Non-Pharmacological Intervention Society

Non Pharmacological Interventions Registry

Protocol : HOBSCOTCH Program

Health Problem : Cognitive disorders

Psychosocial

Sheet Code
NPIS-0000000115

Designation

HOBSCOTCH Program

Abbreviation

HOBSCOTCH

Category

Psychosocial

Main Health benefit

To trat memory and attention deficits and improve self-management of epilepsy (Caller 2016; Streltzov 2022; Escoffery 2026).

Explanation

The HOBSCOTCH program teaches organizational strategies, mnemonic techniques, planning skills, and methods for using external aids to manage epilepsy. It also develops metacognitive awareness, which reduces the functional impact of perceived cognitive deficits (Caller 2016; Streltzov 2022; Escoffery 2026).

Routine Test

The Everyday Memory Questionnaire – Revised (EMQ-R) measures daily memory complaints. This test is short (5–10 minutes) and easy to administer.

Threshold

The EMQ-R measures daily memory complaints. The higher the total score, the more severe the complaint.

Minimal Clinically Important Change

There is no universally validated minimum clinically important difference (MCID) for the EMQ-R. A reduction in the score indicates fewer daily memory complaints, although no specific threshold has been established to date. The EMQ-R is a subjective, self-reported measure and is therefore sensitive to demographic and clinical characteristics (age, sex, comorbidities, menopause). Half the standard deviation of the target population at the start of the intervention can serve as an approximate threshold for clinical change.

Secondary benefits

- Reduction in the functional impact of cognitive deficits in daily life (Caller 2016; Streltzov 2022; Escoffery 2026).
- Strengthening of self-management (use of compensatory strategies, routines, and external aids) and health-promoting behaviors (Caller 2016; Streltzov 2022; Escoffery 2026).
- Positive effects on mood and depressive symptoms. Improved quality of life (Caller 2016; Escoffery 2026).
- Benefits for the caregiver and the patient-caregiver dyad.

Direct Risks

- Few serious adverse effects (Caller 2016; Streltzov 2022; Cano-López 2025; Escoffery 2026).

- Cognitive fatigue after sessions and mild, transient frustration in some participants due to the difficulty of certain exercises or awareness of disorders.

- Temporary increase in anxiety in some patients during the learning of strategies.

- Stress induced when using the remote version due to technical problems, poor mastery of digital tools or limited access to equipment.

- Risk of not participating due to frustration or lack of perception of the benefits of the program until leading to abandonment.

- Charge for the caregiver involved in the program if applicable.

Risks of interaction

No direct interaction with antiepileptic drugs. Rare difficulties may occur during the program:
- Risk in some patients of modification of drug treatment without medical consultation caused by high self-confidence which may cause a recurrence of epileptic symptoms.

- Risk of increased cognitive complaints and depressive symptoms in some patients. In this case, the doctor may modify the basic treatment and/or add a treatment that could lead to a risk of interactions.(Quon 2019)

- Risk of interaction with ongoing psychotherapy when there is no coordination between caregivers.

Biological and Psychosocial Mechanisms

- Learning compensatory cognitive strategies called 'targeting knowledge' (organization, mnemonics, planning, use of external aids) and problem-solving strategies reducing the functional impact of perceived cognitive deficits (Reyes 2026).

- Targeted training on attention and executive functions (planning, inhibition). In other

words, NPI leads to functional modulation of attention and executive networks (synaptic plasticity and reinforcement of compensating circuits), a better allocation of cognitive resources (Caller 2016).

- Improvement of self-management and daily behaviours (routines, recall strategies, adaptation of the environment). The digital offer reinforces the adherence and transformation of these new learned behaviors into daily habits.

- Reduction of emotional and anxiodepressive symptoms improving motivation, attention and memorization (less internal distraction, better concentration).

- Better sleep improving the state of wakefulness and consolidation of learning.

- Increased confidence in following prescribed drug treatments.

- Reduction of isolation and stigma (Prieto 2026), better collaboration with caregivers, better understanding of the caregiver.

Responding population

- Epileptic adult with cognitive complaints (memory/attention) (Caller 2016).

- Epileptic adult with mild to moderate deficits.

- Adult with controlled or uncontrolled epilepsy, the program is designed to be applicable regardless of seizure control, the goal being self-management.

