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Improving Understanding of the Elderly through Pre Hospital Stroke Code Education at Sentani Ederly Home

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A B S T R A C T

Stroke is a syndrome condition that arises suddenly, rapidly progressives, and causes high morbidity in elderly patients. This service aims to provide an understanding of Stroke prevention with Code of Stroke. The output of this service is a reduction of stroke cases. The service process begins with a Pre-test, education sesion and post test. The service held in June 2025 at the Sentani Elderly Home. The results of the Pre test showed that 30 elderly people aged >60 years had no knowledge of stroke symptoms. The understanding increased after providing education. The implications of this service are expected to provide wider benefits for all elderly people in Jayapura.

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INTRODUCTION

Stroke is a serious neurological emergency and is ranked highest as a cause of death. Stroke requires prompt treatment and this is greatly influenced by proper early detection in pre-hospital. Strokes that are detected late can cause stroke severity (Sari et al., 2023). Stroke according to WHO is a disorder that occurs in brain function with clinical signs that last for a long time, namely more than 24 hours. Stroke is a disease caused by the loss of blood flow to the brain due to the rupture of blood vessels or blockage of blood vessels leading to the brain resulting in reduced energy and nutrient supply to the brain ((Murphy & Werring, 2020). Stroke is one of the types of stroke that can be the main cause of disability and result in death (Assaufi et al., 2016; Pizov, 2023)

In general, the clinical manifestations of stroke are the appearance of severe headaches, aphasia (slurred speech, lack of speech, or difficulty understanding speech), hemiparesis (muscle weakness on one side of the body) and facial palsy (weakness in part of the facial muscles), sudden changes in mental status (confusion, delirium, coma), dysarthria (speech or slurred speech), visual impairment or diplopia (double vision). Another manifestation that is often experienced by stroke patients is difficulty swallowing or dysphagia (Alifia Nadhirah, 2022).

Stroke is a degenerative disease that occurs in the elderly. As a result of stroke, the quality of life of the elderly becomes low, where the elderly who have a stroke will face dependence in various life activities. The fatal and permanent effects that can occur from a stroke can be avoided if a person affected by a stroke receives prompt and appropriate medical attention within 3-5 hours. Usually this Golden period makes stroke disease quickly overcome and the prognosis becomes better FAST is one of the early detection methods of stroke that is easy to teach and understand for the elderly. The acronym FAST stands for Face, Arm, Speech, Timing (Amelia et al., 2020).

Clinical manifestations of acute stroke can be facial or limb paralysis (usually sudden onset hemiparesis), impaired sensation in one or more limbs (hemiparetic disorder), sudden changes in mental status (congestion, delirium, lethargy, stupor, or coma), aphasia (slurred speech, lack of speech, or difficulty understanding speech), dysarthria (speech and slurred speech), visual impairment (hemianopia or monocular, or diplopia), ataxia (trunkal or limb), vertigo, nausea and vomiting, or headache . These signs of symptoms can be recognized using the early detection method with the FAST method. In non-hemorrhagic (Iskhemic) stroke, the main symptom is the sudden or subacute onset of neurological deficits, preceded by prodromal symptoms, occurring at the time of waking up at rest or waking up in the morning and usually not decreases, except when the embolus is large enough, usually occurring at the age of more than 50 years (Pomalango, 2022; Prihati & Prasetyorini, 2023).

According to WHO in the International Statistical Dessification of Disease And Realeted Health Problem 10 th Review, hemorrhagic stroke is divided into the following categories:

1. Bleeding Intraserebral (PIS)

Stroke due to PIS has unclear symptoms, except for headaches due to hypertension, attacks are often during the day, during activities, when emotions or anger, the nature of the headache is very severe, nausea and vomiting are often present at the beginning of the attack. Hemiparesis or hemiparesis is common at the onset of an attack, consciousness usually decreases and falls into a coma quickly (0% occurs less than 30 minutes, 23% between 30 minutes to 2 hours, and 12% occurs after 2 hours, up to 19 days.

2. Bleeding Subaraknoid (PSA)

In PSA patients prodromal symptoms are in the form of severe and acute headache, consciousness is often disturbed and very varied, there are symptoms or signs of meningeal stimulation, pupil oedema can occur when there is a subhyaloid due to rupture of an aneurysm in the anterior communicative artery or internal carotid artery. Neurological symptoms depend on the severity of the vascular disorder and its location.

Pre hospital stroke code is an emergency procedure that is performed when there is a suspected stroke outside the hospital. This procedure aims to speed up the treatment of stroke patients and minimize the risk of permanent brain damage. Pre-hospital stroke code measures include; detect early stroke symptoms, provide prompt action to get the patient to the hospital, and initiate necessary medical treatment, such as thrombolytic medication. Based on these three things, the main step that is very important is the prevention of stroke through early detection of stroke symptoms.

