

# Improving Delirium Detection and Management During Inpatient Admission



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# Perioperative Brain Health Initiative

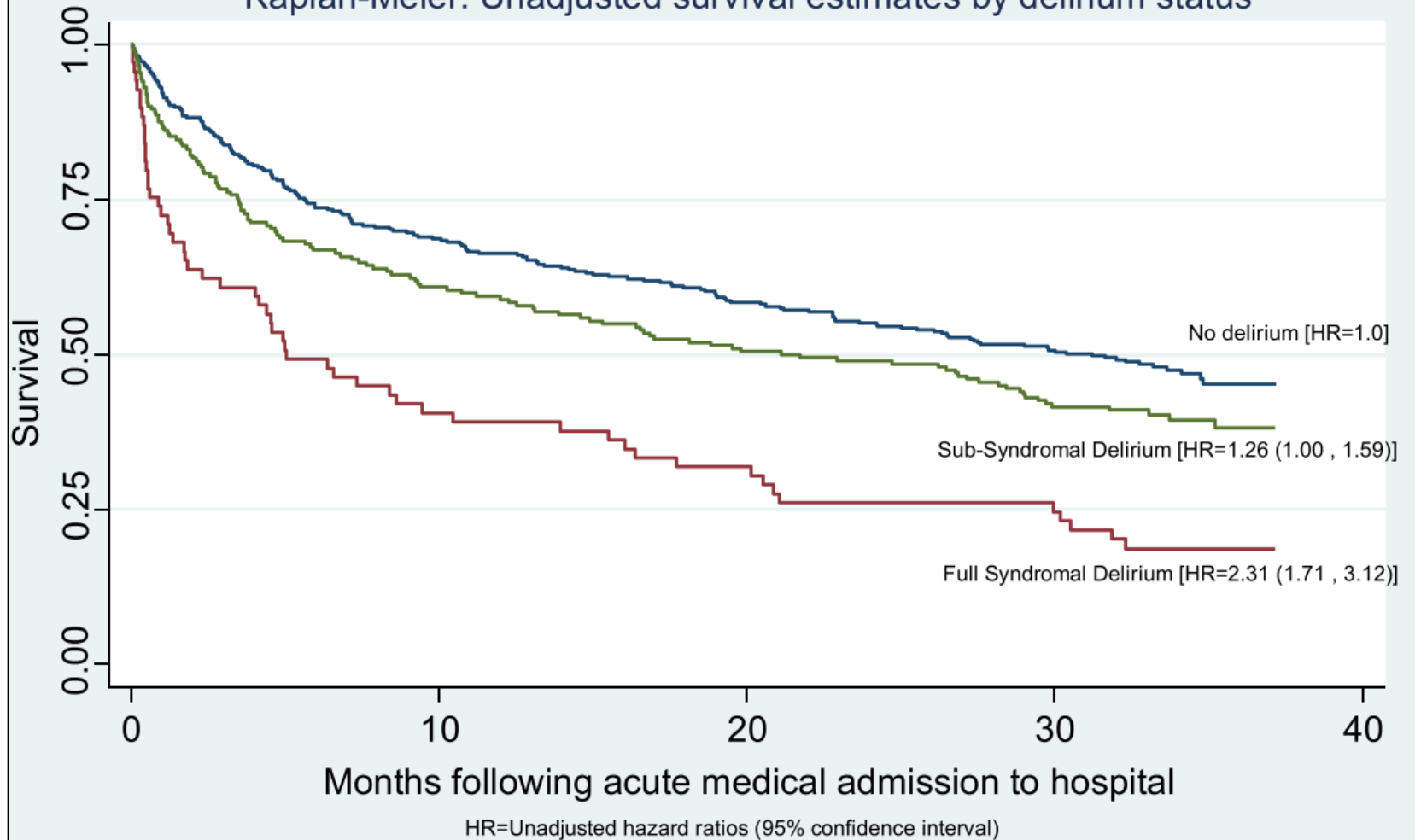
*Promoting brain health for older adults before, during and after surgery*

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# Kaplan-Meier: Unadjusted survival estimates by delirium status



# Delirium

A disturbance in attention and awareness, developing over a short period of time, that tends to fluctuate in severity during the course of a day.

