Frequently Asked Questions about Constraint-Induced Movement Therapy (CIMT)

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Is there an information sheet/ pack we can give to patients?

- A template for participant handouts is available from the StrokeEd website (Resources tab) (http://strokeed.com/) as a resource which you can download and add your own logo to.

Do all staff need formal training before providing CIMT?

- Formal training is not needed but helpful. The main thing is to get started.
- Try buddying or pairing with others. Systems need to be developed for ongoing workshops which can be taken on by local staff.

Some of the tasks are bimanual (e.g. tying shoelaces, putting paper clips onto paper). How does the person perform the task in that instance, and when do you allocate unimanual vs bimanual tasks?

- Generally in week 1, complete only uni-manual tasks as you want the person to use their affected hand most of the time.
- You want to get them out of the habit of 'cheating' and using their stronger hand to help / in preference.
- If there is a task that requires two hands early into the program (e.g. putting paperclips onto a page), the therapist/carer acts as the 'second' hand.
- Sometimes a non-slip mat under the object is enough to stop the need for a second hand to hold the object.
- In the second week, you may want to introduce some bimanual tasks into the program of practice tasks.

Many of the shaping tasks are not 'functional' everyday ADLs such as using cutlery, doing up buttons, using a keyboard – instead the shaping tasks involve activities like stacking wooden blocks or turning over dominoes. What is the purpose of using these tasks instead of tasks that link to the person's goals?

- Shaping is intended to 'shape' a motor behaviour (movement) such as supination or grasping an object between the index fingertip and thumb, or activate flexion and rotation of the ring or little finger which might be weak.

- It isn't essential that the tasks people do as part of the shaping program are all 'functional'. You are aiming to encourage/promote a movement that you have identified as problematic during your movement analysis.

Do you give feedback on the shaping trials?

- You can give brief feedback at the end of each trial.

What combination of shaping and functional task practice is needed?

- Ultimately you want the person to do more functional tasks by the time they finish the program, so generally include more shaping tasks in Week 1, and more functional tasks (with less shaping) in Week 2, as well as including functional tasks as part of homework throughout the program.

What other strategies have been used in terms of functional tasks?

- This depends on goals identified by the COPM. Patients can bring in items for the sessions as well as therapists but ensure that items/tasks fit within the CIMT regime.

If a person has no carer support and memory problems, or can't write (in their home diary), what do you do about their homework recording?

- In hospital, perhaps write up their planned practice on a whiteboard in their bedroom, or write the practice on a poster to place on their locker or bedside table. Then ask nursing staff and/or another patient/family member to remind them and /or tick off the tasks.
- Video the homework/instruction on their phone or iPad.
- Instead of expecting written notes in the homework diary, just ask them to tick that they have done their practice. If using this method, ensure your instructions are clear about the amount of repetitions/ amount of practice time you expect to be completed.

Do we need to use all the outcome measures presented during the workshop?

- No. But ensure that you include some appropriate outcome measurement in your programs to demonstrate benefits to patients, staff and program funders.

What about infection control and use of mitts in hospital?

- In hospital, you can use low cost oven mitts ($2 - $5 each) or ICU mitts for individual use. If oven mitts are not restrictive enough, put a flat piece of card or thermoplastic inside to stop the person grasping/using their 'good' hand.

In the brain injury unit, many patients who are agitated or in PTA might wear a mitt for other reasons, for example to stop them pulling out an NG tube. How can we indicate to nursing staff that a person is wearing a mitt for other reasons, and is allowed to remove it for tasks?

- Use a coloured mitt, or write 'CIMT mitt' on the mitt.
- Place a sign at the person's bedside or in their file to alert staff to the reason for the mitt.

When do you stop using the mitt?

- After the 2-week program, unless the patient wants to continue using the mitt at home after the 2-week period.

Can you offer some suggestions for in-hospital homework tasks?

- Pulling curtains around the bed.
- Turning taps in the toilet.
- Pressing the nurse call button.
- Eating and drinking.
- Putting on /taking off make-up.
- Turing the television on and off.
- Wiping down the bedside table with a redi-wipe/paper towel.
- Turning pages in a book or newspaper.
- Turning door handles/ opening and closing bathroom door.
- Opening and closing drawers on bedside cabinet.

Can you offer some food/menu options for inpatients that are easier for them to manage with their weaker hand while wearing a mitt?

