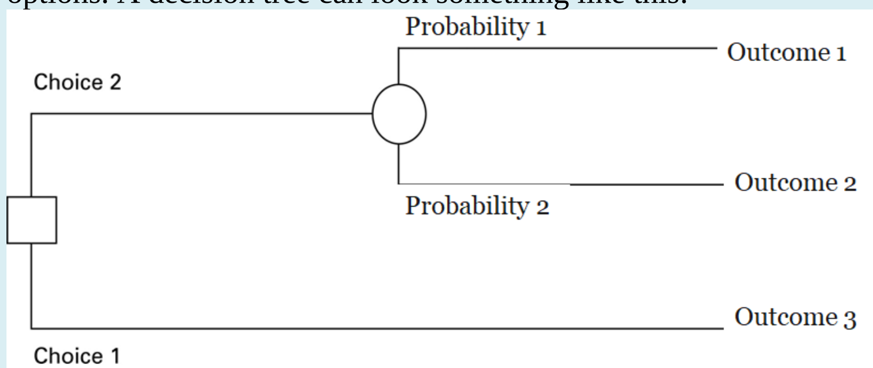
Common Terms and Definitions used by the Society for Medical Decision-Making (SMDM)

Key: Blue = methods relevant to SMDM
Orange = content relevant to SMDM
Gray = acronyms for other societies or terms relevant to SMDM (end of document)

Term	Abbreviation	Definition
Conjoint analysis	CA	A method of using surveys to measure preferences (of patients, clinicians, stakeholders) by estimating how people feel about various choices. This can be done using features that differ between options (e.g., their side effects or costs), or using a short description of the options and asking people to choose which one they prefer.
Community-based participatory research	CBPR	A process through which researchers and community members work together as equal partners to answer research questions that are important to the community.
Classification and regression tree	CART	A tool used to segment subgroups to provide predictions based on mutually exclusive groups
Cost-benefit analysis	CBA	Estimates the net benefits of a health intervention (benefit minus cost). Similar to CEA except that health outcomes are expressed in money units. (e.g. direct medical costs averted). See: https://www.cdc.gov/policy/polaris/economics/cost-benefit/index.html
Cost-consequence analysis	CCA	Report of all costs and consequences of an intervention or policy change so decision-makers can align potential effects with their values to come to make a choice.
Cost-effectiveness analysis	CEA	Comparison of a health intervention to status quo or other interventions. Examine the ratio of the net cost divided by change in health outcomes.
Cost-effectiveness acceptability curve	CEAC	Graph that displays information about uncertainty of a cost-effectiveness estimate. Shows the probability that the intervention is cost-effective when compared to alternatives.
Confidence interval	CI	Statistical range of values indicating the precision of the collected data. You can expect results to fall within the range of the confidence interval. For example, a 95% confidence interval means that one can be 95% certain the results contain the true value.
Conflict of interest	COI	A situation where primary interests (e.g., patient welfare and research integrity) could be influenced by secondary interests (e.g., financial profit and personal gain)

Cost-utility analysis	CUA	Method used to compare costs and outcomes of an intervention compared to its alternative(s). Measures health benefits through QALYs (see below).
Contingent valuation	CV	Survey-based method to determine individual's monetary value of health interventions, methods, and technologies.
Decision aid	DA	(See below: PDA, PtDA)
Decision analysis	DA	Use of a decision tree (example: if I choose option A, what might happen next? If I choose option B, what might happen next?) to apply principles of evidence-based medicine (see below) to objectively make an informed clinical decision with multiple options. A decision tree can look something like this: 
Decision regret	–	Distress or remorse after a healthcare decision.
Decisional conflict	–	Describes personal uncertainty about which course of action to take when choosing between options involves risk, regret, or challenge to personal life values.
Disability-adjusted life year	DALY	Unit whose measure is equivalent to years of full health lost due to time in imperfect health or disability. 1 DALY = loss of one year in optimal health.
Discrete choice experiment	DCE	Method used to elicit patients' preferences for treatment by asking them to choose between some hypothetical situations. Addresses care beyond health outcomes (e.g., mode of taking medicine, waiting time, distance to seek care, etc.).
Discrete event simulation	DES	Computer-based model that simulates how separate events in an actual system, such as a health care system, will work.
Dissemination (as applied to research)	–	Dissemination: sharing knowledge and results to a wide range of audiences. The goal of dissemination is to make sure research results reach the people who can make use of them, to maximize the benefit of the research.

