

ORIGINAL CLINICAL REPORT

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Development and Validation of the Family ICU Delirium Detection Instrument

OBJECTIVES (BACKGROUND): Families play an important role in the care of ICU patients, yet their potential to contribute to the detection of delirium—a common and harmful complication—is often underutilized. This study aimed to adapt the Sour Seven to create the Family ICU Delirium Detection Instrument (FIDDI) and to assess its usability, reliability, and construct validity for delirium detection in ICU patients.

DESIGN: Cross-sectional.

SETTING: Canadian closed 34-bed general systems adult ICU providing tertiary level care.

PARTICIPANTS: Patient-family pairs (dyads) were included. Eligible patients had no primary brain injury, a Richmond Agitation-Sedation Scale score of greater than or equal to -3 and were expected to remain in the ICU for at least 24 hours to complete all study assessments.

INTERVENTIONS: Not applicable.

MEASUREMENTS AND MAIN RESULTS: The Sour Seven underwent adaptation using data from the Family ICU Delirium Detection Study and input from a multidisciplinary working group. The FIDDI was then tested for internal consistency using Cronbach's alpha and construct validity through confirmatory factor analysis. Family members provided feedback through surveys on the tool's usability and their experience with delirium detection. We enrolled 51 patient and family member pairs. Most family members were women ($n = 38$, 75%), including spouses ($n = 17$, 33%), adult children ($n = 16$, 31%), or siblings ($n = 10$, 20%). The FIDDI showed strong internal consistency (Cronbach's alpha = 0.858). The model fit indices indicated acceptable structure validity (Tucker-Lewis index [TLI] = 1.015, comparative fit index = 1.000, root mean square error of approximation = 0.000, and standardized root mean residual = 0.044). Family members reported that the tool was easy to use and helpful for understanding delirium, although some attributed behavioral changes to medical treatments or clinical conditions, highlighting the need for further education on delirium.

CONCLUSIONS: The Sour Seven was successfully adapted for the ICU environment (FIDDI) and pre-tested, demonstrating reliability and construct validity for detecting delirium in the ICU. These findings support its potential as a family-engaged assessment tool. Further research is needed to test the value of the FIDDI relative to current delirium detection strategies.

KEYWORDS: critical care; delirium; family; intensive care units; patient-centered care

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Families (i.e., immediate family, relatives, and friends) play a key role in patient care, acting as surrogate decision-makers and important emotional supporters (1, 2). Family presence at the bedside is critically important in the ICU, where patients are often unable to communicate with the



KEY POINTS

Question: How effective is the adapted Sour Seven, now the Family ICU Delirium Detection Instrument (FIDDI), in terms of usability, reliability, and construct validity for delirium detection in ICU patients?

Findings: In this cross-sectional study, the FIDDI showed reliability and construct validity for detecting delirium, with family members reporting it was easy to use and helpful for understanding delirium.

Meaning: The Sour Seven was successfully adapted into the FIDDI, showing reliability and validity for ICU delirium detection, supporting its potential as a family-administered delirium detection tool.

healthcare team due to the severity of their illness and the invasive nature of the technologies and therapies employed. While the important role family play in ICU care is increasingly recognized, there remains a gap in understanding how to best engage them as active members of the care team (3–7).

Delirium is an acute state of worsening confusion commonly occurring in critically ill adults. Patients with delirium may experience persistent cognitive and physical impairments, psychiatric comorbidity (3–5), increased mortality (8), and higher healthcare costs (9). Family members of critically ill patients face risks of developing anxiety and depression during and after their loved one's ICU stay (10, 11). Notably, family presence at the bedside is one of the few modifiable risk factors for delirium, with evidence suggesting that active family engagement may help reduce delirium incidence and duration (6, 12). While involving families in delirium care is a promising strategy, existing interventions are heterogeneous, and the evidence remains inconclusive. Structured approaches such as engaging families in delirium detection may enhance its recognition, support earlier intervention, and promote meaningful involvement, potentially improving patient and family outcomes (6).