- Sandwiches.
- Cut up meals/meat.
- Liaise with the person's treating speech pathologist- if they are agreeable often a cut up diet can be requested short term that allows the person to still have a wide range of food choices pre cut up for them.

For the eligibility criteria, does a patient at the lower grade (eg Grade 5) have to display ALL criteria or would you simply exclude these people?

- Don't exclude these people, but know that the evidence of effectiveness of CIMT for these groups is weaker. It may be better to gain experience with people at grades 2 and 3 and get that right first before using CIMT with people who have less function.

Can CIMT be used with any other diagnoses?

- Yes. CIMT has been shown to be effective with children with cerebral palsy but the effects plateau over time. CIMT has also been used with patients with multiple sclerosis (lower limb focus) and Parkinson's disease.

Can people with motor planning problems do CIMT?

- Yes, however it depends on the severity of the motor planning deficit. You can try it with people with mild apraxia but direct training may be more effective for more severe problems.

Does regression in performance affects client motivation?

- Yes. that's why you don't emphasise any deterioration - just focus on positive gains across previous trials on any given day, and performance across days. It is common for someone to drop performance scores from time to time. Emphasise to the client that this is "normal" but "look at what you have achieved to date".
- It is also important to remember that success during a CIMT program is emphasised- if a person has regressed (eg scores/timing is lower), consider if the task has been set at a level of difficulty that is initially be too high.

Can you focus on parameters other than time?

- Yes. Other parameters are encouraged. Consider accuracy and quality of movement, what you are focussing on and why, and then how success/improved performance will be measured. These need to be clear to the client.

How long does the process of completing a behavioural contract take?

- About an hour.
- The contract can be discussed/completed at the end of the first day.
- Alternatively, the contract could be completed before the CIMT program, at the program screening stage, as it is important to gain client "buy-in".

Are there times where the carer is more motivated than the client?

- Yes. It is up to the therapist to decide if there is client buy-in. A strong focus on measuring adherence can help the therapist decide if client is motivated to complete required tasks and if not, why not.

Do you discontinue the program if the client is not adhering to the program?

- First, find out why the client is not adhering. It could it be due to fatigue or other reasons.
- The first week tends to be the hardest, consider the "Day 5 blues".
- Then try strategies to improve client adherence, such as:
    - Use of certificates at the end of week 1, to recognise achievement.
    - Start the program on a Wednesday rather than a Monday to allow a break after the first three days over the weekend. This can also assist with therapist fatigue when new to CIMT!
    - Review positive gains made to date including video feedback.
    - Consider splitting the program into smaller chunks of therapy e.g. morning and afternoon sessions but ensure that you have at least a couple of hours in each session to ensure that clients get the required practice and repetitions.

When administering the Motor Activity Log (MAL) Amount of Use (AoU) scale during the baseline assessment (pre-CIMT program) do you ask about the previous 24 hours or the previous week?

- Initially, for the first MAL administration of the 30 questions, ask about the previous <u>week</u>. However, after that time, you will be administering the MAL every day, and only want to ask about the previous <u>two days</u> or 'since I last saw you…..'.

- Usually only the Quality of Movement (QoM) "How well scale" is used during the CIMT program. Only 15 of the 30 MAL questions are asked each day, alternating between questions 1 to 15 and 16 to 30, each day.

Does "pre-commencement" of the MAL mean before the behavioural contract is signed?

- In this instance, "pre-commencement" means before the CIMT shaping activities begin.

How do we manage hand dominance when testing using the MAL, and someone who says they never perform a task?

- There is only one item on the MAL that should be affected by hand dominance: handwriting.
- The term *not applicable* (N/A) should only be used for the handwriting item. Any other items that are *not completed* should be scored as a zero with a reason code given (see bottom of the MAL) to ensure the instrument remains valid.
- The task of hair brushing may not be completed if the person is bald.
- Some questions should be asked even if the use of the affected hand is only occasional e.g. can sometimes turn on light using non-dominant hand. Consider asking further prompt questions in these instances e.g. "If you were carrying an item in your dominant hand, like a glass of water, how would you turn off the light?"

Is it common to find tasks that are 'not completed' when scoring the MAL (i.e. scoring 0) because the client does not do the task, or because tasks are performed by others?

