

# Behavioural Supports Ontario-Dementia Observation System<sup>©</sup>



## BSO-DOS<sup>©</sup>

**Skillfully and Confidently Use the BSO-DOS<sup>©</sup>  
to Inform Behavioural Assessment and  
Individualized Care Planning**



Behavioural Supports Ontario  
Soutien en cas de troubles du comportement en Ontario



# BSO-DOS<sup>®</sup>

- A reliable direct observation tool that provides objective data about a person's behaviour every thirty minutes for 24-hours over five consecutive days
- An essential clinical tool in behavioural assessment and individualized care planning for persons living with dementia

**BSO-DOS<sup>®</sup> Behavioural Supports Ontario Dementia Observation System**  
**WORKSHEET**

PRE-RELEASE VERSION #2  
NOT FOR CLINICAL USE

**Step 1: Background** (Complete prior to Data Collection Sheet)

1. a) Check the reason(s) for completing BSO-DOS<sup>®</sup>:

- ☒ Baseline/Admission
- ☐ Transition/Move
- ☐ Change in behaviour
- ☐ Evaluation of a new strategy/approach
- ☐ Adjustment of medications
- ☐ Support for a referral/transfer
- ☒ New behaviour: calling out
- ☐ Other:

b) BSO-DOS<sup>®</sup> start date: 10/04/2025 BSO-DOS<sup>®</sup> stop date: 14/06/2025

Section 1 completed by (print name): Nikita Wilkins Signature: Nikita Wilkins

**Step 2: Complete the Data Collection Sheet**

2. Proceed to the next page and complete the Data Collection Sheet. Once finished, return back to this page and continue to Step 3.

**Step 3: Analysis and Planning** (Use the Data Collection Sheet)

3. a) Highlight the numbers on the Data Collection Sheet  
b) Use the table below to calculate how often

	Day 1	Day 2
1 Sleeping	10	11
2 Awake/Calm	23	21
3 Positively Engaged	3	3
4 Vocal Expressions	3	5
5 Motor Expressions	1	1
6 Sexual Expression of Risk	0	1
7 Verbal Expression of Risk	0	0
8 Physical Expression of Risk	0	0
9		
10		

Total the block (Add up the numbers in each category per day)

c) Document the following within a progress note

- A summary of the completed analysis table
- What the BSO-DOS<sup>®</sup> data reveal (e.g. types of behaviours expressed, patterns, time of day, broken sleep)
- Possible causes and contributing factors (consider collected context and personhood information)

Table completed by (print name): Nikita Wilkins

Progress note completed by (print name): Nikita Wilkins

BSO-DOS<sup>®</sup> Advisory (2023). Behavioural Supports Ontario Dementia Observation System. Behavioural Supports Ontario Provincial Coordinating Office, North York.

**BSO-DOS<sup>®</sup> DATA COLLECTION SHEET**

PRE-RELEASE VERSION #2  
NOT FOR CLINICAL USE

Observed Behaviours (For #3-b, check specific behaviours as you observe)

1 (Blue) Sleeping

2 (Green) Awake/calm

3 (Green) Positively engaged

- ☐ Conversing
- ☐ Engaging in activity
- ☐ Hand holding
- ☐ Singing
- ☐ Kissing
- ☐ Laughing
- ☒ Smiling
- ☐ Other:

4 (Yellow) Vocal expressions (repetitive)

- ☐ Asking questions
- ☐ Crying
- ☐ Grunting
- ☐ Humming
- ☐ Moaning
- ☐ Repeating words
- ☐ Requests
- ☐ Sighing
- ☐ Other:

5 (Yellow) Motor expressions (repetitive)

- ☐ Banging/rattling
- ☐ Collecting
- ☐ Disrobing
- ☐ Entering others' spaces
- ☐ Fidgeting
- ☐ Grinding teeth
- ☐ Pacing
- ☐ Rocking
- ☐ Rummaging
- ☐ Trying to leave
- ☐ Other:

6 (Pink) Sexual expression of risk

- ☐ Sexual comments/questions
- ☐ Requesting sexual favours
- ☐ Sexual threats
- ☐ Sexual gestures
- ☐ Exposing genitals
- ☐ Self-pleasuring in others' presence
- ☐ Unwanted touching
- ☐ Forcing others into sexual acts
- ☐ Other:

7 (Purple) Verbal expression of risk

- ☐ Derogatory insults
- ☐ Screaming/yelling
- ☐ Swearing
- ☐ Threatening
- ☐ Other:

8 (Orange) Physical expression of risk

- ☐ Biting
- ☐ Choking others
- ☐ Grabbing
- ☐ Hair pulling
- ☐ Hitting/slapping
- ☐ Kicking
- ☐ Pinching
- ☐ Punching
- ☐ Pushing
- ☐ Scratching
- ☐ Self-injuring
- ☐ Spitting
- ☐ Throwing
- ☐ Other:

9 Other:

10 Other:

Context

A: Alone R: Expressions directed at Resident/patient/visitor(s)

C: Personal Care (e.g. bathing, incontinent care, toileting) S: Expressions directed at Staff

F: Family/visitors present X: Other: Pain medication given

L: Loud/busy environment Y: Other:

Q: Quiet environment

Data Collection Table Contributors

Names (print)	Initials	Names (print)	Initials
Nikita Wilkins	NW	Aziz Tawegon	AT
Kate Perry	KP	Dany Manning	DM
Sophie Smyth	SS		
Jim Thompson	JT		

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# The BSO-DOS<sup>©</sup> is Used to:

- ✓ Identify behavioural patterns, trends and contributing factors associated with responsive behaviours
- ✓ Develop tailored non-pharmacological approaches to address unmet needs
- ✓ Evaluate the outcomes of non-pharmacological approaches
- ✓ Measure the impact of medications

# Your Experience in Using the BSO-DOS<sup>©</sup>

How familiar are you with the BSO-DOS<sup>©</sup>?

- ☐ This is your first time hearing about it
- ☐ You have heard of it, but have never used it
- ☐ You use it occasionally
- ☐ You use it often



For those that have used the BSO-DOS<sup>©</sup>, what parts of the tool have you completed?

- ☐ The Background Section
- ☐ The Data Collection Table
- ☐ The Analysis and Planning Section





# Your Experience in Using the BSO-DOS<sup>©</sup>

**Thank-you** for the role that you have played in completing the tool!



What benefits have you seen in using the BSO-DOS<sup>©</sup>?





# Mrs. Cheng



# Mrs. Cheng

## Step 1 Background *(Complete prior to Data Collection Sheet)*

### 1. a) Check the reason(s) for completing BSO-DOS®:

☒ Baseline/Admission

☐ Transition/Move

☐ Change in behaviour

☐ Evaluation of a new strategy/approach

☐ Adjustment of medications

☐ Support for a referral/transfer

☒ New behaviour: calling out

☐ Other: \_\_\_\_\_

b) BSO-DOS® start date: 10/06/2025 BSO-DOS® stop date: 14/06/2025

Section 1 completed by (print name): Nellie Wilkins

Signature: Nellie Wilkins







## BSO-DOS® DATA COLLECTION SHEET

Name: Yun Cheng  
DOB (dd/mm/yyyy): 14/09/1939  
HCN: 1111-111-111-MB  
Other ID:

### Observed Behaviours

(For #3-8, check specific behaviours as you observe)

#### 1 (Blue) Sleeping

#### 2 (Green) Awake/calm

#### 3 (Green) Positively engaged

- ☐ Conversing ☐ Hugging ☐ Singing  
☒ Engaging in activity ☐ Kissing ☒ Smiling  
☐ Hand holding ☐ Laughing ☐ Other:

#### 4 (Yellow) Vocal expressions (repetitive)

- ☐ Asking questions ☐ Humming ☐ Requests  
☐ Crying ☒ Moaning ☐ Sighing  
☐ Grunting ☒ Repeating words ☐ Other:

#### 5 (Yellow) Motor expressions (repetitive)

- ☒ Banging/rattling ☒ Fidgeting ☐ Rummaging  
☐ Collecting ☐ Grinding teeth ☐ Trying to leave  
☐ Disrobing ☐ Pacing ☐ Other:  
☐ Entering others' spaces ☐ Rocking

#### 6 (Pink) Sexual expression of risk

- ☐ Sexual comments/questions ☐ Self-pleasuring in others' presence  
☐ Requesting sexual favours ☐ Unwanted touching  
☐ Sexual threats ☐ Forcing others into sexual acts  
☐ Sexual gestures ☐ Other:  
☐ Exposing genitals