Despite screening with guideline-recommended tools (13), it has been estimated that up to 66% of delirium cases are undetected due to fluctuating symptoms and subtle delirium presentations

like hypoactive delirium (14). While the original Confusion Assessment Method (CAM) is a well-validated provider-administered delirium screening tool for general medical patients (15), its reliance on patients' ability to communicate verbally limits its applicability in the ICU, where many patients are mechanically ventilated or sedated. To address this gap, the CAM-ICU was developed and validated specifically for critically ill patients, including those who are nonverbal due to intubation or sedation (8). The CAM-ICU has demonstrated strong validity and reliability in detecting delirium in this population, enabling accurate assessment despite patients' impaired communication abilities (16). This adaptation was essential because traditional CAM criteria could not be consistently applied in the ICU setting, highlighting the need for tailored tools in critical care environments.

Similarly, existing family-administered delirium detection tools, like the Family CAM (FAM-CAM) (17) and the Sour Seven (18), were developed for use in non-ICU settings and face comparable limitations when applied to critically ill patients. Like the original CAM, these tools often assume the patient can communicate verbally, engage in routine activities, and exhibit symptoms that are easily observable. However, in ICU setting, intubation, sedation, and pain medication may mask symptoms of delirium. Just as the CAM required adaptation for the ICU environment, so too must family-administered tools be tailored to account for the complexities of critical illness. Importantly, family members, who are most familiar with the patient's baseline cognition and behavior, may recognize atypical symptoms or subtle changes that healthcare providers, who lack this prior knowledge, might overlook. Expanding delirium detection beyond provider-administered assessments to include structured family involvement may serve as a valuable adjunct to standard clinical assessments, enhancing detection and improving patient and family outcomes.

Family involvement in the detection and management of delirium, the most common complication of critical illness (3–5), is an important area of focus in improving patient care, particularly because delirium may be directly impacted by family presence (6, 7). This highlights a crucial gap in current ICU care practices, where family engagement has the potential to improve outcomes but is often not fully integrated

into care models. As part of our efforts to engage families as active members of the ICU care team through family-administered delirium detection, we adapted and pre-tested an existing family-administered delirium detection tool (Sour Seven) for use in the ICU, creating a new tool called the Family ICU Delirium Detection Instrument (FIDDI).

METHODS

This study was approved by the University of Calgary Conjoint Health Research Ethics Board (CHREB; Study identification: REB24-0091; study title: Development of a Family ICU Delirium Detection Instrument; original approval date: February 8, 2024) and study procedures were followed in accordance with the ethical standards of the responsible committee on human experimentation (CHREB) and with the Helsinki Declaration of 1975. We aimed to pretest the FIDDI, a family-administered tool, to assess its reliability and construct validity for delirium detection in ICU patients. This tool was adapted from the Sour Seven, a seven-item caregiver-administered delirium detection tool, four questions of the Sour Seven reflect *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5) criteria of delirium, one assessing disorganized behavior, and two novel categories assessing decline in activities of daily living. Based on previous validation, items in the Sour Seven correlate weakly with delirium. We, therefore, modified the Sour Seven for ICU use and named the new tool FIDDI. The study was reported according to the Strengthening the Reporting of Observational Studies in Epidemiology statement for cross-sectional studies (19).

Study Design

Adaptation. In a previous study, we assessed the validity of the Sour Seven (items displayed in **Table 1**) for use in the ICU (20). Secondary analysis of these data demonstrated which items lacked reliability, conceptual alignment, and predictive value in critically ill patients. Items 1–5 demonstrated strong associations, agreement, and similarity, as evidenced by high tetrachoric correlation ($tr > 0.78$), kappa coefficient ($kr > 0.52$), and Jaccard coefficient ($jc > 0.51$). In contrast, items 6 and 7 showed notably weaker relationships ($tr < 0.63$, $kr < 0.37$, and $jc < 0.38$), suggesting lower consistency and shared response patterns. Removing