Evidence-based medicine	EBM	Use of best evidence to provide patient care. It includes clinical expertise, research findings, and patient values. 
Expected utility	EU	How much benefit from an intervention is expected when there is no known outcome. It provides a way to analyze situations in which individuals must make a decision without knowing the outcomes that may result from that decision.
Expected value of perfect information	EVPI	Difference in monetary value of decisions based on currently available versus perfect information (having no uncertainty). It is how much money a decision maker would pay to have perfect information regarding a decision.
Expected value of sample information	EVSI	Value of reduced uncertainty of a decision resulting from a study collecting additional information prior to making a decision.
Health economics and outcomes research	HEOR	Research involving health economics and outcomes to help health care policy makers make decisions. Involves the value (both the importance and monetary value) of health care treatments along with the effects of such treatments.
Hazard ratio	HR	Hazard rate in treatment group vs. control group. It describes relative risk of harmful outcomes by comparing the probability of events in each group.
Health literacy	–	Describes an individual's capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions.
Health-related quality of life	HRQOL	Individual’s self-rated well-being, including physical, psychosocial, and emotional factors associated with one’s health.
Health services research	HSR	Research studying how social factors, financing, organizational structures, health technology, and personal behavior affect access to

		care, quality of care, cost of care, and overall health/well-being.
Health technology assessment	HTA	Measuring the properties, effects, and/or impacts of health care technology. It should include medical, social, ethical, and economic aspects, and its main purpose is to inform decision-making in the health area.
Health Utility Index	HUI	Scale (values 0.0 - 1.0) used to rate health related quality of life (see above; HRQOL) and health status.
Healthy years equivalents	HYE	Measures health outcome with potential number of years in optimal health vs. certain number of years in imperfect health.
Implementation	–	Study of strategies to use research evidence in practice and policy. Sometimes used together with dissemination (dissemination often involves spread to a large group of users, while implementation can involve use in specific contexts).
Intraclass correlation coefficient	ICC	Values from 0.0-1.0 to show correlations and reliability among a set of data, useful for observing differences between two raters.
Incremental net benefit	INB	How effective a new intervention is, compared to a standard practice.
Kaplan-Meier curve	KM	Graph estimating survival rate.
Knowledge translation	–	Summarizing, sharing, and using knowledge developed from research to improve practice and policy.
Life expectancy	LE	Average number of years an individual or population is expected to live.
Life year	LY	The remaining life expectancy from an avoided death.
Medical decision making	MDM	How and why clinicians, patients, and policy makers make decisions. Studying MDM often includes studying barriers to and facilitators of effective decision making as well as interventions to support it.
Multi-criteria decision making	MCDM	Choosing among or ranking various interventions when multiple factors must be taken into account.
Maximum likelihood estimate	MLE	Estimating the parameters of a model so that the observed data are most probable/most likely.
Number needed to harm	NNH	Number of patients who need to receive a treatment or intervention in order for one person to have a bad outcome. This number should

