



## GLOSSARY of research terms

### JLA Urinary Incontinence Working Partnership Workshop to set research priorities in Urinary Incontinence November 2008

*Terms in bold are commonly used clinical/research terms.*

**Anticholinergics:** Commonly prescribed type of drug used to help stop involuntary spasms of the bladder that cause some kinds of bladder control problems.

**Antispasmodics:** Type of drug used to stop contractions of bladder muscle that cause some kinds of bladder control problems.

**Before-After Trial:** Investigation of an intervention (such as a treatment) in which the investigators compare the status of patients before and after the intervention.

**Behavioral Modification:** Techniques that people can use to manage their symptoms (such as setting a schedule for voiding, increasing time between voids gradually and Kegel exercises, which help to strengthen the muscles that help you stop urinating).

**Benign prostatic hyperplasia (BPH):** A noncancerous enlargement of the prostate that can interfere with urination.

**Bias:** A systematic tendency to produce an outcome that differs from the underlying truth. There are many different types of bias.

**Biofeedback:** This term refers to a variety of techniques that teach patients bladder and pelvic muscle control by giving positive feedback when the patient performs the desired action. This feedback can be from an electronic device or directly from health professional.

**Bladder:** A muscular pouch that stores urine, comprised of the detrusor muscle, a valve-like internal sphincter, and other tissues.

bladder neck: The junction of the bladder and the urethra.

**Bladder Training:** This treatment for urge incontinence involves teaching a patient to urinate according to a timetable rather than an urge to do so. Gradually, the scheduled time between trips to the bathroom is increased as the patient's bladder control improves.

**Case Reports:** Descriptions of individual patients

**Case Series:** A study reporting on a consecutive collection of patients, treated in a similar manner, without a **control group** (comparison group).

**Case control studies:** studies used to investigate causes of diseases, or to identify adverse or side-effects of treatments. They include people with an outcome of interest and a suitable control group of people unaffected by the outcome. The occurrence of the possible cause is compared between **cases** (people with the disease/condition) and **controls** (people not known to have the disease/condition).

**Catheter:** A hollow, flexible tube used to add or remove fluid to or from the body, commonly inserted into the bladder through the urethra.

**Clinical Guidelines:** Guidelines are systematically developed statements, directions, or principles that help practitioner and patient decisions about the right health care for specific disease areas or circumstances. Guidelines may be developed by government agencies, institutions, organisations, such as professional societies or governing boards, or by expert panels.

**Continence:** Voluntary control of urination.

**Cochrane Collaboration:** an international endeavour in which people from many different countries systematically find, appraise and review available evidence from **RCTs**. The Collaboration aims to develop and maintain systematic, up-to-date reviews of **RCTs** of all forms of health care and to make this information readily available to clinicians and other decision-makers at all levels of health care.

**Cohort Studies (or follow-up studies):** Studies which begin with a group of people (the cohort) free from disease but who have been exposed to a potential cause of disease or outcome. The cohort is followed up to see the subsequent development of new cases of the outcome of interest. Cohort studies provide the best information about the causation of disease and the most direct measurement of the risk of developing disease. They can also be used to measure the outcome of treatments or exposure when, for ethical reasons, it is not possible to perform an **RCT** or to investigate the effects of a rare exposure.

**Confounder or confounding variable:** A factor that distorts the true relationship of the study variable of interest by virtue of also being related to the outcome of interest. Confounders are often unequally distributed among the groups being compared. Randomised studies are less likely to have their results distorted by confounders than are observational studies

**Controls:** is the comparison group, in a **Random Controlled Trial**. They receive the usual treatment (or a **placebo**) while the experimental group receives the treatment being tested.

**Conventional Therapy:** a currently accepted and widely used treatment for a certain type of disease, based on the results of past research. Also called conventional treatment.

**Crossover Trial:** A study design in which all patients receive both experimental and control treatments in sequence.

**Cystoscopy:** Using a lighted scope to view the inside of the bladder.

**Detrusor:** The main muscle of the bladder. When the detrusor is relaxed, urine is collected there. When the detrusor contracts, urine can be expelled from the body.

**Detrusor instability:** Involuntary contractions of the detrusor muscle while the bladder is filling, resulting in urgency, frequency, or sometimes incontinence.

**Detrusor muscle:** The layer of involuntary muscle in the bladder wall; during urination, it contracts to squeeze urine out of the bladder into the urethra.

**Dysuria:** Painful urination.

**Enuresis:** Involuntary urination while sleeping (bedwetting).

**Effectiveness** is the extent to which an intervention/treatment improves the outcome for patients in real life.

**Evidence-Based Medicine (EBM):** Using current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine requires integration of individual clinical expertise and patient preferences, with the best available evidence from good quality research.

