1) EFFECTIVENESS STUDIES: BEHAVIOURAL ADHERENCE INTERVENTIONS

The coding proforma for behavioural interventions is based on the following reference and associated materials:
Abraham, C. & Michie, S. (2008). A taxonomy of behavior change techniques used in interventions. Health Psychology 27, 379-387.

Only code text describing the intervention itself. Do not code aspects of the intervention evaluation (e.g., completing pre- and post intervention questionnaires) or preparation for intervention delivery (e.g., training of instructors). If there is more than one behavioural intervention, code for the most intensive or elaborate intervention programme described in the methods section.

Never infer use of a technique – if it is not explicitly mentioned then do not credit it. Do not make judgements about the quality of delivery of techniques. If it is claimed that a technique was delivered and it matches the technique definition then record use of that technique – even if you have doubts about the intensity or resources used for delivery.

Sometimes two techniques may be indicated by the same piece of text e.g., instruction (8) and modelling/ demonstrating (9). Make a clear decision as to whether the text indicates one or both, then, if appropriate, decide which one, i.e., do not just tick both without making a clear decision. Justify decisions.

	INFORMATION PROVISION	General guidance	Specific to ICONS
1	**Providing general information on health/behaviour link**		Including anatomy and physiology relevant to incontinence, risk factors or susceptibility for incontinence, general health education relevant to the behaviours of continence. Also include information on lifestyle factors, but check that this is not 8 (provide instruction on adapting lifestyle factors)
2	**Provide information on consequences** Involves providing information focusing on what will happen if the person performs the behaviour including the ***benefits and costs*** of action or inaction.		
3	**Provide information about others' approval** Involves information about what other people think about the reader's or target person's behaviour. It clarifies whether others will like, approve or disapprove of what the person is doing or will do.		
8	**Provide instruction** Involves *telling* the person *how* to perform a behaviour or preparatory behaviours. For example, providing individual face to face instructions, offering an instructional group class or providing "tips" on ***how*** to take action in text form.		Any practical instruction including written instruction on a) how to perform practical activities such as BT, PFMT etc, given to patient or carer b) lifestyle advice on how to manage diet, fluid intake, constipation

9	**Model/Demonstrate the behaviour** Involves *showing* the person how to correctly perform a behaviour e.g., face-to-face as in a group class or using video.	**NB** This is distinct from just providing instruction (technique 8) because in "demonstration" the person is able to *observe* the behaviour being enacted. Techniques 8 and 9 may be used separately or together – check for this.	PFMT with vaginal palpation or biofeedback would count as a demonstration, as would use of models, or illustrative materials to demonstrate practical skills.
	SELF MONITORING		
12	**Prompt self-monitoring of behaviour** The person is asked to keep a record of specified behaviour/s. This could e.g., take the form of a diary or completing a questionnaire about their behaviour.		Don't include keeping bladder diaries just for outcome evaluation purposes. The bladder diary should be part of the intervention, and used consistently i.e. 7 day
	ADHERENCE REMINDERS		
?	Use of (passive or interactive) devices or systems to self-prompt practice e.g. fridge magnets, sheets to fill in, computerized counters	Differentiate this from 15 (teach to use prompts and cues), where the emphasis is on helping the person to build their own reminder systems	
	TAILORING/GOAL SETTING		
4	**Prompt intention formation** Involves encouraging the person to set a general goal or make a behavioural resolution e.g., "I will take more exercise next week" would count as a prompt to intention formation. This is directed towards encouraging people to decide to change.	This is distinguished from technique 10 (prompt specific goal setting) by the general nature of the goal i.e., it does not involve planning exactly what will be done or when the behaviour or action sequence will be performed. Where the text only states that goal setting was used without specifying the detail of action planning involved then this would be an example of this technique (not technique 10)	Use this for interventions where it states that the individual's own goals for continence were discussed, or where people we asked about their goals for continence.
5	**Prompt barrier identification** Think about potential barriers and plan ways of overcoming them. Barriers may include competing goals in specified situations. This may be described as "problem solving" and if it is problem solving in relation to performance of the behaviour, then it is an instance of this technique.	Closely related to technique 10 (specific goal setting) but involves a focus on specific obstacles to performance.	
23	**Relapse prevention** Following an initial change help the person identify situations that increase the likelihood of returning to a risk behaviour or failing to perform a new health behaviour – and help them plan how to avoid or manage the situation so that new behavioural routines are maintained.	This may look like technique 5 (barrier identification) but is distinct in that it occurs only after an initial change has taken place.	
7	**Set graded tasks** Set the person easy-to-perform tasks, making them increasingly difficult until target behaviour is performed.	Although this might follow from technique 10 (specific goal setting), the key difference lies in planning to perform a sequence of preparatory actions or task components which *increase in*	Do not include if there is only reference to a schedule of BT or PFMT that increases over time, because this is for physiological rather than behavioural reasons.

