

Site Specific MET Development Guide for Use in Health Centres, Hospitals, Shopping Centers and Malls.

To be used with The Site-Specific MET Development Template

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Preamble: In 2023, Scarff et al.¹ published a guide for site-specific development for the Multiple Errands Test. To provide all clinicians with access we have modified and adapted the guide based and provided templates for the (1) *Task & Rule List for Test-Takers*, (2) *Guidelines for Scoring* and (3) *Documenting and Scoring Form Template*.

We encourage all clinicians to read Scarff et al.'s paper¹ as it describes many subtleties that should be considered when developing a site-specific MET. We also encourage clinicians to read an overview of the Multiple Errands Test such as the one provided in *Functional Cognition* (2nd Ed) (AOTA Press, 2026)².

If clinicians do not wish to develop a site-specific MET, they may consider using the Home-MET³ which can be used in a variety of home settings or the Big-Store MET⁴ which can be used in a variety of department stores. Virtual versions of the MET such as the OxMET⁵ are also available.

Required Components	Comments
1. Locations	
Include essential locations (where a task must be done) and distractor locations (not essential to test completion although it may be possible to complete tasks there).	⇒ Locations should be in general use at site (e.g., gift shop not pop-up store) and allow for self-selection by the test taker (e.g., card rack) and interaction with staff (e.g., cashier).

	⇒ If possible, limit number of locations to 5 or 6 - increasing the number and/or required route complexity will increase the task complexity.
Tasks (Numbers correspond to numbers on Template.)	
1-4: Purchase / gathering / delivering*: 3 common items from at least 2 locations. Ideally one location has all three items making participants pay attention to the rule restricting purchase of all three from one site.	⇒ Purchasing offers more task complexity than gathering and should be used whenever possible. ⇒ As the option to buy stamps is often unavailable, the MET-R ⁶ adapted the task to ' <i>leave something ready to be mailed (except the stamp) to xxxx with the test administrator</i> '.* ⇒ Item descriptors (e.g. <i>birthday card</i>) can affect task complexity and should be kept as similar to the original as possible.
5: Provide 3 simple pieces of information to a staff member.	⇒ Often done by telephone but could also have test-taker speak to someone. Consider having test taker use their own mobile phone and having them reach a voicemail so that message can be scored for accuracy. ⇒ Information specifics may be varied but should be simple and contextually relevant.
6: Meet the test administrator at a specific location and time and provide 1 simple piece of information.	⇒ Location and information should be used only for this task. ⇒ Written task instruction tells test taker they may continue the test after this meet-up. ⇒ Grace period allowed for scoring depending on circumstances (e.g., having to wait in line to purchase an item).
7-10: Find and write down information: 4 pieces of information must be specified.	1. Information should be specific and contextually relevant, e.g., opening and closing times, prices etc. However, increased specificity, will make the test easier. For example, specifying “the price of a can of coke” vs. stating “a coke” (assuming different options are available) reduces the difficulty associated with budgeting.
11: Closure Task: Tell test administrator when tasks are completed.	2.
12: Interruption Task: Shortly (at a set time, e.g., 5 min) after test has started, test administrator provides test taker with a piece of paper which tells test-taker to provide the administrator with a specific item or to tell the administrator if the item is not available.	⇒ Item should be free and available at a location that does not require visiting for other tasks. ⇒ Timing of interruption can be modified with setting but should be standard within setting.

* Many versions of the MET including the first hospital version⁷ include tasks of buying a card, buying stamps and mailing something. Together these form a highly complex task as the participant is required to identify an item to mail (return or deliver), to find and visit a location (mailbox, information desk, return counter) and complete other steps necessary for correct task completion (e.g., addressing and possibly stamping an envelope, obtaining using a return receipt).

As the use of regular mail has greatly decreased and purchasing stamps is sometimes less available, one option is to have the participant buy a 3rd item that is not a stamp and change the ‘mail something’ task to *Leave something ready to be mailed to _____ (except the stamp) at the information desk.*

Rules that... (Most versions have 8 rules.)