**Experimental study** is a study in which conditions are under the direct control of the investigator, so that the outcome can be attributed to the intervention. A randomised controlled trial is an experimental study.

**Exposure:** A condition to which patients are exposed (either a potentially harmful agent or a potentially beneficial one) that may impact on their health.

**Faecal Incontinence:** Accidental loss of solid stool, liquid stool, or gas.

**Focus Groups:** Investigators use focus groups, typically gatherings of 4 to 8 people with similar background or experience, to understand their attitudes or their response to a particular situation or experience.

**Follow-up:** The investigators are aware of the outcome in every patient who is recruited to a study.

**Frequency:** A type of urinary incontinence in which a person routinely needs to urinate more than eight times during the day or more than twice at night.

**Functional incontinence:** Incontinence caused by problems (other than gastrointestinal conditions) that make it difficult to reach a toilet in time.

**Hawthorne effect:** psychological response, in which subjects change their behaviour simply because they are participating in a research study, not because of the research treatment.

**Homogeneity:** meaning 'similarity'. Studies are said to be **homogeneous** if their results vary no more than might be expected by the play of chance. The opposite of homogeneity is **heterogeneity**.

**Immunotherapy:** a variety of strategies of treatment based upon the concept of modulating the immune system to achieve a desired outcome in therapy or preventative therapy.

**Incidence:** Number of new cases of disease occurring during a specified period of time; expressed as a percentage of the number of people at risk.

**Inclusion Criteria:** Investigators specify the inclusion criteria to define the people who will be eligible for a study.

**Indwelling catheter:** A catheter which remains in the bladder to allow urine to drain.

**Intrinsic sphincter deficiency:** Inability of the urinary sphincter to close completely.

**Intermittent self-catheterisation:** emptying the bladder by introducing a catheter into the bladder via the urethra as required.

**Informed Consent:** A potential participant's expression of willingness, after full understanding of the facts, to participate in a study.

**Intervention (s):** An action that produces an effect or that is intended to alter the course of a disease process

**Investigator Triangulation:** Investigator triangulation requires more than one investigator to collect and analyse the raw data, such that the findings emerge through consensus between or among investigators.

**Kegel exercises:** Exercises designed to increase muscle strength and elasticity in the pelvis. Kegel exercises may be recommended for treatment of an incompetent cervix, vaginal looseness after pregnancy and delivery, or urinary incontinence.

**Kidneys:** Two organs that filter liquid waste from the blood.

**Likert-Type Scales:** Scales, typically with from 3 to 9 possible values, that include extremes of attitudes or feelings (such as from totally disagree to totally agree) and that investigators preset to respondents to obtain their ratings or their responses.

**Lost to Follow-up:** Patients whose status at the end of the study is unknown.

**MEDLINE:** an electronic database which summaries thousands of pieces of biomedical research literature, in selected journals. It is available through most health service libraries.

**Meta-analysis:** a statistical technique, which summarises the results of several studies into a single estimate. More importance is given to studies, which have been done with larger groups of people.

**Micturition:** Emptying the bladder; another name for urination or voiding.

**Mixed Incontinence:** Symptoms of both urge incontinence (a symptom of overactive bladder) and stress incontinence.

**Neuromodulation:** This is a new approach in the treatment of the overactive bladder, urinary retention and urinary frequency. Electrodes are surgically inserted into the nerves that control the bladder.

**Nocturia:** Excessive urination at night.

**Number Needed to Harm (NNH):** The number of patients who would need to be treated over a specific period of time before one adverse side effect of the treatment will occur.

**Number Needed to Treat (NNT):** The number of patients who need to be treated over a specific period of time to prevent one bad outcome. When discussing NNT, it is important to specify the treatment, its duration and the bad outcome being prevented.

**Overactive Bladder:** A condition with symptoms of leakage and wetting incidents (urge incontinence), urinating frequently (frequency), and a need to urinate (urgency), caused by spasms of the bladder muscle.

**Pelvic floor muscles:** A group of muscles in the pelvis that support and help to control the vagina, uterus, bladder urethra and rectum.

**Pelvic floor muscle exercises:** a way to strengthen the muscles that hold urine in the bladder

**Perineum:** The area of skin between the vagina and anus in women, and between the scrotum and anus in men.

**Pessary:** A device worn in the vagina to support or correct the position of the uterus, rectum, or bladder.

**Pharmacotherapy:** the treatment of a disease with drugs

**Placebo therapy:** is an inactive treatment often given to controls in trials. The **placebo** is delivered in a form, which is apparently identical to the active treatment being tested in the trial, so that the research participant is unaware of which they are taking, this helps to eliminate psychological effects on the outcome.



