวชระเบียนและเวชสถิติต่องานวิจัยศูนย์ตะวันฉาย

รำพรรณ ภัทรนิตย์, วาสนา จันทะชุม, อรทัย เล็กบุญญาสิน, สุธีรา ประดับวงษ์

เจ้าหน้าที่งานเวชระเบียนและสถิติเป็นผู้มีบทบาทสำคัญที่อยู่เบื้องหลังความสำเร็จของการให้การรักษาพยาบาลและการวิจัยของแพทย์ พยาบาล และบุคลากรสาขาวิชาชีพอื่นๆ ทำหน้าที่ให้บริการเวชระเบียนและข้อมูล เพื่อการทำงานวิจัยตั้งแต่เป็นเก็บรวบรวมเอกสารข้อมูลอย่างเป็นระบบ ตามมาตรฐานระบบเวชระเบียนของสถานพยาบาล สร้างฐานข้อมูล นำเสนอข้อมูล ช่วยสืบค้นข้อมูลผู้ป่วยให้แก่ทีมดูแลรักษา เป็นแกนกลาง ประสานความเข้าใจของทีมสุขภาพ เรื่องสภาพความเจ็บป่วยตั้งแต่อดีตถึงปัจจุบัน และได้มีส่วนร่วมกับศูนย์วิจัยผู้ป่วย ปากห่าง เพดานโหว่ มหาวิทยาลัยขอนแก่น ภายใต้โครงการตะวันฉาย ซึ่งเป็นหน่วยงานประกอบด้วยทีมวิจัย สหสาขาวิชาชีพที่มีส่วนร่วมให้การดูแลผู้ป่วยปากห่าง เพดานโหว่ และความพิการแต่กำเนิดของศีรษะและใบหน้าให้ได้รับการดูแลช่วยเหลืออย่างต่อเนื่อง เพื่อให้การดูแลรักษาผู้ป่วยได้ผลดี มีประสิทธิภาพ มีคุณภาพชีวิตที่ดีตั้งแต่แรกเกิดจนถึงอายุ 18 ปี หรืออาจมากกว่านั้น และจากการสนับสนุนและผลักดันให้เกิดผลงานวิจัยของทีมวิจัยของศูนย์วิจัย ทำให้นักเวชระเบียนและนักวิชาการเวชสถิติได้มีโอกาสเข้าร่วมทีมวิจัยปากห่าง เพดานโหว่ โดยเริ่มจากผู้อยู่เบื้องหลังมีบทบาทนำเสนอข้อมูลและสารสนเทศที่ขึ้นำช่องว่าง ขององค์ความรู้ นำคำถามและประเด็น การทำวิจัยอีกหลายประเด็น ซึ่งสามารถต่อยอดการศึกษาวิจัยกลุ่มผู้ป่วยปากห่าง เพดานโหว่และความพิการ แต่กำเนิดของศีรษะและใบหน้า มาเป็นผู้ร่วมวิจัยและผู้วิจัยในโครงการการศึกษาด้านระบาดวิทยาของผู้ป่วยปากห่าง เพดานโหว่ที่เข้ารับการรักษาที่โรงพยาบาลศรีนครินทร์ ปี พ.ศ. 2527-2550 โดยร่วมอยู่ในทีมวิจัยของศูนย์ตะวันฉายและมีงานวิจัยตีพิมพ์บทความทั้งในระดับชาติและนานาชาติในเวลาต่อมา