items 6 and 7 did not change Cronbach's alpha, indicating they did not contribute meaningfully to the scale. Additionally, their exclusion did not alter the scale's ability to predict delirium. Items 6 and 7 were also less relevant to critically ill patients, as they addressed issues such as unexplained difficulty when eating or drinking (item 6) and unexplained difficulty with mobility or movement (item 7)—factors that may be influenced by ICU-related conditions rather than delirium itself. Based on these findings, we refined the Sour Seven by retaining only items 1–5 and renamed it the FIDDI. This adaption ensured that, at minimum, the four core features of delirium from the CAM (15)—fluctuating course, inattention, altered level of consciousness, and disorganized thinking (items 1–4, Table 1)—were preserved. Notably, three delirium features outlined in the DSM-5 are also included (items 1–5; Table 1). However, level of arousal, which is a CAM feature and was present in DSM-IV, was removed in DSM-5, as delirium is now defined by cognitive features rather than arousal level (21, 22).

These five items were revised in collaboration with a multidisciplinary working group with lived, clinical, content, and methodological expertise (i.e., past ICU family members who are part of our research team; B.S., S.L.), ICU registered nurses (M. Maclean, P.M., T.O., J.R., M.S.), clinical nurse specialist (K.A.K.), nurse practitioner (K.D.), ICU physician (N.J.), medical student (M. Mok), and researchers at different levels of training (K.M.F., K.D.K., N.C.A., T.G.P.). Working alongside patient partners, we refined items 1–5 to ensure the wording was accessible to laypersons and ICU family members, while aligning with the recommended sixth-grade reading level for patient-facing materials. The draft FIDDI was then emailed to the working group, accompanied by copies of the FAM-CAM (17), Sour Seven (18), and CAM-ICU (16), to collect written feedback. Using this feedback, the FIDDI underwent iterative refinement, which included the addition of “for example” statements to enhance comprehension and clarity. While these examples introduced more complex language and increased the Flesch-Kincaid readability score to grade 9, this still represents an improvement over the original Sour Seven (Flesch-Kincaid readability score of grade 14). The working group convened once via Zoom to finalize the instrument. A comparison between the original Sour Seven and adapted FIDDI is presented in Table 1.

TABLE 1.
Comparison of the Sour Seven, With the Original Draft of the Family ICU Delirium Detection Instrument

Item No.	Sour Seven	Family ICU Delirium Detection Instrument
1	Altered level of awareness to the environment in any way different than being normally awake.	A change in behavior, alertness, or ability to think clearly. For example, acting confused, moving their body in a restless or agitated way, or being extremely sleepy.
2	Reduced attentiveness: inability to focus on you during the interaction.	A change in ability to pay attention. For example, being easily distracted or losing focus during a conversation or activity.
3	Fluctuation in awareness and attentiveness, such as drifting in and out during an interaction or through the day.	A change in awareness or attention that comes and goes. For example, being confused in the morning and aware in the evening, or being agitated yesterday and very sleepy today.
4	Disordered thinking: the response (whether verbal or action) is unrelated to the question or request.	Communicating or thinking in a way that does not make sense. For example, giving a confusing answer to a question, not understanding that they are in an ICU, or seeing or hearing things that are not there.
5	Disorganized behavior: purposeless, irrational, under-responsive or over-responsive to requests.	Doing things that do not make sense or being more or less interactive than usual. For example, trying to take their gown off, pulling at lines or tubes, being combative or withdrawn, or having slow speech or thinking.
6	Unexplained impaired eating or drinking (excluding appetite); unable to perform the actions to feed oneself.	NA
7	Unexplained difficulty with mobility or movement.	NA

NA = not applicable.

Pre-Testing. Once the initial draft of the FIDDI was completed, its use was tested with ICU families. Participants were invited to provide feedback regarding their perceptions of the tool using a paper-based or online (Qualtrics, Provo, UT) questionnaire (**Appendix 1**, <https://links.lww.com/CCX/B568>). The multidisciplinary working group reviewed the feedback and made revisions accordingly.

Setting

The study was conducted in one 34-bed general systems adult ICU providing tertiary level care in Calgary, Alberta, from July 17, 2024, to December 2, 2024.