#### 7 (Purple) Verbal expression of risk

- ☐ Derogatory insults ☐ Swearing ☐ Other:  
☒ Screaming/yelling ☐ Threatening

#### 8 (Orange) Physical expression of risk

- ☐ Biting ☐ Kicking ☐ Self-injuring  
☐ Choking others ☐ Pinching ☐ Spitting  
☐ Grabbing ☐ Punching ☐ Throwing  
☐ Hair pulling ☐ Pushing ☐ Other:  
☒ Hitting/slapping ☐ Scratching

9 Other:

10 Other:

### Context

A: Alone R: Expressions directed at Resident/patient/visitor(s)  
C: Personal Care (e.g. bathing, incontinent care, toileting) S: Expressions directed at Staff  
F: Family/visitors present X: Other: Pain medication given  
L: Loud/busy environment Y: Other:  
Q: Quiet environment

### Data Collection Table Contributors

Names (print)	Initials	Names (print)	Initials
Nellie Wilkins	NW	Aziz Temesgen	AT
Kohl Farraj	KF	Denny Manning	DM
Sophie Koyanagi	SK		
Jana Thompson	JT		

\*Mandatory column

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### Step 3 Analysis and Planning *(Use the completed Data Collection Sheet)*

3. a) Highlight the numbers on the Data Collection Sheet according to the colour-coded legend in order to identify patterns.  
 b) Use the table below to calculate how often per day the behaviour(s) of interest occurred *(not every row needs to be calculated)*.

	Total the blocks for each day <i>(Add up the number of blocks for each category per day)</i>						Total the ½ hour blocks <i>(Add up the number of blocks for each category over 5 days)</i>		Calculate the average number of 1-hour blocks per day <i>(Divide the total blocks by 10. Hint: move the decimal one space left.)</i>	Concerns		
	Day 1	Day 2	Day 3	Day 4	Day 5					Frequency	Duration	Risk
1 Sleeping	20	15	22	24	20	=	101	÷10	10.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Awake/Calm	22	22	13	14	20	=	91	÷10	9.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Positively Engaged	3	3	1	3	3	=	13	÷10	1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Vocal Expressions	3	8	9	6	4	=	30	÷10	3.0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Motor Expressions	1	2	2	1	1	=	7	÷10	0.7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Sexual Expression of Risk						=		÷10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Verbal Expression of Risk	0	1	3	0	1	=	5	÷10	0.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Physical Expression or Risk	0	0	1	0	0	=	1	÷10	0.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9						=		÷10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10						=		÷10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table completed by (print name): Nellie Wilkins

Signature: Nellie Wilkins





D/M/Y	Observed Behaviour*	Context	Observed Behaviour*	Context	Observed Behaviour*	Context	Observed Behaviour*	Context	Observed Behaviour*	Context
10/06/2025	1		1		1		1		1	
0700	2		4	A	4	A	1		2	
0730	4	A C	4	7	C	4	5	C	4	C
0800	3		2		2		2		2	
0830	2		4	A	4		4	A	2	
0900	2		2		2		2		4	A
0930	2		2		2		2		2	
1000	4	5	A	3		2		3		2
1030	2		2		4		2		3	
1100	2		2		7		2		3	
1130	2		2		2		2		2	
1200	2		2		2		2		2	
1230	2		2		2		2		2	
1300	2		4	5	C	2		4	L	2
1330	2		2	Q	4	L	4	L	4	
1400	2		2		4	5	L	5	C	4
1430	2		2		7	8	C	1	5	7
1500	2		2		4		1		2	C
1530	2		2		2		2		2	
1600	2		2		3		2		2	
1630	2		2		2		2		2	
1700	2		2		2		2		2	
1730	2		4		2		2		4	X
1800	4	A	2		4		4	Q	2	
1830	2		2		7	A	4	Q	2	
1900	2		3		4	A	3		3	
1930	3		3		2		3	X	2	
2000	3		2		2		2		2	
2030	2		2		1		2		2	
2100	2		2		1		1		2	
2130	1		2		1		1		1	
2200	1		1		1		1		1	
2230	1		1		1		1		1	
2300	1		1		1		1		1	
2330	1		1		1		1		1	
2400	1		4		1		1		1	
0030	1		1		1		1		1	
0100	1		1		1		1		1	
0130	1		1		1		1		1	
0200	1		2		1		1		1	
0230	1		4		1		1		1	
0300	1		1		1		1		1	
0330	1		1		1		1		1	
0400	1		1		1		1		1	
0430	1		4	5	1		1		1	
0500	1		1		1		1		1	
0530	1		1		1		1		1	
0600	1		1		1		1		1	
0630	1		1		1		1		1	