- Remind clients that they can and should use their affected hand for activities even if only occasionally or rarely.
- You could use some of the activities on the MAL as tasks/shaping activities during the 2-week program to show clients how they might use that hand (eg to brish their hair, eat food, undo buttons).
- Explain that the CIMT program is "boot-camp" for their affected arm, so we want them to use their arm as much as possible even if it is performing activities that they would not normally use that arm for.

When asking questions using the MAL (at the initial, mid-way and end point), are clients comparing their ability to pre-stroke or just in the past week?

- The client is comparing their ability to use their affected arm in the past week **in comparison to their pre-stroke/ pre injury** amount of use and quality of movement in their affected arm.

Some clients seem to rate themselves more highly on the MAL than the therapist. Do you have any comment on that?

- Therapists should always probe, check and clarify with the client to confirm response.
- Remember the MAL is a client self-report/self-perception tool and clients usually become better and more accurate in their responses with regular use of the assessment tool throughout their CIMT program.

Do you have any suggestions for how to use the MAL with clients of CALD backgrounds as it will not be possible to organise an interpreter for each day of the program.

- Maybe organise an interpreter for the first and last assessments and use a family member for other days if available. Or use a telephone interpreter for the MAL.
- The MAL is available in 4 other languages [but these translated documents can only be used within the SWSLHD].

Can you use interpreters in CIMT programs?

- Yes, interpreters are being used in the ACTIve ARM project for scoring the MAL, reviewing homework and planning for the next day. Interpreters are sometimes ony used for 30-45 minutes per session, and telephone interpreters have been used too.
- Using interpreters has not posed any limitations or challenges to the program.

Given the variations in how CIMT is delivered across studies, what do you consider to be the 'essential components' for inclusion in any CIMT program?

- The following 3 components are essential:
    1) Intensive graded exercise using the affected arm
    2) Constraint of the non-affected arm
    3) Transfer package.
- All components of the transfer package are essential (ie contract, diary, homework).
- 30 hours: Aim for 30 hours of practice across the CIMT program. How the 30 hours are structured can vary but be aware that the longer the program is (in terms of weeks) the harder it is for clients to stay motivated.
- Mitt: Wearing of the mitt should be reinforced.
- Follow-up: It is common for performance to "drop-off" after the program has concluded. To address this issue clients can be offered repeat programs or 'top-ups' over time (years), e.g. Phil has repeated the program at six-monthly intervals for a client living in a rural area.
- Skype and Facetime can be used to follow-up clients e.g. Phil has administered the MAL with a client using Skype, the University of Alabama offer one-week booster programs, follow up phone calls with the client are low cost but can be a way of keeping the client motivated to use their affected arm.
- Provision of an "exercise" program at the end of the CIMT program for the person to continue with independently, with some clear goals set, can help to maximise gains made and motivate the client to keep practicing and improving.

The intensity of the program is very high. We are not sure that we can achieve that in our setting. Do you have any comments and suggestions on that?

- While 30 hours is the goal, you need to focus on what is achievable for your setting and remember that some hours of intensive CIMT training is better than nothing.
- You can also split the work between therapists/relevant others (develop a roster) providing there is good program documentation and communication.
- Offer as many hours as you can. There are no minimum hours. Ensure that you include as much of the behavioural intervention as possible as the intervention is more than just practice. All other components of the program are as important as the practice component.

How have you engaged physiotherapists in the CIMT team in an acute setting?

- Yes, using a team roster, stressing the importance of the program, and clarifying roles.
- Also many team have involved allied health assistants.

What happens if a client misses a few days?

- You could make up lost time by increasing practice at home, or try a gradual introduction to the program (e.g. start on a Wednesday so that the patient starts with 3 consecutive program days). The aim is for the client to complete achieve 30 hours of practice.

Can you describe how you document practice and the program in an inpatient medical file?

- Record progress in the CIMT patient handbook (paper copy), then write a brief entry each day in the electronic medical record (EMR2) or medical notes.
- A copy of the paper handbook is given to the patient during the program, and at the end of the program, and the original copy is given to Lauren Christie (if in SWSLHD) as part of the research program.

What happens after the CIMT program?

- The CIMT program sets the patient up to continue with more independent practice. Therapists should handover the ownership of the program to the patient. Therapists could:
    - Set goals for post-program.
    - Try follow up phone calls to maintain patient motivation.
    - Provide a program that can be "reviewed" at a later date.
    - Make videos of clients to monitor progress.
- Therapists can also use resources on self-management from the Australian Stroke Foundation "EnableMe" website (https://enableme.org.au/).

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