- Adult motivated to participate in all sessions of the program.

- Adult with a video conferencing system if he or she chooses this option.

Nonresponding population

- Epileptic adult with untreated severe psychiatric disorder (Lin 2012).

- Epileptic adult with a very severe cognitive deficit or extended neurodegenerative.

- Epileptic adult with untreated severe depression.

- Epileptic adult not motivated in following the 8 sessions of the program.

- Epileptic adult without technological means of videoconference wanting to follow the supervised format remotely.

- Epileptic adult medically instable (frequent seizures, hospitalizations).

Participants

Individual

Duration

8 weeks

Sessions per week

1 session per week

Procedure

The HOBSCOTCH program improves perceived cognition and quality of life by combining education on memory and epilepsy, attentional training, compensatory strategies and problem-solving strategy delivered by a professional trained over 8 weekly sessions of 45 to 60 minutes (Caller 2016; Streltzov 2022; Escoffery 2026). Each session is conducted in a participatory manner and adapted to the problems identified by the patient. The HOBSCOTCH Institute provides the manual, session sheets and certifying training for professionals to ensure the fidelity of the application (Kiriakopoulos 2026).

	Main objective	Content	Practical assignments between sessions
Session 1	Understanding memory and epilepsy	Psychoeducation on how memory work; factors influencing cognition in epilepsy	Keep a journal of challenging situations, identify difficulties
Session 2	Self-reflection and self-awareness	Self-assessment of risky situations; introduction to mindfulness and trigger awareness	Awareness exercises; note down triggers and context

Session 3	External memory strategies	Teaching external aids (schedule, alarms, lists, organizing the environment)	Implement at least two external aids and report on their effictiveness
Session 4	Internal memory strategies	Mnemotechnic, visualization, information segmentation, encoding and retrieval techniques	Daily practice of memory techniques using real-life tasks
Session 5	Attention training and executive fonctions	Targeted exercises for sustaines attention and organization; tips for reducing distractions	Attention exercises at home; applying strategies in specific situations
Session 6	Applied problem-solving techniques	Structured process for solving concrete cognitive problems, collaborative action plan	Implement the action plan, keep a daily log of obstacles and adjustements
Session 7	Integration and generalization	Review of strategies, training in applying solutions to other contexts, role of caregivers as appropriate	Apply the strategies in at least 2 new situations, provide feedback to the professional
Session 8	Consolidation and maintenance plan	Progress review, long-term maintenance plan, resources and follow-up options, satisfaction assessment	Written maintenance plan, ressources and contacts for follow-up

Components

Typical example of a HOBSCOTCH session.

Main objective: to work on a specific skill, for example a problem-solving practice.
Duration: 60 minutes in a one-on-one meeting via video conference.
Format: session guided by the certified professional and focused on the patient's request on a targeted problem.

1- Welcome and quick verification (5–8 min) with the aim of detecting temporary contraindications and adapting the content.
Reminder of the overall objective of the program and the session.
Checking mood, fatigue and safety (recent seizures, drug effects).

2- Work from home review and feedbacks (10–12 min)
Discussion of the strategies tested since the previous session (external aids, mnemonics, attention exercises).
Identification of concrete successes and obstacles.

3- Introduction of the theme of the session and targeted psychoeducation (8–10 min)
Brief theoretical explanation adapted to the participant (e.g., why planning helps memory; how stress interferes with attention).
Use of concrete examples related to the patient's daily life.

4- Directed active work (20–25 min)
Identification of a concrete problem, generation of options, evaluation of solutions, choice of an action plan and definition of measurable steps (Moncrief 2021).
For a memory strategy, demonstration and guided practice (encoding, segmentation, external aids) followed by real-time implementation and correction of the technique.

5- Action plan and personal practice at home (5–8 min)
Formalization of a specific plan to be applied between sessions (who does what, when, how to measure progress).
Implementation of external aids (alarm, checklist) if relevant.

6- Closure and rapid assessment (2–5 min)
Pragmatic output measure (short self-assessment, e.g. confidence/self-efficacy scale).
Reminder of the next appointment and resources (cards, contacts).

