

“TAASA”, A Suggested Acronym, To Improve Stroke Literacy And Acute Stroke Recognition In Uganda—A Correspondence.

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Abstract

Stroke causes the most disability and mortality for a medical condition and is a leading cause of neurologic admissions among adults in Africa, including Uganda. Alongside several existing challenges to stroke care in Africa lies the critical fact that public stroke literacy remains low, contributing to delayed stroke recognition and pre-hospital delays, which worsen stroke outcomes. Even though tools like FAST (Face, Arm, Speech, Time) and BE-FAST (Balance, Eyes, Face, Arm, Speech, Time) have been developed to improve public stroke literacy, in Africa, stroke literacy rates only range from 18% to 66%. A key factor to consider in Africa's suboptimal stroke literacy is language barrier. Uganda, for example, has only moderate English proficiency and over 41 local languages, with Luganda being the most widely used local dialect. Stroke literacy tools in Luganda could better resonate with the Ugandan public. Drawing from initiatives like RAPIDO (Rostro, Aliento, Pérdida de equilibrio, Imbalance, Dolor de cabeza), a Spanish-language translated stroke recognition algorithm, a Luganda adaptation of the BE-FAST tool, “TAASA”, an acronym derived from the Luganda word “taasa” meaning “save” or “deliver” in English, that comprises the Luganda words “Tatebenkera”, “Amaaso”, “Anafuye”, “Ssimu” and “Ambulensi” is suggested. TAASA is designed to be a recallable, culturally relevant tool for acute stroke recognition to help the Ugandan general public identify stroke onset more rapidly. Disseminating TAASA through local mass media and community education programs could enhance public suspicion and recognition of stroke onset, reduce pre-hospital delays and bridge the stroke literacy gap in Uganda.

Keywords: stroke, stroke in Africa, BE-FAST, alarm signs of stroke, TAASA, stroke diagnosis, stroke recognition.

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Around the world, stroke causes the most disability and mortality for a medical condition and is a leading cause of neurologic admissions among adults in Africa (1) including Uganda. In addition to existing challenges to stroke care in Africa

like poor infrastructure, lack of treatment protocols, medications and trained personnel (2), lies the critical fact that public stroke literacy remains low (2), contributing to delayed stroke recognition and pre-hospital delays, which worsen stroke

outcomes. Literature suggests that community-level stroke education can reduce these delays (3). However, even though tools like FAST (Face, Arm, Speech, Time) and BE-FAST (Balance, Eyes, Face, Arm, Speech, Time) have been developed to improve public stroke literacy(4), in Africa, stroke literacy rates only range from 18% to 66% (1).

A key factor to consider in Africa's suboptimal stroke literacy is language barrier (3). While tools like BE-FAST are globally available, their presentation in English may not effectively convey the intended message to populations with limited English proficiency (3). In sub-Saharan Africa, this language barrier is a significant obstacle (2). Uganda, for example, has moderate English proficiency (5) and over 41 languages with Luganda being the most widely used and significantly relatable local dialect (6). Stroke literacy tools in Luganda could better resonate with the Ugandan public in agreement with the observation that introducing new medical concepts to general public communities in culturally appropriate, native-language models is often most effective (7).

Recent findings from a Ugandan study revealed that no patient caretakers at the country's two main public stroke referral hospitals were familiar with the BE-FAST algorithm, regardless of their education level (7). This is very concerning, seeing as stroke knowledge directly correlates with appropriate action during a stroke (8). The study recommended enhancing public education on acute stroke recognition through media and community outreach in local dialects (7). While algorithmic memorization aids like BE-FAST can improve stroke awareness (9), their effectiveness in improving Uganda's general public's stroke literacy depends on how recallable and applicable they are to the general public.

Drawing from initiatives like RAPIDO (Rostro (face), Aliento (breath), Pérdida de equilibrio, (balance), Imbalance (arm), Dolor de cabeza(headache), a Spanish-language translated stroke recognition algorithm (9), and other countries' efforts to adapt popular algorithms into local dialects (3;10), a Luganda adaptation of the more diagnostically valuable BE-FAST tool in comparison to FAST (4), could significantly enhance stroke awareness in Uganda since it could be the most feasible language for creating a BE-FAST equivalent in this country's stroke literacy context. This leads to the suggestion and development of "TAASA", an acronym derived from the Luganda word "taasa", meaning "save" or "deliver" in English. TAASA is designed to be a recallable, culturally relevant tool for acute stroke recognition, using precise Luganda terms to help the Ugandan general public identify stroke onset more rapidly.

The TAASA acronym comprises the Luganda words "Tatebenkera", "Amaaso", "Anafuye", "Ssimu" and "Ambulensi". "Tatebenkera" loosely translates to "he/she is not stable" in English and represents "Balance" from BE-FAST, used to describe observed instability. "Amaaso", meaning "eyes," is expanded by "amaaso tegalaba" ("the eyes do not see") to denote vision deficits, aligning with BE-FAST's "Eyes". "Anafuye", meaning "he/she has weakened," refers to weakness in specific body parts. When paired with terms like "feesi" (face), "omukono" (arm), "olulimi" (tongue), or "okugulu" (leg), it translates to "his/her face/arm/tongue/leg has weakened," covering BE-FAST's "Face," "Arm," and "Speech" (as slurred speech is locally more commonly described as "anafuye olulimi" which translates in English to "he/she has weakness of the tongue"). Alternatively, "asanyaladde" ("he/she is paralyzed") can indicate sensory or motor deficits like numbness or weakness unlike "anafuye" which specifically represents motor deficits. While both terms start with

“A,” “anafuye” is more commonly used, particularly for speech issues, and is thus preferred in TAASA. “Ssimu” (telephone) and “ambulensi” (ambulance) represent BE-FAST’s “Time,” urging timely action with

the phrase “kwaata ssimu, okubire ambulensi” (“pick the phone, call the ambulance”). Table 1 below summarises these ideas.

Table 1: Items of the BE-FAST tool as represented in TAASA, a Luganda adaptation of BE-FAST.

TAASA acronym item	Corresponding BE-FAST item
Tatebenkera	Balance
Amaaso	Eyes
Anafuye (feesi, omukono, olulimi)	Face, Arm, Speech
Ssimu	Time
Ambulensi	

Disseminating TAASA through local mass media and community education programs could enhance public suspicion and recognition of stroke onset, reduce pre-hospital delays and bridge the stroke literacy gap in Uganda. While introducing new stroke care concepts is challenging (3), translating globally recognized algorithms into local languages across Africa is a promising strategy to improve stroke literacy and recognition continent-wide. By leveraging culturally relevant tools like TAASA, Uganda can take a significant step toward better stroke outcomes, and similar efforts in other African nations could further address the region’s stroke literacy challenges.

Abbreviations

FAST - Face, Arm, Speech, Time.
BE-FAST -Balance, Eyes, Face, Arm,

Speech, Time.

RAPIDO- Rostro, Aliento, Pérdida de equilibrio, Imbalance, Dolor de cabeza.

TAASA- Tatebenkera, Amaaso, Anafuye, Ssimu, Ambulensi.

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