1. Specify that tasks may be done in any order (noted in test instructions, rather than rule list)	The most efficient way to complete the MET requires some planning. Completing the tasks in order is not the most efficient way. Telling participants they can use any order provides them the alternative to plan ahead.
2. Specify the boundary of the assessment zone.	The assessment zone may vary but should be similar to published versions in order not to increase task complexity. Provision of a map is not recommended unless this is something typically provided to visitors. Test takers may use electronic maps if they choose to do so. While several studies show that familiarity with the test location may have a positive impact on performance, no-one has investigated whether providing a map will ‘equal the playing field’. Knight et al. provided participants with maps and still reported that higher levels of familiarity were associated with fewer task failures for participants with acquired brain injury.
3. Specifies any prohibited areas.	For example, prohibited areas may include be ‘staff only areas’.
4. Specify not going back to areas already visited thus ‘forcing’ forward planning of a route by the test taker.	Test takers are not to return to locations previously visited although they may go back through a hallway if necessary.
5. Restrict where items may be purchased and/or gathered from.	If three items are being purchased, a rule stating that only 2 may be obtained from one place.
6. Require test taker to plan and monitor money.	Budget may vary but should be kept low and require some planning on the part of the test taker. Because the amount ‘as little as possible’ will be variable and could be difficult to specify accurately, we suggest only providing a limit to what can be spent.

7. Enable a site-specific requirement to be enforced	For example, a location specific rule such as not entering patient areas or obtaining receipts for items bought.
8. 6-7. Restrict behaviour	An instruction to be as efficient and timely as possible and not rush excessively is commonly used. An instruction to not enter stores unless required is commonly used
9. 8. Restrict engagement with the test administrator.	To attempt to mimic real life, test administrators are not to be used as a resource by test-takers.

References

- ¹ Scarff, S. M., Nalder, E. J., Gullo, H. L., & Fleming, J. (2023). The Multiple Errands Test: A guide for site-specific version development. *Canadian Journal of Occupational Therapy*, 90(3), 280-296.
- ² Dawson, D. R., Burns, S. P., Nalder, E., Rotenberg, S. (2026). The Multiple Errands Test. In. Eds. T. Wolf, G. Gillen & D. Edwards (Eds.). *Functional Cognition* (2nd Ed.)(Chapter 13). AOTA Press.
- ³ Burns, S. P., Dawson, D. R., Perea, J. D., Vas, A., Pickens, N. D., & Neville, M. (2019). Development, reliability, and validity of the multiple errands test home version (MET-home) in adults with stroke. *The American Journal of Occupational Therapy*, 73(3), 7303205030p1-7303205030p10. Burns, S. P., Dawson, D. R., Perea, J. D., Vas, A., Pickens, N. D., & Neville, M. (2019). Development, reliability, and validity of the multiple errands test home version (MET-home) in adults with stroke. *The American Journal of Occupational Therapy*, 73(3), 7303205030p1-7303205030p10.
- ⁴ Antoniuk, K., Clores, J., Jensen, D., Nalder, E., Rotenberg, S., & Dawson, D. R. (2019). Developing and validating a big-store multiple errands test. *Frontiers in Psychology*, 10, 2575.
- ⁵ Webb, S. S., Jespersen, A., Chiu, E. G., Payne, F., Basting, R., Duta, M. D., & Demeyere, N. (2022). The Oxford digital multiple errands test (OxMET): Validation of a simplified computer tablet based multiple errands test. *Neuropsychological Rehabilitation*, 32(6), 1007-1032.
- ⁶ Morrison, M. T., Giles, G. M., Ryan, J. D., Baum, C. M., Dromerick, A. W., Polatajko, H. J., & Edwards, D. F. (2013). Multiple Errands Test-Revised (MET-R): A performance-based measure of executive function in people with mild cerebrovascular accident. *The American Journal of Occupational Therapy*, 67(4), 460-468.
- ⁷ Knight, C., Alderman, N., & Burgess, P. W. (2002). Development of a simplified version of the multiple errands test for use in hospital settings. *Neuropsychological Rehabilitation*, 12(3), 231-255.