Stroke prevention can be carried out in several ways, including controlling risk factors, including hypertension, diabetes mellitus, heart disease, high cholesterol, obesity, smoking cessation and others. And by living a life free of the risk of stroke, among others, avoiding excessive diets and high fat or high in salt, regular exercise, avoiding obesity, avoiding stress, and practicing religious teachings correctly (Yastroki, 2012). In addition to some of the methods above, what is no less important and plays a very important role in the prevention of stroke is early detection to recognize the signs of early stroke attacks using the FAST method, which is as follows (Zulkifli, 2022):

a. Face : Ask the person suspected of having a stroke to smile, noticing if their face appears asymmetrical.
b. Arms: Ask the person suspected of having a stroke to move both arms straight forward and hold them for a few seconds. Can the client only lift one arm, if the client can lift both arms, does one of the arms look down.
c. Speech : Ask the person suspected of having a stroke to repeat a few sentences. Whether he is able to speak clearly or sound slurred or slurred. It will be clearer if the sentence that is spoken contains many consonants of the letter "R
d. Time As mentioned earlier, Time is Brain every second is precious. If any of the above symptoms are found, immediately contact or take the patient directly to the nearest hospital that has an integrated stroke management facility.

The management of the acute phase of brain attacks, both ischemic and hemorrhagic, is a race against time, starting from the time of onset to the time in the emergency department of a hospital and the time required until the diagnosis is properly enforced. Time is Brain, every second of every minute is very important in the acute phase, with the principle of stabilizing the patient's condition, confirming the diagnosis quickly and efficiently, precise laboratory examinations to determine the best treatment and prevention of worsening and complications (Nury et al., 2022; Pomalango, 2022).

The principle of stroke management is to control risk factors and accompanying conditions or diseases to prevent further deterioration and brain attacks (secondary prevention), prevent complications and consequences of stroke itself (decubitus ulcers, pneumonia, urinary tract infections, phlebotrombosis, and pulmonary embolism). Specific pathological and pathophysiological management, for example, surgically, includes intracranial hematoma drainage, management of intracranial enhancement, intra-arterial intervention, among others, reperfusion of vascular occlusive lesions, and medical, among others, with coagulibility control to prevent the formation of thrombus, and of course with the completeness of recovery facilities, and improving neurological function (Pomalango, 2022).

IMPLEMENTATION AND METHODS

This Community Service will be held on June 2, 2025 at the Sentani Elderly Development Home, Jayapura Regency, Papua Province. The service was attended by 30 participants aged > 60 years old who lived in the Nursing Home. The Service Method is carried out by:

1. Coordination with the Elderly Development Home
2. Concluding the participants in the Nursing Home Hall and registration and breakfast
3. Explanation and assistance for filling out the Pre Test
4. Providing education through direct interaction and visualization by neurological doctors
5. Discussion and Q&A session
6. Post Test filling assistance
7. Lunch to the elderly and continued health checks for early detection of non-communicable diseases.

RESULTS AND DISCUSSION

This community service activity carries the title "Increasing Understanding of the Elderly Through Pre-Hospital Stroke Prevention" which was held at the Sentani Regency Nursing Home, Papua. This activity aims to increase the knowledge and awareness of the elderly about the importance of early detection and prevention of stroke before patients reach health facilities (pre-hospital phase), considering that stroke is one of the main causes of disability and death in the elderly. This service was carried out at the Sentani Elderly Development Home (Nursing Home), Jayapura Regency.

This activity was carried out in the form of interactive counseling attended by 25 elderly people over 60 years old who live in the orphanage. The material

presented included the recognition of early signs and symptoms of stroke with the FAST method (Face, Arm, Speech, Time), stroke risk factors such as hypertension, diabetes mellitus, hypercholesterolemia, and unhealthy lifestyle, as well as preventive measures that can be done at home, such as regulating diet, regularly doing light physical activity, monitoring blood pressure regularly, and recognizing emergency situations that require immediate action.

The educational method is carried out communicatively using easy-to-understand language, interspersed with discussions, questions and answers, and simulations of the recognition of stroke symptoms using simple visual media. Before and after the activity, participants' understanding was measured using a simple questionnaire that has been adjusted to the cognitive abilities of the elderly. The results of the evaluation showed a significant increase in participants' comprehension scores after being given counseling, which indicates that this educational activity is effective in increasing the awareness of the elderly about the dangers of stroke and the importance of quick action in the pre-hospital phase. In addition to gaining new knowledge, the elderly also seemed enthusiastic and felt appreciated by the attention and educational visits from the community outreach team. This activity is expected to contribute to reducing the risk of delayed stroke treatment among the elderly and strengthening promotive-preventive efforts in the field of public health.

The results of the evaluation showed an increase in participants' comprehension scores after being given educational materials, which showed that interactive counseling methods with approaches that meet the needs of the elderly were effective in delivering health information appropriately. The use of easy-to-understand language as well as visual media and simple simulations have been proven to help the elderly in recognizing the early signs of stroke and understanding the importance of quick action when dealing with these symptoms, especially in the context of limited access to health services that may be experienced. The positive response and active participation during the educational sessions showed that the elderly were very open and appreciated new knowledge that could improve their quality of life and prevent emergency conditions, such as stroke, that risked lowering their independence.

