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Development and Implementation of a Pharmacist-Led Post-Intensive Care Clinic for Neurocritical Care Patients

Jennifer Stalas, PharmD, BCACP
Ambulatory Care Clinical Pharmacist | AdventHealth Celebration
Mary Tremaine, PharmD, BCCCP
Critical Care Clinical Pharmacist | AdventHealth Celebration

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Disclosure

We do not have a vested interest in or affiliation with any corporate organization offering financial support or grant monies for this continuing education activity, or any affiliation with an organization whose philosophy could potentially bias my presentation (within the last 12 months).

- Jennifer Stalas, PharmD, BCACP
- Mary Tremaine, PharmD, BCCCP

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Presentation Objectives

1. Describe the best practices model as it fits within the complex healthcare organization
2. Examine legal or regulatory requirements that impact this model
3. Evaluate personnel and staffing requirements necessary for implementation of the best practice
4. Summarize the impact of the best practices model on quality, regulatory or other indicators

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Presentation Topics

1. Post-intensive care syndrome and its significance for neurocritical care patients
2. Post-intensive care clinic model and pharmacist's role
3. Pharmacist's impact on patient outcomes through a post-intensive care clinic for neurocritical care patients

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BACKGROUND

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PICS Background

- Improvement of medical management in critically ill patients leads to a growing number of survivors after hospitalization in the intensive care unit
- Post Intensive Care Syndrome (PICS) is new or worsening impairments in physical, cognitive, and mental health in patients surviving critical illness and persisting beyond hospitalization
- One survivor out of two will still experience PICS in the year following discharge
- PICS decreases quality of life and increases long term mortality

Anaesth Crit Care Pain Med. 2026;45(1):101620.

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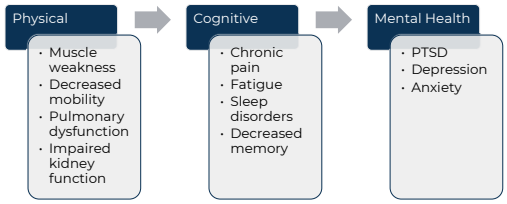
PICS Background



Anaesth Crit Care Pain Med. 2026;45(1):101620. *Ann Intensive Care.* 2022;12(1):58. PTSD: Post traumatic stress disorder

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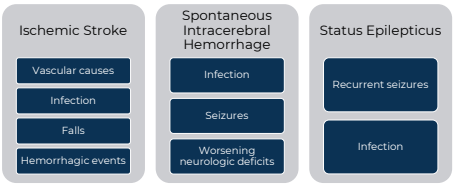
Readmission Risk

- Neurocritical care patients are at high risk for PICS manifestations
  - Patient population not currently followed in transition of care services
  - PICS increases mortality and readmission rates



Neurocrit Care. 2019;31(3):534-545. *BMC Neurol.* 2017;17(1):116. *Brain Behav.* 2018;8(3):e00935. *Epilepsy research.* 2020;165:106346.

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Current Literature

Design
- Prospective, observational cohort study

Inclusion
- Patients followed in PICS clinic had at least one risk factor for PICS

Exclusion
- Terminal illness, with life expectancy <6 months
- Hospice referral or comfort care measures only
- Preexisting cognitive impairment
- Residence at a long-term skilled nursing facility
- Disease-specific follow-up already in place
- Established care with another intensivist

Pharmacist Interventions
- Medication review, reconciliation, interview, counseling, and optimization

Ann Pharmacother. 2018;52(8):713-723

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Current Literature

Results
- 62 patients completed a visit
- 56 had full medication review by clinical pharmacist
- Median number of pharmacy interventions per patient was 4
- All 56 patients had at least 1 pharmacy intervention

Ann Pharmacother. 2018;52(8):713-723

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PICS CLINIC MODEL

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Clinic Requirements

Pharmacist practices through a scope of practice agreement with neurocritical care physicians

Scope is based on current guidelines for treatment of neurologic injury related concerns

Staffing consists of a PGY2 resident and pharmacist preceptor equating to about 0.2 FTE

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Clinic Model

Scope of practice agreement

- Assess patient functions of daily living
- Assess mental and cognitive changes
- Assess home vital monitoring
- Medication reconciliation
- Adjust medications for vascular benefit
- Adjust blood pressure medications
- Discontinue extraneous medications

Telephonic visits within 7 days of discharge with one follow up as appropriate

Documented medication adjustments and recommendations

Coordinated follow-up with primary care and neurology

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Enrollment

Inclusion Criteria

- Neurologic injury of AIS, SE, sICH, or aSAH during admission

Exclusion Criteria

- Discharged to a long term care facility
- Deceased prior to discharge
- Diagnosed with an intracranial neoplasm
- Discharged to hospice
- Lived out of country
- Left against medical advice
- Were seen in the Veteran's Affairs administration
- Were transferred to another institution
- Were seen by a pharmacist in another service line for transitions of care
- Declined pharmacy encounter

AIS: acute ischemic stroke, SE: status epilepticus, sICH: spontaneous intracranial hemorrhage, aSAH: aneurysmal subarachnoid hemorrhage

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Methods

Intervention Group

- Seen by the pharmacist-led PICS clinic

Control Group

- Discharged from the neurocritical care unit by a provider not participating in the PICS clinic
- Were unable to be contacted after discharge

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Methods

Primary Endpoint

- Thirty-day hospital readmission

Secondary Endpoints

- Sixty-day hospital readmission
- Medication discrepancies identified and resolved
- Interventions instituted per protocol
- Clinical recommendations
- Counseling and education

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Questions?

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Jennifer Stalas, PharmD, BCACP
Mary Tremaine, PharmD, BCCCP

jennifer.stalas@adventhealth.com
Mary.tremaine@adventhealth.com

Thank you!

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