Site-Specific MET Development Template

Task & Rule List for Test-Takers

In this exercise you should complete the following tasks in any order:

1. Do the following:
 - Buy...
 - Buy...
 - Buy...
 - Telephone [person's name] at [phone number] and tell them ...
 - Leave something to be mailed*....
2. Meet me at _____ (place) at _____(time) tell me the weather today. You may then continue the test.
3. Obtain the following information and write it down in the spaces below:
 - What is the closing time of _____ on a Thursday? _____
 - What is the opening time of _____ on a Friday? _____
 - What is the price of _____: \$_____.
 - What is today's headline on _____? _____?

Tell me when you have completed the exercise.

While carrying out this exercise you must obey the following rules:

Rules

- You should spend no more than \$_____.
- You should stay within_____.
- You should not enter _____.
- You should not go back into an area you have already been in (excluding walkways).
- You should buy no more than 2 items in the _____.
- Take as little time to complete this exercise without rushing excessively.
- No area should be entered other than to complete a task.
- Do not speak to your test administrator *unless* this is part of the exercise.

* Insert mailing address here.

NB: The task/rule sheet given the test-takers does not include information about the interruption task.

4. Interruption task description:

E.g., Five minutes after the test-taker has begun the test, interrupt them saying: "*There is an additional task, not written on the list you have. Here it is.*" Provide the test-taker with a piece of paper that has the task written on it, e.g., 'Pick up a flyer and keep it with you until the end of the test. If no flyers are available, tell the test administrator at the end of the test.'

Guidelines for Scoring and Documenting Behaviours Observed on Site-Specific Versions of the Multiple Errands Test

1. Task and Rule Break Scoring to determine Total Errors

NB: This scoring is not diagnostic but may be helpful as a guideline.

- 1.1. Identify each of the 12 tasks on the MET as Accurately Completed, Partially Completed or Omitted. **Omitted tasks are given a score of 1.** Maximum score possible is 12 for this section.
- 1.2. For tasks completed partially there are a number of identifiable errors that may have prevented full completion. These are called **Partial Task Failures (PTF)**. For the Baycrest MET Version A, 46 PTFs were pre-determined. **Each of these errors is given a score of 1.** Thus, a maximum score of 46 is possible for this section.
- 1.3. Each of the 8 rules) should be scored as broken or adhered to. **Broken rules should be given a score of 1 with the following qualifiers.** Maximum score possible is 8 for this section.
 - 1.3.1. The rule “Spend as little as possible without going over \$x.xx should only be scored as broken if the client spends more than the set amount.
 - 1.3.2. The rule “Be as efficient and timely as possible without rushing excessively” should only be scored as broken if clients rush excessively (e.g., running during the test).
 - 1.3.3. The rule “You should carry out all these tasks but may do so in any order” should be scored as broken if any tasks are omitted.
 - 1.3.4. For this scoring, rules can only be scored as broken once.

A **Total Error Score** can be calculated by adding the Tasks Omitted + Partial Task Failures + Rules Broken. Based on data from Knight et al., 2002; Dawson et al., 2009, and Clark et al., 2015, sensitivity and specificity of this score are highest when a cut-score of 7 is used. Less than 10% of healthy controls in these research studies had total scores of 7 or more errors.

Scoring Other Behaviours

Participants often demonstrate a variety of other behaviours that research (ours and others) have found to be significantly different than those demonstrated by healthy controls, to be significantly related to measures of executive function and/or to be significantly related to performance on other measures of everyday life performance.

The following standardized way of documenting behaviours may prove helpful in determining why clients may be having difficulties with goal-directed behaviours. It may also be useful in developing effective intervention plans.

2. Documenting partial task failures as interpretation failures or inefficiencies.

Task errors can often be identified as either inefficiencies (e.g., spending excessive time selecting a card) or interpretation failures (e.g., buying the wrong kind of card). It may be clinically helpful to know if clients are having difficulty with goal-directed behaviours because they are demonstrating either or both of these types of behaviours.

3. Scoring other Inefficiencies

In our research and experience, participants often demonstrate a variety of inefficient behaviours. The ones we have commonly observed are listed on the second page of the scoring template as “Other inefficiencies”. You may score these as observed and the frequency with which they occur.