Figure 1. Preparation before the Pre Test

Figure 2. Assistance in Filling in Pre Test

Figure 3. Stroke Symptom Detection Education by Neurologist

Figure 4. Photo of the Service Team

CONCLUSIONS AND RECOMMENDATIONS

In the end, the conclusion obtained is that educational counseling activities are proven to increase the elderly's understanding of pre-hospital stroke prevention. Delivering material in simple language and visual media supports the effectiveness of education. The elderly have high enthusiasm for health knowledge which has a direct impact on personal safety. This service activity has a real impact and can be replicated in other elderly groups.

Advice for partner institutions is to recommend always coordinating with health centers and hospitals to carry out screening/early symptoms of stroke so that they can carry out faster treatment. For the community, especially the elderly group, to further improve their health by exercising regularly, maintaining a healthy diet, getting enough rest, reducing strenuous activities and regularly taking medication.

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REFERENCES

Alifia Nadhirah. (2022). Gambaran Pemeriksaan Flexible Endoscopic Evaluation OF Swallowing pada Pasien Stroke dengan Disfagia di Poliklinik THT-KL RSUP DR. M. Djamil Padang Periode Oktober 2018 – Oktober 2021. In Universitas Andalas.

Amelia, R., Abdullah, D., Sjaaf, F., & Purnama Dewi, N. (2020). Pelatihan Deteksi Dini Stroke "Metode Fast" Pada Lansia Di Nagari Jawijawi Kabupaten Solok Sumatera Barat. Seminar Nasional ADPI Mengabdi Untuk Negeri. https://doi.org/10.47841/adpi.v1i1.19

Assaufi, M. H., Ardana, M., & Masruhim, M. A. (2016). Evaluasi Terapi Obat Antiplatelet pada Pengobatan Pasien Stroke di Instalasi Rawat Inap RSUD AM Parikesit Tenggarong Periode Tahun 2014. Proceeding of Mulawarman Pharmaceuticals Conferences. https://doi.org/10.25026/mpc.v4i1.184

Balgis, B., Sumardiyono, S., & Handayani, S. (2022). Hubungan Antara Prevalensi Hipertensi, Prevalensi Dm Dengan Prevalensi Stroke Di Indonesia (Analisis Data Riskesdas Dan Profil Kesehatan 2018). Jurnal Kesehatan Masyarakat (Undip). https://doi.org/10.14710/jkm.v10i3.33243

Murphy, S. J., & Werring, D. J. (2020). Stroke: causes and clinical features. In Medicine (United Kingdom). https://doi.org/10.1016/j.mpmed.2020.06.002

Nury, V., Kusyani, A., & Nurjanah, S. (2022). Pengaruh Pendidikan Kesehatan Deteksi Dini Stroke terhadap Tingkat Pengetahuan pada Penderita Hipertensi. Jurnal Insan Cendekia. https://doi.org/10.35874/jic.v9i1.979

Pizov, N. A. (2023). Rehabilitation after stroke. Meditsinskiy Sovet. https://doi.org/10.21518/ms2023-429

Pomalango, Z. (2022). Pengaruh Edukasi Deteksi Dini Stroke dengan Metode Fast terhadap Tingkat Pengetahuan Keluarga dengan Risiko Tinggi Stroke di Wilayah Kerja Puskesmas Suwawa Kabupaten Bone Bolango. Care Journal.

Prihati, D. R., & Prasetyorini, H. (2023). Pemberdayaan Kader Kesehatan dalam Upaya Deteksi Dini Stroke dengan Metode F.A.S.T di Kecamatan Tugu. Jurnal Kreativitas Pengabdian Kepada Masyarakat (PKM). https://doi.org/10.33024/jkpm.v6i6.9764

Sari, L. M., Murni, L., & Nurmala, I. (2023). Hubungan Pengetahuan Keluarga Tentang Deteksi Dini Tanda Dan Gejala Stroke Dengan Tingkat Keparahan Stroke. Jurnal Kesehatan Tambusai. https://doi.org/10.31004/jkt.v4i4.18134

Simanjuntak, G. V., Pardede, J. A., & Sinaga, J. (2022). Edukasi Metode Be-Fast Guna Meningkatkan Self Awareness Terhadap Deteksi Dini Stroke. Idea Pengabdian Masyarakat. https://doi.org/10.53690/ipm.v2i01.107

Zulkifli. (2022). Pengaruh Edukasi Deteksi Dini Stroke dengan Metode Fast Terhadap Tingkat Pengetahuan Keluarga dengan Risiko Tinggi Stroke di Wilayah Kerja Puskesmas Suwawa Kabupaten Bone Bolango. Care Journal. https://doi.org/10.35584/carejournal.v1i1.22