		difficulty over time - as opposed to simply planning out a sequence of actions in detail.	Include if there is a schedule of UI strategies that gradually introduces more difficult tasks such as BT/ PFMT followed by urge/stress strategies, *once the earlier stages are mastered.*
10	**Prompt specific goal setting** Involves detailed planning of what the person will do including, at least, a very specific definition of the behaviour to be performed. In addition, at least one of the following contexts i.e., where, when, how or with whom must be specified. This could include identification of sub-goals or preparatory behaviours and/or specific contexts in which the behaviour will be performed.	Without clear illustration of this level of detail instances of "goal setting" should be regarded as applications of technique 4 (intention formation) Thus the terms "goal setting" or "personal plan" are not enough to ensure inclusion of this technique. When specific goal setting is used this does not automatically imply technique 4. Both or either may be included in an intervention.	Do not include just for reference to specific instructions on BT schedule or PFMT exercises to be performed because these are based on a physiological rationale. Only include if there is *detailed and specific goal setting* relating to UI strategies e.g. urge strategies to be used first at home, then at work, then at a social event; or the Knack to be used in various situations such as bending, coughing, laughing etc.
11	**Prompt review of behavioural goals** Involves reconsideration of previously set goals/ intentions. In most cases this will follow previous goal setting and an attempt to act on those goals.		This would be fulfilled if a health professional discusses/reviews performance of and progress toward an individual's own goals for UI within the intervention, not just their performance on a bladder diary. This would be 13 (provide feedback).
16	**Agree behavioural contract** Must involve agreement (e.g., signing) of an explicitly specifying behaviour so that there is a written record of the person's resolution witnessed by another.		
	PROFESSIONAL SUPERVISION/MONITORING		
13	**Provide feedback on performance** This involves either receiving data about recorded behaviour (e.g., following technique 12 self monitoring of behaviour) or commenting on how well or badly a person has performed an action (e.g., identifying a discrepancy with a set goal.	General praise which does not include comment on performance is included in technique 6 below (general encouragement)	The requirement is for *recorded* behaviour/ performance. This would be fulfilled if the bladder diary or performance of UI strategies recorded by biofeedback were discussed within the intervention with a health professional. It would not be fulfilled by general discussion of progress without a basis in review of performance data of some sort.
	MOTIVATION/REINFORCEMENT		
6.	**Provide general encouragement** Involves praising or rewarding the person for effort or performance without making this contingent on specific behavioural performance; or "motivating" the person in an unspecified manner. This will include attempts to enhance self efficacy through argument or persuasion (e.g., telling someone they will be able to perform a behaviour).		Include if there is reference to people being encouraged to exercise or adhere to the behavioural UI strategies.

14.	**Provide contingent rewards** This can include praise and encouragement as well as material rewards but the reward/ incentive must be explicitly linked to the achievement of specified goals i.e. the person receives the reward if they perform the specified behaviour (or preparatory behaviour) but not if they do not perform the behaviour.		
15.	**Teach to use prompts/ cues** Teach the person to identify environmental prompts which can be used to remind them to perform the behaviour. This could include times of day, particular contexts or elements of contexts which prompt them to perform the target behaviour.	May be a component of 4 (intention formation), or 10 (goal setting)	Include this if people are encouraged to personalize their BT, PV or PFMT schedule to fit in with personal circumstances or environment, *so that it reminds them to practice.*
17.	**Prompt practice** Prompt the person to rehearse and repeat the behaviour or preparatory behaviours numerous times. Note this will also include parts of the behaviour e.g., refusal skills in relation to quitting smoking. This could be described as "building habits or routines" but is still practice so long as the person is prompted to try the behaviour (or parts of it) during the intervention.	If this is done in a group setting it will inevitably involve technique 19 (social comparison). Thus a group class in which people perform the behaviour or parts of the behaviour will include practice and opportunities for social comparison.	Do not use this just for BT or PFMT exercise schedules which are inherently repetitive, and are repeated for physiological reasons. Only include this if people are encouraged to rehearse and repeat UI strategies in different settings or situations (check overlap with 10 – specific goal setting)
18.	**Use of follow up prompts** Involves sending letters, making telephone calls, visits or follow up meetings after the major part to the behaviour change intervention has been completed. If spaced contacts is an intrinsic part of the behaviour change intervention these in themselves do not count as follow up.	This may (but does not need to) involve 6 (general encouragement)	Include this if people are contacted by phone or in person after the major delivery of the intervention components, to check on progress, encourage adherence, or provide reminders.
	COUNSELLING/COACHING STRATEGIES **i.e wider than just professional encouragement – using specific techniques**		
22.	**Prompt Self talk** Encourage the person to use talk to themselves (aloud or silently) before and during planned behaviours to encourage and support action.		
21.	**Prompt identification as role model/ position advocate** Involves focusing on how the person may be an example to others and affect their behaviour e.g., being a good example to children. Also includes providing opportunities for participants to persuade others of the importance of adopting/ changing the behaviour. For example, giving a talk or writing a persuasive leaflet.		