Equipment

- Communication device: computer, tablet or smartphone with camera and micro functional.
- Stable internet connection
- Notebook or logbook to identify problematic situations, assignments, and progress.
- Paper agenda or simple digital tools (alarms/notifications, shared calendar) to generalize the strategies
- Session sheets and printed or digital assignments provided by the coach ("Memory Toolkit").
- HOBSCOTCH Manual and "Memory Toolkit" (session scripts, participant sheets, PST worksheets).
- Secure video conferencing platform compliant with local privacy rules.
- Follow-up sheets and evaluation forms (EMQ test - Everyday Memory Questionnaire)
- Procedure for guidance and written consent.
- Protocol for reporting to the prescriber in case of deterioration.
- Scheduling and reminders system (SMS or email) to improve adherence.
- Technical resources: assistance for patients in telehealth (tutorials, connection test).
- Attentional training applications or validated digital exercises (complement to work in session).
- Multimedia teaching materials (slides, short videos) for psychoeducation.
- Printed sheets for the caregiver if applicable.

Location

The NPI is designed as a program carried out in an outpatient health facility (nursing home, hospital neurology department) or at home by teleconsultation.

Best implementation practices

- Assess motivation, medical stability, the presence of severe psychiatric comorbidities and technological access before inclusion to maximize adherence and safety (Kiriakopoulos 2026).
- Provide standardized training for supervisors (didactics, role plays, supervision) to ensure adherence to the protocol and the quality of coaching.
- Schedule structured weekly sessions of approximately 60 minutes (Kiriakopoulos 2026).
- Respect the sequence (psychoeducation, self-observation, external/internal strategies, problem solving, consolidation) to reproduce the effects observed in the studies (Kiriakopoulos 2026).
- Let the participant choose the targeted problems, adapt the strategies to their daily life and set SMART action plans to promote generalization (Kiriakopoulos 2026).
- Use validated and low-binding instruments like the EMQ-R for memory to track impact and fidelity.
- Inform the doctor (treating, neurologist, psychiatrist) about the start of the NPI and report any deterioration (or issue related to medication management and comorbidities).
- Provide the tutorials.
- Check the connection and alternatives to in-person appointments for eligible patients.
- Follow the membership and react quickly to the first signs of abandonment.
- Set up reminders, interim assessments and alert procedures in case of fatigue, anxiety or crises to adapt the rhythm or guide towards additional care.
- Clarify the role of relatives.
- Provide practical sheets and limit the burden on the entourage.
- Systematically collect feedback, satisfaction, and results to adjust reference materials and paths.

Best practices for sustainability

- Institutionalize the program within neurology services and expert centers (University Hospital 2025). This facilitates patient identification, coordination with prescribers, and continuity of care (Mameniškienė 2025).
- Train and certify professionals according to a standardized framework. Fidelity to the protocol and the quality of facilitation are correlated with the observed effects. Manuals

and centralized training are key elements for scaling up (Escoffery 2023).
- Systematically measure clinical and implementation outcomes (EMQ, adherence, satisfaction). This pragmatic pre/post monitoring allows evaluation of the real impact, identification of non-responders, and adjustment of the program (Escoffery 2023).
- Standardize tools and materials (manual, session sheets…). They ensure the reproducibility of effects and facilitate training and supervision.
- Finance dedicated positions (interveners, coordinators) and provide resources for telehealth.
- Actively coordinate with prescribers (neurologists, psychiatrists) and document communications (Mameniškienė 2025).
- Adapt delivery modes (remote / in-person / hybrid) based on patient profiles and local constraints (Becker 2022; Hopp 2022). Flexibility increases adherence and reduces access inequalities.
- Monitor adherence and promptly re-engage participants at risk of dropout (reminders, catch-up sessions).
- Continuously evaluate quality and improve the program through user feedback and fidelity audits. The NPI form allows collection of feedback from professionals and users for this purpose.
- Document and publish implementation results (successes, obstacles, costs) to promote dissemination and institutional buy-in.
- Involve stakeholders (patients, caregivers, management, funders) in the governance of the program.

Precautions

- Preselect candidates according to medical stability, the absence of severe untreated psychiatric comorbidity, and the motivation to commit (Escoffery 2023).

- Systematically screen for psychological distress and suicide risk before inclusion, and if present, propose a psychiatric evaluation to ensure the participant's safety (Escoffery 2023).

- Inform the patient and caregiver of the objectives, limitations, and expected, transient effects (cognitive fatigue, frustration).