\*Mandatory column

## Observed Behaviours

(For #3-8, check specific behaviours as you observe)

## 1 (Blue) Sleeping

## 2 (Green) Awake/calm

## 3 (Green) Positively engaged

- ☐ Conversing ☐ Hugging ☐ Singing  
☒ Engaging in activity ☐ Kissing ☒ Smiling  
☐ Hand holding ☐ Laughing ☐ Other:

## 4 (Yellow) Vocal expressions (repetitive)

- ☐ Asking questions ☐ Humming ☐ Requests  
☐ Crying ☒ Moaning ☐ Sighing  
☐ Grunting ☒ Repeating words ☐ Other:

## 5 (Yellow) Motor expressions (repetitive)

- ☒ Banging/rattling ☒ Fidgeting ☐ Rummaging  
☐ Collecting ☐ Grinding teeth ☐ Trying to leave  
☐ Disrobing ☐ Pacing ☐ Other:  
☐ Entering others' spaces ☐ Rocking

## 6 (Pink) Sexual expression of risk

- ☐ Sexual comments/questions ☐ Self-pleasuring in others' presence  
☐ Requesting sexual favours ☐ Unwanted touching  
☐ Sexual threats ☐ Forcing others into sexual acts  
☐ Sexual gestures ☐ Other:  
☐ Exposing genitals

## 7 (Purple) Verbal expression of risk

- ☐ Derogatory insults ☐ Swearing ☐ Other:  
☒ Screaming/yelling ☐ Threatening

## 8 (Orange) Physical expression of risk

- ☐ Biting ☐ Kicking ☐ Self-injuring  
☐ Choking others ☐ Pinching ☐ Spitting  
☐ Grabbing ☐ Punching ☐ Throwing  
☐ Hair pulling ☐ Pushing ☐ Other:  
☒ Hitting/slapping ☐ Scratching

## 9 Other:

## 10 Other:

## Context

- A: Alone R: Expressions directed at Resident/patient/visitor(s)  
C: Personal Care (e.g. bathing, incontinent care, toileting) S: Expressions directed at Staff  
F: Family/visitors present X: Other: Pain medication given  
L: Loud/busy environment Y: Other:  
Q: Quiet environment

## Data Collection Table Contributors

Names (print)	Initials	Names (print)	Initials
Nellie Wilkins	NW	Aziz Temesgen	AT
Kahil Farraj	KF	Denny Manning	DM
Sophie Koyanagi	SK		
Jane Thompson	JT		

Page 2 of 2

## Step 3 Analysis and Planning (Use the completed Data Collection Sheet)

3. a) Highlight the numbers on the Data Collection Sheet according to the colour-coded legend in order to identify patterns.

b) Use the table below to calculate how often per day the behaviour(s) of interest occurred (not every row needs to be calculated).