DSM<sup>®</sup> Library

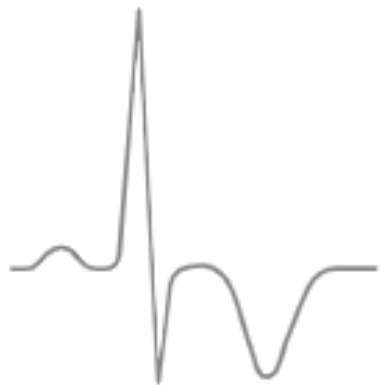
# Delirium

- Common (10-70%)
- Increased mortality
- Cognitive decline
- Functional decline
- Healthcare costs (\$33 billion annually)



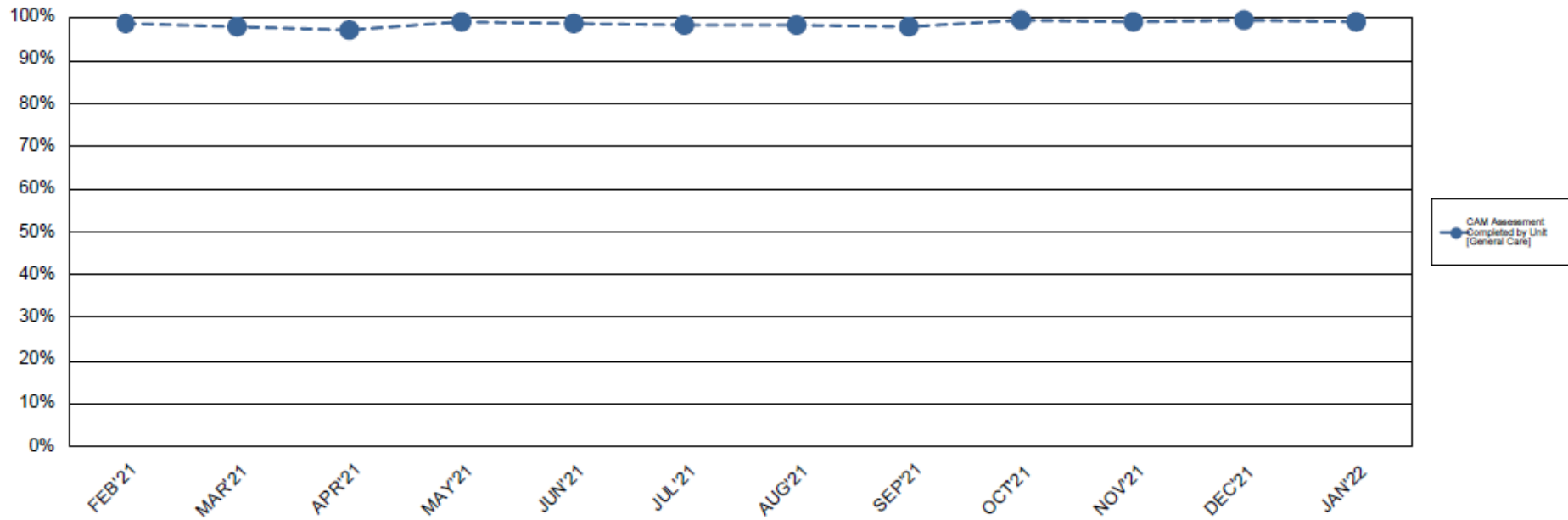
Gou RY et al. *JAMA Surg* 2021  
Gottesman RF et al. *Ann Neurol*. 2010  
Saczynski JS et al. *N Engl J Med*. 2012  
Koster S et al. *Ann Thorac Surg*. 2012