4. Additional information regarding scoring rule breaks.

Documenting the number of times rules are broken is an additional behavioural indicator. In addition to the rules listed, we and others have observed that during the performance of the MET some people demonstrate what have been called **Social Rule Breaks**. In the original paper on the MET, Shallice and Burgess (1991) described several of these including a participant becoming involved in a heated argument with a store clerk. Documenting these may prove clinically useful.

5. Scoring Strategies

As with rule breaks, in addition to documenting whether a strategy has been observed, it may also be informative to track the frequency with which the strategy was used. A third column might be added to the strategy checklist to indicate whether that strategy was observed to support or interfere with goal-directed behaviour. Our experience is that it is often difficult to determine this while administering the MET but it may inform fruitful analysis after the test is completed. Understanding the naturalistic employment of strategies may be useful in intervention planning and clinical decision-making.

Scoring Table Template

Name: _____

Date: _____

Planning time: _____ Start time: _____ End Time: _____

Total time: _____

Task #	Task Description	Accurately Completed	Partially Completed (specify errors)	Omitted	Comment
1	Item 1 Purchase				
2	Item 2 Purchase				
3	Item 3 Purchase				
4	Leave something to be mailed task				
5	Telephone Task				
6	Meet up Task				
7	Information Task 1				
8	Information Task 2				
9	Information Task 3				
10	Information Task 4				
11	Tell examiner when done				
12	Interruption Task completed				

Rules	Circle yes if broken	Frequency
1. Tasks are carried out in any order. <i>Rule is broken if tasks completed are done in order listed on template.</i>	Yes No	
2. Stay within stated boundaries. <i>Rule is broken if doesn't stay on property</i>	Yes No	
3. Does not enter prohibited areas. <i>Rule is broken if this is done.</i>	Yes No	
4. Does not go back to an area already visited. <i>Rule is broken if area is re-entered.</i>	Yes No	
5. No more than 2 items purchased at specified location. <i>Rule is broken if this is done.</i>	Yes No	
6. Spend no more than \$xx.xx.	Yes No	
7. Complete tasks as fast as possible without rushing. <i>Rule is broken if obvious rushing occurs</i>	Yes No	
8. Not speaking to the evaluator. <i>Rule is broken if speaking to the evaluator</i>	Yes No	

Total Scores:

Tasks Accurately Completed: <u> </u> / 12	Number of Rules Broken: <u> </u> / 8	Other inefficiencies or notable behaviours:
Tasks Partially Completed: <u> </u> / 12	Frequency of Rule Breaks: <u> </u>	
Tasks Omitted: <u> </u> / 12		

Total Error Score (Tasks Omitted + Partial Task Failures + Rules Broken): / 32
(Healthy controls generally make fewer than 7 errors.)

CATEGORY	STRATEGY	Observed	Frequency
Used Print Resources Provided	Planned before starting test		
	Read task/rule list for > 5 seconds		
	Checked task/rule list		
	Read map for >5 seconds		
	Checked map		
	Physically oriented self to map or map to self		
	Drew route before starting		
	Marked tasks as completed		
	Made notes		
Used Personal Resources	Self-talk		
	Checked watch		
	Organized materials and bag		
	Went to meeting spot early and waited for examiner		
Money management	Checked change		
	Asked for receipts		
	Kept tally of money spent		
	Asked for specific change (in order to use phone)		
	Separated personal money from study money		
	Separated money at beginning to avoid over-spending		
	Compared prices		
Used Environmental Resources	Looked overtly at signage / visual landmarks		
	Asked examiner questions prior to start of task		
	Asked staff for directions / help / assistance		
	Asked non-staff for directions / help / assistance		
Multi-tasking (did more than one thing at a time)	Did more than ONE thing at a time (specify)		
	Did more than TWO things at a time (specify)		
	Did more than THREE things at a time (specify)		
	Did more than FOUR things at a time (specify)		
Self-Generated Strategies (check if observed)		Frequency & Comments	
Other			
Environment/Context			
Comment on how environmental and contextual factors may have / was observed to influence behaviour:			