20.	**Plan social support/ social change** Involves prompting the person to think about how others' could change their behaviour to offer him/her help and/or (instrumental) social support. This will also include provision of such support during the interventions e.g., setting up a "buddy" system or other forms of support.	This could (but does not need to) involve technique 5 (barrier identification) – where others' behaviour are perceived to be a key barrier to successful performance. Techniques 5 and 20 can be used independently or together.	
19.	**Provide opportunities for social comparison** This will most commonly be seen in the case of group practice (e.g., group classes) but could also be employed using detailed case studies in text or video or by pairing people as supports. It provides a setting in which processes such as social comparison could occur.	Group classes may also involve instruction (technique 8) demonstration (technique 9) and practice (technique 17). Check for these additional techniques.	Any intervention delivered in a group setting should be checked for the opportunities for this. Given that UI strategies are generally personal and invisible, it is not automatic that social comparison will be a component
25.	**Motivational interviewing** This is a specific set of techniques involving prompting the person to provide self-motivating statements and evaluations of own behaviour to minimise resistance to change (includes motivational counselling).	Normally this technique will be mentioned by name.	
24.	**Stress management** This may involve a variety of specific techniques (e.g., progressive relaxation) which do not target the behaviour directly but seek to reduce anxiety and stress to facilitate the performance of the behaviour.		
26.	**Time management** This includes any technique designed to help a person make time for the behaviour (e.g., how to fit it into a daily or weekly schedule). These techniques are not directed towards performance of target behaviour but rather seek to facilitate it by freeing up times when it could be performed. This technique may or may not be mentioned by name.		

B) QUALITATIVE DATA EXTRACTION

Check descriptive data as follows:
Page 1: research design classification, data collected from:
Page 2:

- client group recruitment, inclusion and exclusion criteria, number,
- client description,
- intervention description,
- data collection method, description, timing
- model or framework for analysis
- analysis method

Extract findings (pg 4) Findings are the researcher constructs interpreting the data, rather than the actual data. The proforma splits the data into columns for researcher theme(s), categories and codes. For us, it is likely to be at the level of **category** that the information is most useful, although this will differ dependent on the level of the research. There are likely to be multiple categories per theme, and possibly multiple codes per category. Try to keep one line for each **category.** However, fairly basic descriptive research may do no more than code and list individual factors.

Categorise barriers or enablers as follows:

- *intervention*: combined, PFMT, BT, PV, generic behavioural
- *influencing factor source*: client (CL), intervention (INT) or context (CO)
- *influencing factor direction*: enabler (E) or barrier (B)
- *outcome*: choice/uptake (CU), participation/adherence (PA), longer-term sustainability (S), withdrawal/drop-out (WDO)

There is a column for coding each line of findings, prior to their transfer into the category structure as per Page 5. Transfer each finding according to whether they are a barrier (left hand side) or enabler (right hand side), keeping one line per category. If there are barriers and enablers that are natural opposites e.g. Barrier = too much time, Enabler = too little time match them up on the same line. Otherwise – keep one data item per line.

When transferring, keep a separate page for each **type of intervention** i.e. don't mix up barriers and enablers for different interventions on the same sheet. Try to attribute responses to specific interventions where possible and clear, but otherwise name the intervention "generic" if it is behavioural, but not clear what. A number of the studies are even more general in that they are about self-management strategies/promoting continence. Either exclude the full study if too generic/little or no data. Do not transfer individual items of data if only about factors generally influencing the promotion of continence, rather than being attributable/relevant to a behavioural intervention.