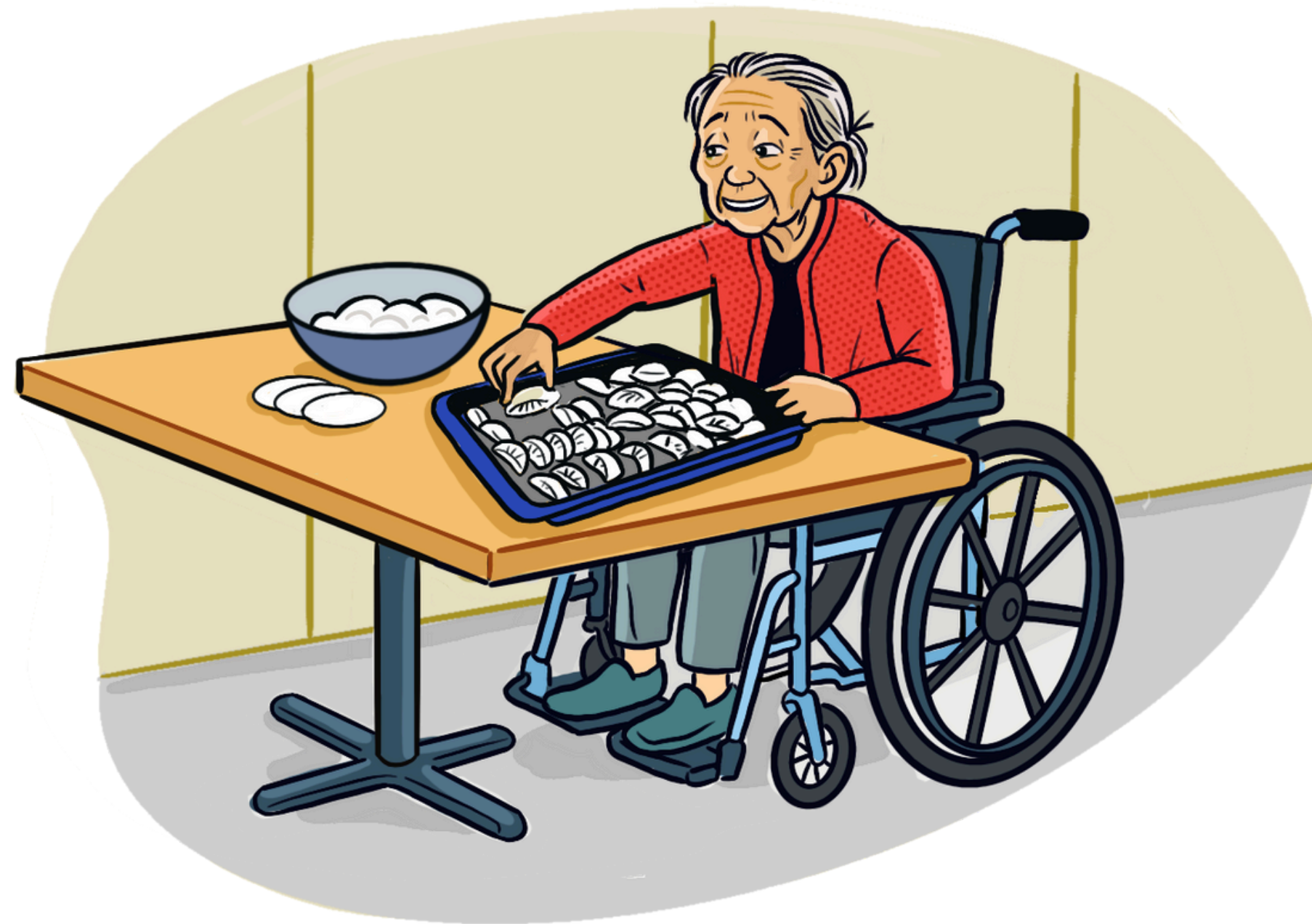
	Total the blocks for each day (Add up the number of blocks for each category per day)						Total the ½ hour blocks (Add up the number of blocks for each category over 5 days)			Calculate the average number of 1-hour blocks per day (Divide the total blocks by 10. Hint: move the decimal one space left.)			Concerns		
	Day 1	Day 2	Day 3	Day 4	Day 5					Frequency	Duration	Risk			
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7 Verbal Expression of Risk	0	1	3	0	1	=	5	÷10	0.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
8 Physical Expression or Risk	0	0	1	0	0	=	1	÷10	0.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
9						=		÷10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
10						=		÷10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Table completed by (print name): Nellie Wilkins

Signature: Nellie Wilkins



# Mrs. Cheng





# Progress Note

New Progress Note

Resident: Cheng, Yun

Type:

Responsive Behaviours/Personal Expressions

Date:

15/06/2025

13:00

BSO-DOS® completed 10/06/2025 - 14/06/2025. Paper copy scanned to chart.

Summary of Analysis Table:

- Concerns identified in relation to frequency and duration of Vocal Expressions (3.0 blocks per day) , frequency for Motor Expressions (0.7 blocks) and frequency for Verbal Expressions of Risk (0.5 blocks).

The BSO-DOS® data reveal the following:

- Repetitive vocal expressions typically occur when resident is alone – mostly the morning when she gets out of bed and after meal times.
- When resident has poor sleep the night before, these vocal expressions are more likely to escalate into verbal and physical expressions of risk.
- When resident is positively engaged, she expresses less responsive behaviours.
- On average, resident was positively engaged during 1.3 one-hour blocks per day.