Participants

We recruited consecutive, eligible patients with at least one family member (defined here as family, relatives, or friends). Eligible patients were 18+ years old; eligible for delirium assessment with a Richmond

Agitation-Sedation Scale greater than or equal to -3 and no primary brain injury; and were able to communicate with research staff (verbal, communication board). Capacity to consent was first assessed by the bedside nurse; if the patient was unable to provide informed consent, surrogate consent was obtained from an authorized decision-maker in accordance with institutional ethics guidelines. Eligible family members were 18+ years old; could provide informed consent; and were able to communicate with research staff (both patient [verbal, communication board] and family member).

Data Sources

Enrolled family members completed the FIDDI on the patient once and provided written or verbal feedback regarding their perceptions of the tool (paper or online via Qualtrics; Appendix 1, <https://links.lww.com/CCX/B568>), which was used to iteratively refine the

FIDDI. Family members also completed a paper or online-based (Qualtrics) demographic questionnaire to understand participant diversity with respect to social determinants of health that can influence health outcomes, behaviors, and access to care (**Appendix 2**, <https://links.lww.com/CCX/B568>).

Study Size

Pre-testing required 50 participants based on a 10:1 participant-to-item ratio (based on five FIDDI questions) (23).

Data Analysis

Demographics were summarized using descriptive statistics. FIDDI completion time was estimated by the study team. Written and verbal feedback from pre-testing was analyzed in NVivo 12 (QSR International, Australia) using qualitative content analysis to categorize responses (24, 25). Potential item reduction was assessed using Cronbach's alpha (α), which quantified the effect of removing items from the tool. An α of greater than 0.70 is considered acceptable internal consistency (26). Items that did not reach an α of greater than 0.70 were considered for removal (except for the four items that relate to the four core features of delirium, as above). Confirmatory factor analysis (CFA) was performed to evaluate the construct validity of the FIDDI and assess the factor structure of the instrument. Given that the FIDDI was adapted from the existing Sour Seven, the CFA tested whether the tool's items appropriately loaded onto their respective latent factors (e.g., acute onset, inattention, disorganized thinking, from the DSM-5) (22). Fit indices, including the comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean residual (SRMR), were used to assess model fit, with CFI values greater than 0.90, RMSEA values less than 0.08, and SRMR values less than 0.08 indicating good model fit. All data were analyzed using R-4.3.0 (R Core Team, 2023, Vienna, Austria) (27) for statistical analysis, utilizing the lavaan package (28) for structural equation modeling, with the significance level set at p value of less than 0.05.

RESULTS

Of the 73 dyads approached, 54 agreed to participant ($n = 54/73$, 74%; **Fig. 1**). Of those 54 dyads, 51

completed the questionnaires. One dyad completed all except the FIDDI perceptions questionnaire. As such, one more dyad was recruited to ensure 50 dyads had completed all questionnaires. Of the 51 dyads, most family members were women ($n = 38/51$, 75%) and relationships to ICU patients included spouse ($n = 17/51$, 33%), adult child ($n = 16/51$, 31%), or sibling ($n = 10/51$, 20%). Select participant characteristics are displayed in **Table 2**, with full characteristics displayed in **eTable 1** (<https://links.lww.com/CCX/B568>).

Internal Consistency and Construct Validity

A total of 51 family members completed the FIDDI once. Of the 255 possible data points (5 items $\times$ 51 people = 255 possible data points), three were missing ($n = 3/255$, 1%; item 2, item 3, and item 5) from three different participants. The internal consistency of the scale was evaluated using Cronbach's alpha, which yielded a value of 0.86, indicating good reliability and that the items in the scale are consistently measuring the same underlying construct. The CFA demonstrated that a five-item model showed an acceptable model fit. The model fit indices indicated acceptable structure validity (Tucker-Lewis index [TLI] = 1.015, CFI = 1.000, RMSEA = 0.000, and SRMR = 0.044).

FIDDI Feedback

A total of 50 family members provided feedback on the FIDDI via the perceptions questionnaire. Most family members reported a median delirium knowledge of 3 (range, 1–5; interquartile range, 1.7), ranging from a score of one ("I have no knowledge about delirium") to five ("I am very knowledgeable about delirium"). More than half of family members ($n = 27/50$, 54%) reported that they observed signs of delirium in their loved one during their ICU stay, while 11 ($n = 11/50$, 22% were unsure). It took families less than 5 minutes to complete the FIDDI questionnaire.