There are three major classifications as to whether **barriers or enablers** originate from the client, intervention or context. This can be difficult (e.g. whether something is a property of the intervention e.g. hard to learn, or whether this is a perception from the client). Reviewers will need to discuss.

There are four columns in the middle of the page to identify the **time period/outcome** that the finding is being attributed to/what the finding is a barrier/enabler for i.e. whether it is *choice/uptake*

of an intervention, *ongoing participation, long-term sustainability, or withdrawal/drop-out*. Sometimes it isn't completely clear, or it may be that the finding appears to relate to more than one time period. If the research is targeted specifically at a particular time period e.g. withdrawal, attribute all the findings to this column. Otherwise, rely on what is explicit in the data rather than inferring.

C) PREDICTOR VARIABLES

	KNOWN/POTENTIAL PREDICTORS OF URINARY INCONTINENCE	
CODE	**VARIABLE CATEGORIES**	**DEFINITIONS**
	SOCIO-DEMOGRAPHIC VARIABLES	
SD-G	Sex	
SD-A	Age	Age categories: 19-44, 45-64, 65+, 80 and over
SD-R	Ethnicity	
SD-EI	Education/income	Include insurance status
	PHYSIOLOGICAL UI VARIABLES	
P-P	Physiological variables impacting on UI a) obstetric b) gynaecological c) urological/rectal	Parity, menopause, age at menopause, duration of menopause, hysterectomy, number of vaginal births, caesarean and forceps deliveries, birth weights, atrophic mucosa, vaginitis, urethrocele, rectocele, uterine prolapse, prostate, constipation, pelvic exam, rectal exam
P-W	Weight/BMI	
P-U	Urodynamic variables	Volume voided, post void residual urine, bladder capacity, muscle strength
P-TR	Previous UI treatment	Gynaecologic or urological surgical procedures, drugs
P-D	Duration of UI	
P-TY	Type of UI	
P-S	Severity/degree of UI	Number, type and severity of symptoms, frequency of UI episodes, volume of UI episodes, amount of loss per episode, day-time/night-time frequency, use of protective garments, PRAFAB
	GENERAL HEALTH STATUS/SELF-CARE ABILITY VARIABLES	
H-G	Comorbidities/ lifestyle factors	Medical history, measures of physical health status, prior general medical treatment or lifestyle variables hypothesised/known to impact on UI e.g. cardiovascular disease, diabetes, asthma, arthritis, stroke, traumatic injury, degenerative disease, use of health care resources, smoking, alcohol intake, diet, levels of activity or fitness
H-F	Functional impairment	Factors affecting general self-care or physical activity such as measures of mobility
H-C	Cognitive abilities	Factors affecting general cognition such as dementia, mental status, cognitive incapacity e.g. MMSE
H-P	Mental health/psychological problems	Factors affecting psychological well-being such as depression, anxiety
H-S	Sexual history	Include history of abuse, torture, rape. Also include sexual history
	PSYCHOLOGICAL/LEARNING VARIABLES	
PSY-H	Health perceptions	Include self assessment of health status e.g. poor, or feelings about/value placed on health status
PSY-QOL	Perceptions of seriousness	Self-assessment of UI severity/symptom impact on quality of life, or symptom distress e.g. IIQ, UDI, IQOL, amount of worry, changes in activity because of UI
PSY-PSB	Perceptions of benefits/ consequences of UI/treatment	Subjective assessment of positive or negative consequences of participation, what people expect to gain
PSY-MA	Motivation/attitude/goals	Measurement of how people feel about the treatment, or how much effort they are willing to contribute, how much change in UI status is desired by individual e.g. social desirability
PSY-SEF	Self-efficacy	Belief in one's own capability to improve, meet demands
PSY-SEM	Self concept	The subjective perception of the self, include self esteem, body esteem
PSY-CON	Perceptions of control	Extent to which individuals attribute internal or external responsibility for their problems or solutions
PSY-COM	Compliance/adherence	Extent to which individuals adhere to the programme demands for amount and type of exercise, recording, clinic attendance etc.
PSY-KT	Knowledge-correct technique	Amount/accuracy of existing knowledge about causes and treatment of UI, and level/accuracy of skills in behavioural UI techniques
PSY-EXP	Previous experience	of behavioural UI therapy
	EXTERNAL VARIABLES	

SOC-D	Social demands	e.g. hours per week working, caring, activities, children, partner
SOC-I	Social influences	External social factors impacting on perceptions or behaviour such as social norms, beliefs of other people, availability of resources or support