**Prevalence:** Proportion of persons affected with a particular disease at a specified time.

**Primary Care Setting:** Medical care facility that offers first contact health care only, e.g. GP surgery, specialised medical care may be referred elsewhere. Some primary care centres provide a mixture of primary and referred care.

**Primary Studies:** Studies that collect original data. Primary studies are differentiated from systematic reviews that summarize the results of (existing) primary studies.

**Prolapse:** When a part of the body drops from its normal position. (Uterine prolapse: prolapse or descent of the uterus into the vagina.)

**Prophylactic:** Something that prevents or protects.

**Publication Bias** results from the fact that studies with 'positive' results are more likely to be published.

**Pudendal nerve:** The nerve that controls the muscles of the pelvic floor; plays an important role in urinary and faecal continence.

**Qualitative Research:** Qualitative research offers insights into social, and emotional features of life and reports in a descriptive way.

**Quantitative Research:** Aims to test well-specified hypotheses (hunches or ideas) using pre-determined factors and reports this in numbers and data for suitable for statistical analysis.

**Randomisation or Random Allocation:** Allocation of individuals to groups by chance, usually done with the aid of table of random numbers. Not to be confused with systematic allocation (e.g. on even and odd days of the month) or allocation at the convenience or discretion of the investigator

**Randomised Controlled Trial (RCT):** a research trial in which subjects are randomly assigned to two groups: one (the experimental group) receiving the intervention that is being tested, and the other (the comparison group or controls) receiving no treatment or a conventional treatment. The two groups are then followed up to see if any differences between them result. This helps people assess the effectiveness of the intervention.

**Reliability:** Refers to consistency or reproducibility of data

**Review:** Is any summary of the literature

**Risk:** Measure of the association between exposure and outcome (including incidence, side effects, toxicity).

**Slings:** A slender piece of material surgically inserted under the urethra or bladder neck to provide support and improve continence.

**Sphincter:** A ring of muscle around a natural opening or passage that acts like a valve, controlling inflow or outflow.

**Stress Incontinence:** The loss of urine caused by increased pressure on the bladder, caused by such things as coughing, sneezing, laughing, or other physical activity.

**Suprapubic catheter:** A catheter placed into the bladder through the abdomen - it is used to drain the bladder after surgery.

**Survey:** Observational or descriptive non-experimental study in which individuals are systematically examined for the absence or presence (or degree of presence) of characteristics of interest.

**Systematic review** is a **review** in which evidence on a topic has been systematically identified, appraised and summarised according to predetermined criteria.

**Theoretical Saturation:** The point at which iterations among data collection, analysis and theory development yield a well-developed conceptual framework and further observations yield minimal or no new information to further challenge or elaborate the framework.

**Triangulation:** In qualitative analysis, key findings are also corroborated using multiple sources of information, a process called triangulation. For example if it smells like a dog, barks like a dog, and looks like a dog, it probably is a dog.

**Uncertainty:** Uncertainties about treatment or the effects of treatments, that cannot currently be answered reliably by referring to up-to-date systematic reviews of existing research evidence.

**Ureters:** The two tubes that connect the kidneys to the bladder.

**Urethra:** The tube that connects the bladder to the outside of the body.

**Urethral hypermobility:** Movement of the urethra out of place when abdominal pressure increases, leading to stress incontinence.

**Urge Incontinence:** An urgent need to urinate followed by a sudden loss of urine. (Also known as "overactive bladder").

**Urgency:** An intense and uncomfortable sense of needing to urinate.

**Urinalysis:** A test that evaluates chemicals and cells in the urine

**Urinary Incontinence:** A general term for the involuntary loss of urine including urge incontinence, stress incontinence, and other kinds of incontinence.

**Urine:** A mixture of waste products and water produced by the kidneys.

**Urine culture:** A test that determines whether a urinary tract infection (UTI) is present.

**Urodynamics:** A test that uses a small catheter inserted in the bladder to study the function of the bladder and urethra during, filling, leakage and urinating.

**Urogynecologist:** a doctor who treats women's bladder and urine problems.

**Urologist:** a doctor who treats people with bladder or urine problems.

**Values:** The basis for individual personal preferences.

**Validity:** refers to the soundness or rigour of a study. A study is valid if the way it is designed and carried out means that the results are unbiased – that is, it gives you a 'true' estimate of clinical effectiveness of a treatment.

**Voiding:** Passage of urine out of the body.

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