- Coordinate the NPI with the prescriber (primary care physician, neurologist, or psychiatrist) before and during the program for any medication changes or any clinical warning signs (Mameniškienė 2025).

- Monitor adherence and compliance with sessions and home exercises. Offer support from the first dropout, trying to understand the reasons.

- Train and supervise the facilitators according to the standardized manual.

- Provide technical support and alternatives to in-person sessions for patients having difficulties with digital tools.

- Adjust the pace and workload of sessions in case of cognitive fatigue, recent epileptic seizures, or medical constraints.

- Systematically document adverse events, treatment changes, and psychological signs.

- Involve the caregiver in a structured way by clarifying their role and limiting their burden.

- Plan an alert and referral procedure (contacting the prescriber, urgent consultation) in case of clinical worsening or the onset of seizures.

Regulatory specification

The HOBSCOTCH program is a psycho-educational and cognitive rehabilitation intervention intended for adults living with epilepsy (Dartmouth Hitchcock Medical Center and Dartmouth Hitchcock Clinics, 2026). This self-management or therapeutic education program is a structured behavioral protocol, non-pharmacological and non-invasive, developed and disseminated by academic teams and a dedicated institute, the HOBSCOTCH Institute. This NPI has the necessary evidence.

Its standardized implementation relies on coaches trained and certified by the HOBSCOTCH Institute (Kiriakopoulos 2026). This training and supervision are recommended to ensure fidelity to the NPI (Kiriakopoulos 2026). Supervisors are generally healthcare professionals (neurology, rehabilitation, psychology, trained nurses) working within their local scope of practice (Kiriakopoulos 2026). The practice must comply with national professional regulations (e.g., paramedical vs. psychotherapeutic practice depending on the country).

The use of a teleconsultation or videoconferencing system must be in accordance with the regulations in force in the country. Obtaining informed consent for its use as well as for the processing of data is required. Keeping follow-up records, recording pre- and post-evaluations, and procedures for reporting clinical events are recommended for safety and auditability. Civil liability and compliance with local rules (license, insurance) lie with the organization and practitioners delivering the program.

Main Initiator

NA Streltzov and B Jobst, RM Roth, Dartmouth-Hitchcock / Regional Epilepsy Center, USA.

Qualification required

To deliver HOBSCOTCH faithfully and safely, a trained and certified healthcare professional is required. A neuropsychologist, clinical psychologist, occupational therapist, specialized nurse, speech therapist, or another trained rehabilitation professional is expected. The practice then depends on the legal framework of the country (scope of practice, professional regulations of the country, license, insurance, practice limits).

The HOBSCOTCH Institute or an affiliated training organization provides the certification of "Cognitive Coach".
This professional must master the program manual and scripts (session sheets, worksheets, evaluation protocols) to ensure fidelity to the protocol. He or she must be able to:
- Conduct problem-solving methods and teach compensatory strategies (mnemonics, external aids).
- Assess and monitor subjective/objective cognition and identify psychiatric distress requiring referral.
- Coordinate their work with the neurologist or the prescribing team (Kiriakopoulos 2026).
- Master a secure platform and the technical management of remote sessions.
- Understand people with epilepsy.
- Conduct cognitive rehabilitation sessions and psychoeducational support.
- Have communication skills (motivation, pedagogy, working with caregivers) and supervision skills.
- Receive regular supervision (complex cases, protocol fidelity), participate in quality audits, document assessments, develop personalized action plans (Atkinson-Clark 2018), master safety, respect confidentiality, and comply with the regulations in force in the country.

References

Prototype study
Caller TA et al. A cognitive behavioral intervention (HOBSCOTCH) improves quality of life and attention in epilepsy. Epilepsy Behav. 2016 Apr;57(Pt A):111-117. https://doi.org/10.1016/j.yebeh.2016.01.024

Mechanistic study

Reyes A et al. The role of social context in cognitive and neurobehavioural outcomes in epilepsy. Nat Rev Neurol. 2026 Jan 26. https://doi.org/10.1038/s41582-026-01184-0

