Appendix A – Review Protocol				
Working Title of Review	Systematic Review of Delirium Prediction Models		Support	Modifications
Authors	1st & Corresponding	Heidi Lindroth	Literature search, data extraction, data synthesis and manuscript preparation.	
	Data Extraction	Heidi Lindroth Suzanne Purvis	Literature search, data extraction, data synthesis.	
	Content Experts	Lisa Bratzke	Assisted with content related to cognition. Results review.	
		Roger Brown	Statistical content expert	
		Mark Coburn	Results review, Manuscript preparation	
		Marko Mrkobrada	Results review, Manuscript preparation	
		Matthew TV Chan	Results review, Manuscript preparation	
		Daniel Davis	Geriatrician expertise, reviewed results, manuscript preparation.	
		Pratik Pandharipande	Results review, Manuscript preparation	
		Cynthia M. Carlsson	Geriatrician expertise, reviewed results, manuscript preparation.	
	Mentoring	Robert D. Sanders	Mentoring author, resolved content/data disagreements b/w authors, manuscript preparation.	
Aim	To identify existing prognostic delirium prediction models and evaluate their validity and statistical methodology in the older adult ($\geq$60yo) acute hospital population.			
Search Terms	("Delirium" OR "postoperative delirium" OR "ICU delirium" OR "ICU psychosis" OR "ICU syndrome" OR "acute confusional state" OR "acute brain dysfunction") AND ("inpatient" OR "hospital*" OR "postoperative" OR surg* OR "critical care unit" OR "intensive care unit" OR CCU OR ICU) AND ("predict*" model OR risk*)		UW-Madison Health Sciences librarian. Three meetings to refine search terms.	
Databases searched	PubMed, CINAHL, PsychINFO, Cochrane, SocINDEX and Medline		Health Sciences librarian.	Expanded to include SocINDEX
Timelines established	01/01/1990-12/31/2016			Originally was 12/31/15.

			Expanded to include all of 2016.
Inclusion criteria	• Age $\geq$ 60 • Inpatient population • Developing and/or validating a delirium prediction model		Age expanded from $\geq$ 70 years of age due to the literature
Exclusion criteria	• Emergency department • Hospice/palliative care • Pediatric population • Related to alcohol withdrawal • $\leq$50 sample size	Mentoring author	Sample size criteria added to build rigor in the studies that were included in the sys review
Selection process	Studies will be selected based on the inclusion/exclusion criteria. The data extraction authors (HL and SP) will conduct the literature search independently and meet monthly to discuss findings. Any disagreements will be resolved by the mentoring author (RDS)		
Data Management	A shared folder on the UW-Madison Box account will be created to share documents, data and meeting information.		
Data collection process	Data will be collected independently by HL and SP then data points will be shared at monthly meetings. Data collection tables will be created using Microsoft Excel then uploaded to the shared Box account. Any disagreement between authors will be resolved by the mentoring author (RDS).		
Data points collected	• Characteristics of studies (design, population, sample size) • Outcome measure including how it was identified, measured, defined. Prevalence. • Statistical methods applied • Statistical information about the delirium prediction models (sensitivity, specificity, positive predictive value, negative predictive value, AUROC) • Characteristics of DPMs (variables used, scoring, development) • Cognitive measures used in studies. • Criteria to fulfill the Newcastle Ottawa Scale.		
Outcomes	• AUROC will be the primary outcome measure • Characteristics of DPMs (variables, statistics) • Cognitive tests used		

Data synthesis	The first/corresponding author (HL) will synthesize the data into the manuscript. The co-authors will verify this. RB will complete the meta-analysis.		
Manuscript preparation	HL will complete manuscript preparation. All co-authors are responsible for reviewing content and data to assure correctness and complete synthesis of data gathered.		