When asked to describe their experience with completing the FIDDI, most family members described it as straightforward or easy to understand ($n = 19/50$, 38%) or helpful (e.g., contributed to their understanding of delirium or validated their experience; $n = 12/50$, 24%). A few family members noted parts of the questionnaire that they found vague, with respect to if they should consider their loved one's state before the hospital or before the ICU or what symptoms

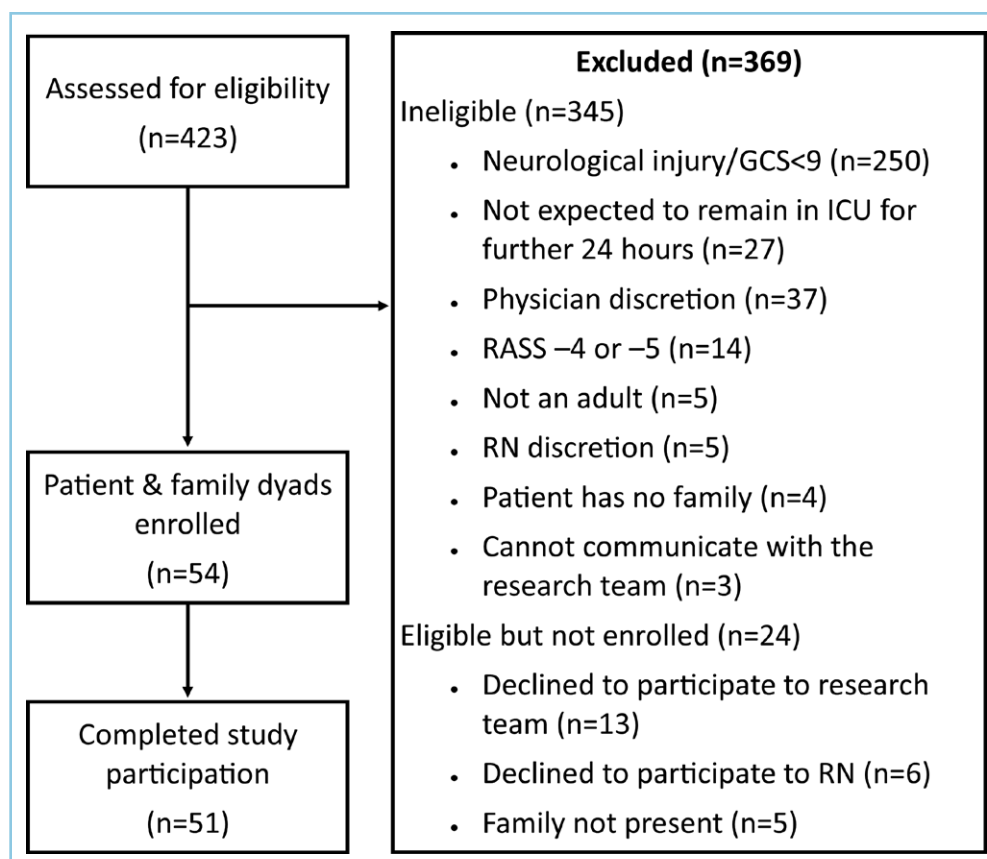


Figure 1. Participant flow. GCS = Glasgow Coma Scale, RASS = Richmond Agitation-Sedation Scale, RN = registered nurse.

are related to medication vs. delirium. Three family members ($n = 3/50$, 6%) reported that the items were annoying, difficult, or upsetting. Two of the three were commenting on the demographic questionnaire and not the FIDDI. The third shared about their loved one's agitation while mechanically ventilated.

When family members were asked for suggestions to improve the five FIDDI items, some noted that medications and medical procedures (e.g., dialysis, mechanical ventilation) influenced their loved one's behavior. They often attributed changes in behavior to the effects of treatments or medical conditions (such as the impact of sedation or severe illness), rather than recognizing that they may be symptoms of delirium:

"She is just coming out of a coma, so behaviour is angry, she is trying to pull lines out..."

"...after her dialysis, she gets agitated, sleeps well next day."