Interventional studies

Streltzov NA et al. Effectiveness of a Self-Management Program to Improve Cognition and Quality of Life in Epilepsy: A Pragmatic, Randomized, Multicenter Trial. Neurology. 2022 May 24;98(21):e2174-e2184.
https://doi.org/10.1212/WNL.0000000000200346
Scoffery C et al. Replication of an evidence-based epilepsy self-management program in Georgia (USA): The HOBSCOTCH trial. Epilepsy Behav. 2026 Jan;174:110805.
https://doi.org/10.1016/j.yebeh.2025.110805

Risk assessment study

Streltzov NA et al. Effectiveness of a Self-Management Program to Improve Cognition and Quality of Life in Epilepsy: A Pragmatic, Randomized, Multicenter Trial. Neurology. 2022 May 24;98(21):e2174-e2184. https://doi.org/10.1212/WNL.0000000000200346

Implementation study in Europe

Mameniškienė R et al. The current state of cognitive rehabilitation for individuals with epilepsy and pathways for improvement: a multinational cross-sectional survey of epilepsy specialists. Seizure. 2025 Aug;130:4-10. https://doi.org/10.1016/j.seizure.2025.04.008
Cano-López I et al. Examining the Effectiveness of Neuropsychological Interventions on Cognition in Patients with Epilepsy: A Systematic Review and Meta-Analysis. Neuropsychol Rev. 2025 Oct 23. https://doi.org/10.1007/s11065-025-09678-2

Other publications

Atkinson-Clark E et al. A discrete-choice experiment to elicit preferences of patients with epilepsy for self-management programs. Epilepsy Behav. 2018 Feb;79:58-67.
https://doi.org/10.1016/j.yebeh.2017.11.015
Becker DA. HOBSCOTCH Your Way to Improved Cognition for Patients With Epilepsy. Epilepsy Curr. 2022 Sep 19;22(6):351-353. https://doi.org/10.1177/15357597221120355
Chu FC et al. Clinician and patient readiness to engage with community health workers at epilepsy care centers. Front Neurol. 2025 Apr 15;16:1580655.
https://doi.org/10.3389/fneur.2025.1580655
Dartmouth Hitchcock Medical Center and Dartmouth Hitchcock Clinics. HOBSCOTCH, 2026. https://www.dartmouth-hitchcock.org/hobscotch-institute/research-publications
Escoffery C et al. MEW network self-management program characteristics and lessons learned through the RE-AIM framework. Epilepsy Behav. 2023 Mar;140:109111.
https://doi.org/10.1016/j.yebeh.2023.109111

Hopp JL.Beyond Seizures: Can Persons With Epilepsy Play HOBSCOTCH to Take Control? Neurology. 2022 May 24;98(21):873-874. https://doi.org/10.1212/WNL.0000000000200106
Kiriakopoulos ET et al. A qualitative analysis of clinician perspectives on community health worker integration at epilepsy centers. Front Neurol. 2025 Apr 9;16:1560077. https://doi.org/10.3389/fneur.2025.1560077
Kiriakopoulos ET et al. Increasing capacity for epilepsy self-management via a hub and spoke implementation model: Clinician perspectives from epilepsy centers in the United States. Epilepsy Behav. 2026 Mar;176:110865. https://doi.org/10.1016/j.yebeh.2025.110865
Kiriakopoulos ET et al. Real world telehealth delivery of an evidence based self-management education program for people with epilepsy and cognitive comorbidity. Front Neurol. 2025 Jul 4;16:1617539. https://doi.org/10.3389/fneur.2025.1617539
Lin JJ et al. Uncovering the neurobehavioural comorbidities of epilepsy over the lifespan. Lancet. 2012 Sep 29;380(9848):1180-92. https://doi.org/10.1016/S0140-6736(12)61455-X
Moncrief GG et al. Self-rated executive dysfunction in adults with epilepsy and effects of a cognitive-behavioral intervention (HOBSCOTCH). Epilepsy Behav. 2021 Aug;121(Pt A):108042. https://doi.org/10.1016/j.yebeh.2021.108042
Prieto S et al. Toward a multimodal model of internalized epilepsy stigma. Epilepsy Behav. 2026 Jan;174:110812. https://doi.org/10.1016/j.yebeh.2025.110812
Quon R et al. Self-management practices associated with quality of life for adults with epilepsy. J Neurol. 2019 Nov;266(11):2821-2828. https://doi.org/10.1007/s00415-019-09503-w

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