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A Depression Screening Protocol for Acute Stoke Patients: A Quality Improvement Project

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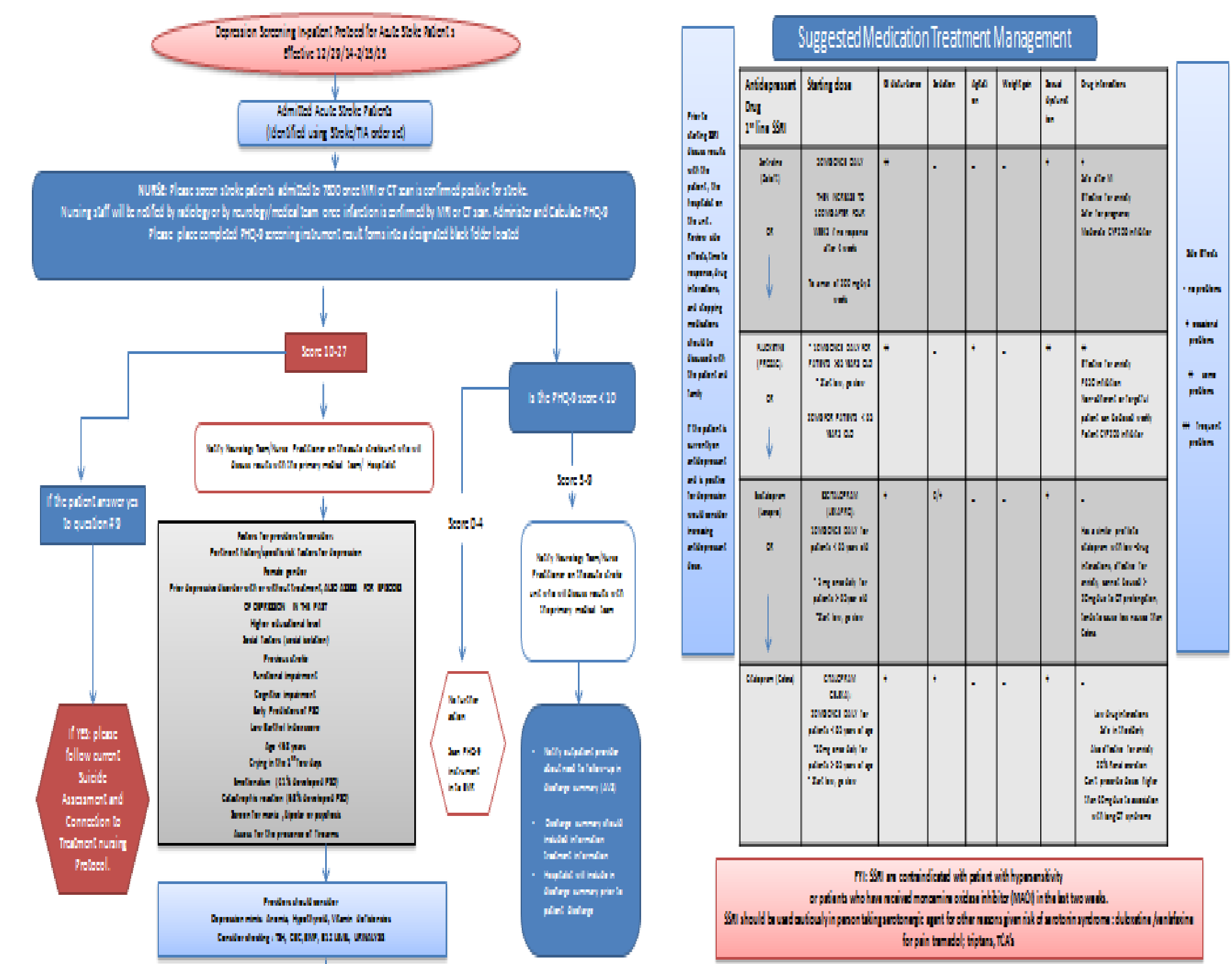
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- Depression is most common emotional disturbance after stroke
- Affecting 2.5 million stroke survivors annually
- Depression has identified as a risk factor of stroke and is predicted to become the second leading cause of disability by 2020
- Has an annual cost burden \$83 billion annually, \$52 billion represents lost work days and productivity
- In 2012, Joint Commission in collaboration with the American Heart Association , recommends assessment for depression, prior to discharge from a Comprehensive Stroke Center (CSC)
- PSD can lead to increased mortality, suicidal ideation, poor functional/rehabilitation outcomes, quality of life, social isolation, and cognitive impairment
- Despite this knowledge PSD is often under recognized and undertreated.