A few family members felt that item 1 had too many words and was repetitive with other items. Two family members wanted changes to item 5 such as changing

the wording to "acting out of character" or that they felt the examples provided were all negative: "The examples were all negative. Our son exhibited extremely positive behavior and socially engaging behavior." Participants also shared confusion about what they were comparing this to, pre-hospital or pre-ICU cognition. Changes to the FIDDI in response to participant feedback are demonstrated in **Table 3**, with the final FIDDI with instructions in **Appendix 3** (<https://links.lww.com/CCX/B568>).

DISCUSSION

The FIDDI was successfully developed and pre-tested, demonstrating reliability

and construct validity for detecting delirium in the ICU. The iterative refinement process, guided by a multidisciplinary working group and feedback from ICU family members, resulted in a tool that aligns conceptually with delirium detection while remaining accessible and practical for families. Notably, 74% of eligible family members participated in the pre-testing, indicating a high level of engagement and willingness to be involved in delirium detection. Families reported that the instrument was easy to use, reinforcing its potential as an adjunct to standard clinical assessments.

These findings highlight the potential of the FIDDI to enhance family engagement in ICU care through delirium detection, by providing a structured and user-friendly tool for families to identify delirium-related changes in their loved one. Previous approaches to family delirium detection in the ICU used tools that had limited relevance for ICU patients and were written well above the recommended sixth-grade standard for health materials (29, 30). This may be one of the reasons that these tools performed no better than provider-administered delirium detection tools (20) in the ICU

TABLE 2.
Participant Characteristics

Characteristic	Family (<i>n</i> = 51)	Patient (<i>n</i> = 51)
Age, median (interquartile range)	53 (38–61)	62 (53–70.5)
Sex, <i>n</i> (%)		
Male	13 (25.5)	36 (70.6)
Female	38 (74.5)	15 (29.4)
Relationship to patient, <i>n</i> (%)		
Spouse	17 (33.3)	-
Child	16 (31.4)	-
Sibling	10 (19.6)	-
Parent	5 (9.8)	-
Prefer to self-describe ^a	2 (3.9)	-
Grandchild	1 (2.0)	-
Education, <i>n</i> (%)		
Secondary (high) school diploma or equivalency	8 (15.7)	7 (13.7)
Apprenticeship or trades certificate or diploma	9 (17.6)	6 (11.8)
Collège d'enseignement general et professionnel or other nonuniversity certificate or diploma	10 (19.6)	5 (9.8)
University certificate or diploma (bachelor's degree not completed)	5 (9.8)	10 (19.6)
Bachelor's degree	14 (27.5)	9 (17.6)
Master's degree	0 (0)	2 (3.9)
PhD or doctoral degree	1 (2.0)	2 (3.9)
I don't know	0 (0)	2 (3.9)
I prefer not to answer	2 (3.9)	2 (3.9)
Activity, <i>n</i> (%)		
Working at a paid job or self-employed	37 (72.5)	19 (37.3)
Going to school	0 (0)	2 (3.9)
Caring for children	1 (2.0)	0 (0)
Household work	2 (3.9)	3 (5.9)
Retired	7 (13.7)	14 (27.5)
Long term illness	2 (3.9)	7 (13.7)
Volunteering or caregiving other than for children	1 (2.0)	0 (0)
I don't know	0 (0)	2 (3.9)
I prefer not to answer	0 (0)	1 (2.0)

^aDaughter-in-laws.

setting. In contrast, the FIDDI was designed specifically for ICU family members, with items written to target a sixth-grade reading level and the addition of examples to enhance accessibility and comprehension. While these examples slightly increase the Flesch-Kincaid readability score, they improve clarity and do not detract

from overall accessibility. Assessments of accessibility and comprehension will be important as the FIDDI is tested in different patient populations to determine whether further refinements are needed. The FIDDI was designed to be applicable to a critically ill adult, while ensuring clarity and comprehension for families with

TABLE 3.
Revised Family ICU Delirium Detection Instrument Based on Participant Feedback