# Screening



### CAM Assessment Completed by Unit [General Care]

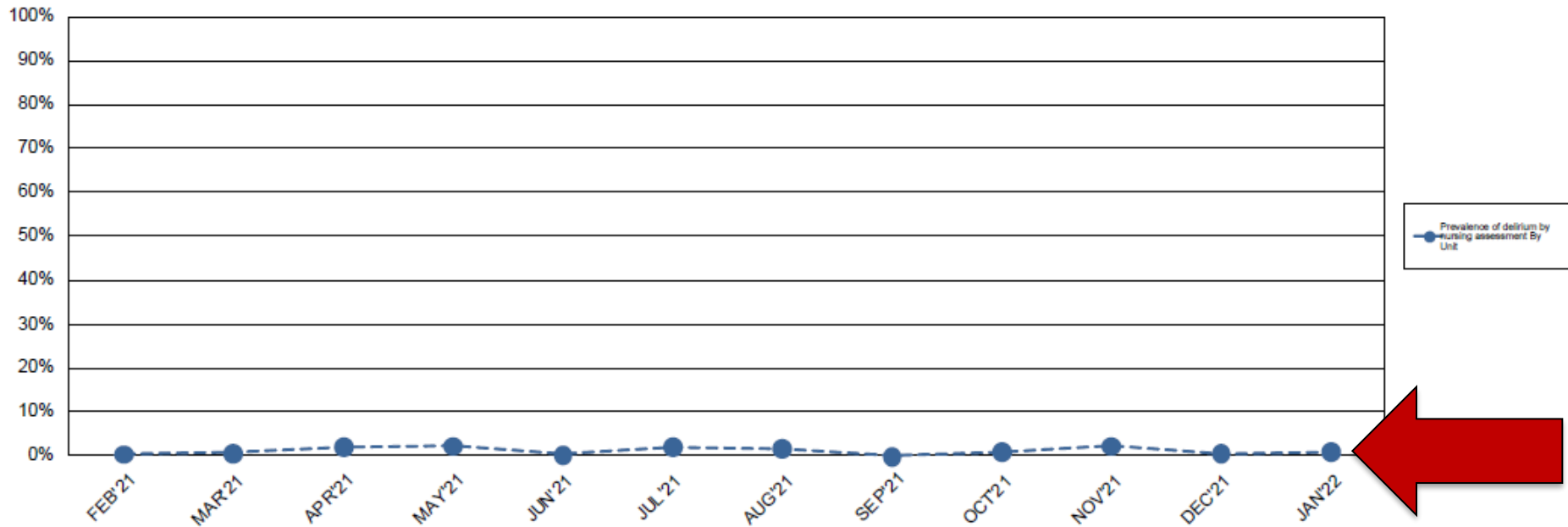
	FEB'21 n=229	MAR'21 n=301	APR'21 n=255	MAY'21 n=220	JUN'21 n=253	JUL'21 n=247	AUG'21 n=293	SEP'21 n=251	OCT'21 n=236	NOV'21 n=217	DEC'21 n=203	JAN'22 n=219	YTD n = 2,924
Patients with at least one CAM-Assessment	99%	98%	97%	99%	99%	98%	98%	98%	100%	99%	100%	99%	98.60%





Prevalence of delirium by nursing assessment By Unit

	FEB'21 n=226	MAR'21 n=295	APR'21 n=248	MAY'21 n=218	JUN'21 n=250	JUL'21 n=243	AUG'21 n=288	SEP'21 n=246	OCT'21 n=235	NOV'21 n=215	DEC'21 n=202	JAN'22 n=217	YTD n = 2,883
Patients assessed with positive CAM-Assessment	0%	1%	2%	2%	0%	2%	2%	0%	1%	2%	0%	1%	1.18%



# Recognition of Delirium in Postoperative Elderly Patients: A Multicenter Study

*Tianne Numan, MSc,\* Mark van den Boogaard, PhD,† Adriaan M. Kamper, MD, PhD,‡ Paul J.T. Rood, MSc,† Linda M. Peelen, PhD,\*§ and Arjen J.C. Slooter, MD, PhD\* for the Dutch Delirium Detection Study Group<sup>1</sup>*

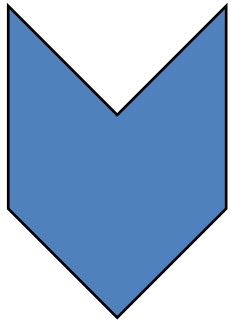
RESEARCH ARTICLE

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## Concordance between DSM-IV and DSM-5 criteria for delirium diagnosis in a pooled database of 768 prospectively evaluated patients using the delirium rating scale-revised-98