Identified possible causes and contributing factors:

- It is stressful for resident to be alone. She is used to having a lot of family around.
- Resident sleeps better when she has pain medication at bedtime. This was not given the night she slept poorly.
- Resident may need more time engaged in activities that are meaningful.

Planned next steps:

- Writer to request MRP to change pain medication to a scheduled dose in the evening, rather than prn. Pain to be assessed each shift.
- Team members to turn on the radio in resident’s room at 0730, as this is when resident often starts to call out.
- Team and family to promote meaningful activities. Team to trial a new activity whereby they provide resident with white, non-toxic playdough to simulate dumpling dough. After each meal, a team member to provide Mrs. Cheng with the playdough and a tray from home. Family members plan to visit her during these times to make the dumplings together.
- Care plan updated as per above.
- Writer will initiate another BSO-DOS® (17/06/2025 - 21/06/2025) to measure the outcomes of these new approaches.

Created By:

Nellie Wilkins, RN



# Challenges to Implementing the BSO-DOS<sup>©</sup>

What challenges does your team face in using the BSO-DOS<sup>©</sup>?

How might your team overcome these challenges?

What next steps are needed for your team to use the BSO-DOS<sup>©</sup> in an effective and valuable way?

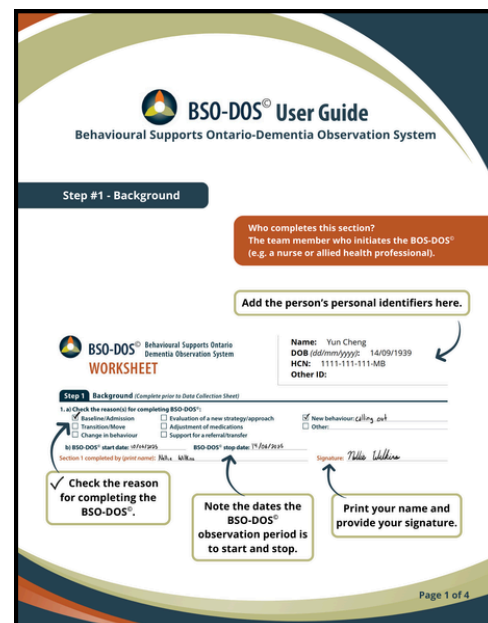


# Additional BSO-DOS<sup>®</sup> Resources Available



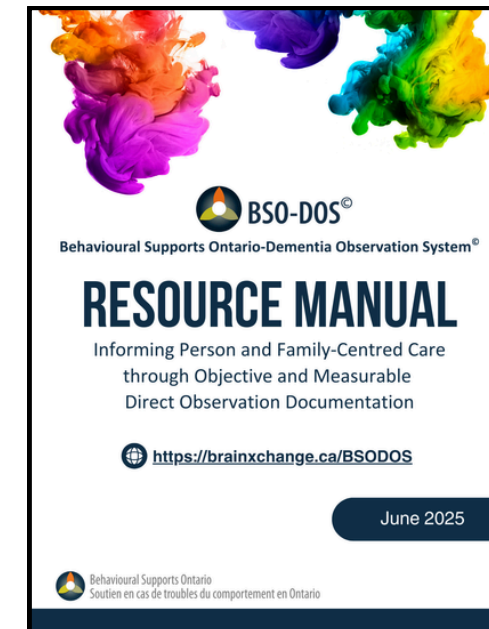
## Fact Sheet

A two page document that provides quick facts about the BSO-DOS<sup>®</sup>



## User Guide

A four page user-friendly guide for point-of-care team members to reference as they complete the BSO-DOS<sup>®</sup>



## Resource Manual

A 50+ page resource that includes definitions, details for completing each section, frequently asked questions, and case studies



## Video

A six minute educational video

**+ MORE!**



**[www.brainxchange.ca/BSODOS](https://www.brainxchange.ca/BSODOS)**



# Questions?





# Contact Information

## BSO Provincial Coordinating Office

✉ [provincialBSO@nbrhc.on.ca](mailto:provincialBSO@nbrhc.on.ca)

🌐 [www.brainxchange.ca/BSODOS](http://www.brainxchange.ca/BSODOS)