FIDDI (Original)	FIDDI (Revised)
1) A change in behavior, alertness, or ability to think clearly. For example, acting confused, moving their body in a restless or agitated way, or being extremely sleepy.	1) A change in “level of alertness.” For example, moving their body in a restless or agitated way or being extremely sleepy.
2) A change in ability to pay attention. For example, being easily distracted or losing focus during a conversation or activity.	2) A change in ability to pay attention. For example, being easily distracted or losing focus during a conversation or activity.
3) A change in awareness or attention that comes and goes. For example, being confused in the morning and aware in the evening, or being agitated yesterday and very sleepy today.	3) A change in “behaviour” that comes and goes. For example, “aware” in the morning and “confused” in the evening or being agitated yesterday and very sleepy today.
4) Communicating or thinking in a way that does not make sense. For example, giving a confusing answer to a question, not understanding that they are in an ICU, or seeing or hearing things that are not there.	4) Communicating or thinking in a way that does not make sense. For example, giving a confusing answer to a question, not understanding that they are in an ICU, or seeing or hearing things that are not there.
5) Doing things that do not make sense or being more or less interactive than usual. For example, trying to take their gown off, pulling at lines or tubes, being combative or withdrawn, or having slow speech or thinking.	5) Doing things that do not make sense, “acting out of character,” or being more or less interactive than usual. For example, trying to take their gown off, pulling at lines or tubes, being combative or withdrawn, having slow speech or thinking, “not listening, or acting unusually talkative or engaging.”

FIDDI = Family ICU Delirium Detection Instrument.

varying levels of health literacy. This design may enable families to contribute effectively to delirium monitoring, helping to identify delirium symptoms that may go unnoticed during brief clinical encounters.

Participant feedback revealed a key challenge: families may try to explain why a patient is behaving differently rather than simply describing what they observe. For example, instead of noting that a patient is very sleepy and difficult to interact with, families may assume the sleepiness is due to sedation and not recognize it as a potential sign of delirium. This distinction is crucial, given that ICU patients are at an increased risk for delirium due to mechanical ventilation, dialysis, and medications, which can impair cognition (31). Without a clear understanding of how these treatment contribute to delirium, families may mistakenly interpret behavioral changes as inevitable consequences of the patient’s condition or the treatment itself rather than recognizing them as potential sign of delirium (32). To address this, the FIDDI focuses on identifying changes from the patient’s baseline rather than requiring families to determine this cause. By focusing

on identifying changes from baseline rather than differentiating causes, families can simply report what they observe to the healthcare team instead of feeling pressure to interpret why the change is happening (33). Clear communication about the FIDDI should emphasize that its purpose is to help families identify and share changes in their loved one’s behavior, alertness, or thinking—allowing clinicians to assess and respond appropriately.

The integration of the FIDDI into routine ICU care offers the potential of practical benefits by providing clinicians with a supplementary source of information, potentially improving the early detection of delirium and allowing timely intervention. The tool can also foster family involvement in patient care, aligning with principles of family-centered care (34). Future research should include a clinical evaluation of the FIDDI compared with a reference standard, such as expert clinical evaluation. This might include working with families and healthcare professionals from diverse backgrounds to translate the tool into multiple languages, modifying items in the tool to

ensure they align with cultural norms and values, and conducting validation studies with a diverse group to assess how well the FIDDI performs in these contexts.

This study has several strengths, including survey development with a multidisciplinary team, a rigorous pre-testing process with a sample of ICU families, and the use of methods to capture both quantitative and qualitative aspects of the instrument's performance. These approaches bolster confidence in the reliability, validity, and acceptability of the FIDDI. However, as a cross-sectional study, this research is limited in its ability to assess the tool's performance over time or its sensitivity to detecting changes in delirium status. The single-center design may also limit generalizability to ICUs with different patient populations, family dynamics, or workflows.

CONCLUSIONS

The successful development and pre-testing of the FIDDI demonstrate its reliability and construct validity for detecting delirium in the ICU. These findings support its potential as a feasible and structured way to engage families in delirium detection. Further research is needed to validate the FIDDI against clinician-administered delirium assessments and to test its incremental value in supporting the detection and management of delirium. Targeted knowledge translation efforts will be important to support clinician acceptance and guide meaningful integration of family-administered delirium detection into routine ICU care.

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