- Lack of facility implemented screening programs
- Gold standard of treatment remains undetermined
- Treatment with antidepressant following stroke improves functional recovery and long-term survival
- PSD can prolong inpatient LOS and outpatient visits

- To develop, implement and evaluate an evidence-based depression screening and treatment protocol specific to the care of acute stroke inpatients prior to discharge



Design	Retrospective chart audit
Setting	A designated stroke center, tertiary hospital in Upstate New York
Sample	Purposive sample
Participants	<p>Inclusion:</p> <p>Patients admitted with stroke- positive CT Scan or MRI</p> <p>18 years of age or older</p> <p>Able to read or understand English (or be able to utilize a translator phone or inpatient translator)</p> <p>Exclusion</p> <p>Comatose, obtunded or too ill to participate</p>
Statistical Analysis	<p>Descriptive statistics</p> <p>Frequencies table</p> <p>Chi-Square</p> <p>Pearson Correlation</p>

- Gender
 - 48 % female
 - 52 % male
- Ages 26 – 97
 - Mean 71.2
 - SD 14.3
- LOS 2-47 days
 - Mean 9.3
 - SD 7.43
- Day from admission to screen 0-16
 - Mean 3.2
 - SD 2.76
- Ethnicity
 - 88% non-Hispanic, 12% Hispanic
- Race
 - 68% white, 26 % African American , other 7%, Asian 1%,
- Why not screened
 - 50% aphasic, 19% obtunded, too ill, 19% confused, 13% dementia

Clinical Variables

Results: Clinical Variables

Variable	Yes/no	Non-depressed	Depressed	P-value
Stroke hx	Yes	49%	51%	.587
	No	55%	45%	
Depression hx	Yes	43%	57%	.486
	No	53%	47%	
Smoking hx	Yes	53%	47%	.792
	No	50%	50%	
Gender	Female	40%	60%	.059
	Male	61%	39%	
Alcohol use *	Yes	37%	63%	.019
	No	64%	36%	
Feeding problems	Total	54%	46%	.646

Results: PHQ Category Variables

PHQ categories	Score	Hx yes	Hx No
No depression	0-4	43%	55%
Mild depression	5-9	7%	32%
Moderate depression	10-14	14%	9%
Moderate-severe Depression *	15-19	29%	2%
Severe depression *	20-27	7%	2%

Results: Protocol Variables

Variable1	Yes/No	Non-depressed	Depressed	P-value
Nurse progress note documentation *	Yes No	31% 66%	69% 34%	.002
New medication *	Yes No	0% 55%	100% 45%	.018
Educational booklet *	Yes No	0% 100%	100% 0%	.000

- Early diagnosis and treatment of PSD has the potential to improve short and long-term patient outcomes and conserve healthcare dollars
- Integration of a systematic depression screening protocol will help standardize screening and treatment practices for acute stroke patients
- The use of a formal screening protocol is a clinically important intervention because of the detrimental effects PSD can have on the stroke survivors, their family and the healthcare system
- Nurses can intervene early during post stroke acute phase if they can identify patients at risk.

- Further research utilizing this protocol will validate its reliability in acute stroke patients in the acute care setting and add to the body of existing literature
- Further studies are needed to determine optimal timing and method of screening and ideal treatment strategy

- References available upon request
- Rochester General Neurology Department
- 7800 Stroke Unit Nurses