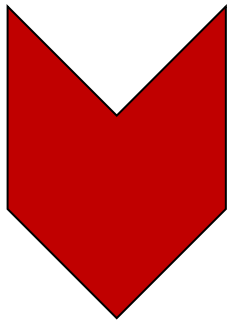
David J Meagher<sup>1,2,3\*</sup>, Alessandro Morandi<sup>4,5</sup>, Sharon K Inouye<sup>6,7</sup>, Wes Ely<sup>8,9</sup>, Dimitrios Adamis<sup>2,10,11</sup>, Alasdair J MacLulich<sup>12,13</sup>, James L Rudolph<sup>14,15,16</sup>, Karin Neufeld<sup>17</sup>, Maeve Leonard<sup>1,2,3</sup>, Giuseppe Bellelli<sup>5,18</sup>, Daniel Davis<sup>19</sup>, Andrew Teodorczuk<sup>20</sup>, Stefan Kreisel<sup>21</sup>, Christine Thomas<sup>22</sup>, Wolfgang Hasemann<sup>23</sup>, Suzanne Timmons<sup>24</sup>, Niamh O'Regan<sup>24</sup>, Sandeep Grover<sup>25</sup>, Faiza Jabbar<sup>26</sup>, Walter Cullen<sup>1,2</sup>, Colum Dunne<sup>1,2</sup>, Barbara Kamholz<sup>27</sup>, Barbara C Van Munster<sup>28,29</sup>, Sophia E De Rooij<sup>28</sup>, Jos De Jonghe<sup>30</sup> and Paula T Trzepacz<sup>31,32,33,34</sup>



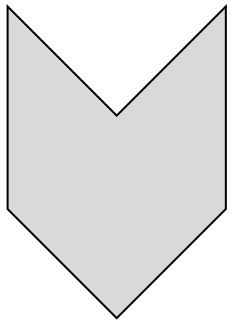


### 1. Mixed methods

*What are the challenges?*



### 2. Pilot Implementation Trial



### 3. Healthcare costs and value



# Management



## Non-pharmacological interventions for preventing delirium in hospitalised non-ICU patients

✉ Jennifer K Burton, Louise E Craig, Shun Qi Yong, Najma Siddiqi, Elizabeth A Teale, Rebecca Woodhouse, Amanda J Barugh, Alison M Shepherd, Alan Brunton, Suzanne C Freeman, Alex J Sutton, Terrv J Ouinn Authors' declarations of interest

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<https://doi.org/10.1002/14651858.CD013307.pub2>



# Hospital Elder Life Program: Systematic Review and Meta-analysis of Effectiveness

*Tammy T. Hsieh, M.D., M.P.H., Tinghan Yang, M.D.,  
Sarab L. Gartaganis, M.S.W., M.P.H., Jirong Yue, M.D., Sharon K. Inouye, M.D., M.P.H.*

- Reduced delirium incidence (OR 0.47, 95% CI 0.37 – 0.59)
- Fall rate reduced by 42% (OR 0.58, 95% CI 0.35 – 0.95)
- Saved \$1600-\$3800/patient in hospital costs, \$16,000 per person-year in terms of long-term costs

# Conclusions

- >20 million inpatient surgeries per year ( $\geq 65$  yo)
- Delirium cases:
  - 2 million (10% incidence)
  - 10 million (50% incidence)
- Increased morbidity, mortality, healthcare costs

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Joseph Brooks

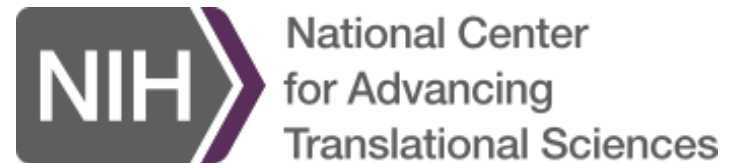
Duan Li

Mackenzie Zierau

Maria Hill-Carruthers

George Mashour

Phil Vlisides



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Blue Shield**  
of Michigan



“If the human brain were so simple that we could understand it, we would be so simple that we couldn’t.”

– Emerson M. Pugh