		be high for good interventions.
Number needed to treat	NNT	Number of patients who need to receive a treatment or intervention in order for one person to benefit. This number should be low for good interventions.
Numeracy	–	The ability to understand and work with numbers.
Ordinary least squares	OLS	A method to estimate the unknown parameters in a linear regression model (a linear regression model assumes a linear relationship between input and output variables).
Patient Decision Aids	PDAs, DAs, PtDAs	Tools that help people make specific and deliberate choices about health care that take into account the best available evidence alongside patients' values and preferences. Decision aids are a part of a shared decision making process, complementing but not replacing counseling. They are best used when there is more than one reasonable option for care.
Patient-centered outcomes research	PCOR	Research that answers patient-centered questions about issues that matter to patients.
Patient engagement	–	Involving patients and/or caregivers in research or practice by focusing on their priorities and the knowledge they've gained from their own experience.
Protected health information	PHI	Health information that can identify individuals, such as name; address (anything smaller than a state);dates (except years) related to an individual -- birthdate, date of admission, etc.; phone number; email address; Social Security number; medical record number; health plan number; fingerprint, voice, photos of identifying features like face or unusual tattoos. PHI is protected by a law called HIPAA (Health Insurance Portability and Accountability Act) in the United States.
Patient-reported outcome measures	PROMs	Measures, using validated or standardized surveys, that ask patients how they feel / what they think about their health or well-being..
Qualitative research	–	Collection of data through observation, audio or video recordings, or interviews.
Quality-adjusted life year	QALY	A measure of disease burden, including both the quality and the quantity of life lived. 1 QALY = 1 year of life in perfect health.
Quality of life	QOL	Subjective perceptions of patient well-being. Includes physical, mental, emotional, and social aspects of well-being.
Quality of Well-	QWB	Scale of 0.0 (dead) to 1.0 (no health problems, optimal functioning).

Being		Involves preference weights of mobility, physical activity, and social activity.
Randomized controlled trial	RCT	Researchers randomly assign participants into groups (to get or not get the intervention). They can then study variables that may have an impact on the effect that is being studied in the trial.
Receiver operating characteristic	ROC	A plot or graph that shows the true positive rate against the false positive rate of an outcome at various thresholds.
Risk communication	–	Ways to communicate statistics and numbers to people about the effect of a treatment or intervention to help them choose between options. Clear risk communication uses frequencies (such as X out of 100, X out of 1000) or percentages, keeping the denominator consistent. It can use graphs to help people visually see the risk information.
Shared Decision Making	SDM	A process of engaging patients/caregivers through sharing clinical evidence using clear, understandable language, acknowledging uncertainty about options, exploring patients' preferences, and communicating to patients as partners as they make health care choices.
Socioeconomic status	SES	Social status, taking into account income, social class, education, and occupation.
Statistical significance	–	The likelihood that results of a study are due to chance. Researchers assume no relationship between variables, and set a value before doing the study to determine how much a difference should result from the study to claim a probable effect (statistical significance) by a variable. Note: this is different from the *clinical* significance which sets out to determine whether a treatment or intervention benefits health.
Survey research	–	Individual responses to questions - Qualitative: open-ended responses - Quantitative: numeric scale values
Technology assessment	TA	Research that looks at outcomes, both short- and long-term, of certain technologies and how they can be adapted or used. The goal is to provide knowledge about policy options and how technology impacts decision-making.
Time-tradeoff	TTO	A way to estimate value of options. When decisions include more than one option, TTO presents outcomes varying an individual's quality of life and length of life, until a person sees them both as equal. This ends up becoming the "utility" or value.

Usability	–	The extent to which a product, like a decision aid or other intervention, can be used to achieve its goals. Usability testing often involves interviews, observations, and/or surveys to study how easy or hard it is to use the intervention.
Visual analog scale	VAS	A scale to measure values by asking someone to rate how they feel about the option along the scale. The place to which they slide the bar or at which they rate the option is its “utility” or value.
Value-based insurance design	VBID	Health care costs are related to the service’s value and based on clinical benefit, not on the expense for the provider. Encourages services when clinical benefits to the patient outweigh cost.
Willingness to pay	WTP	Method of measuring benefit in money-units. It is the maximum amount someone or some organization (private or public) would be willing to pay for something.

Organizations, institutions, other terms	
ACA	Affordable Care Act (U.S.)
ACS	American Cancer Society (U.S.)
AHRQ	Agency for Healthcare Research and Quality (U.S.)
CIHR	Canadian Institutes of Health Research
HIPAA	Health Insurance Portability and Accountability Act (U.S.)
IPDAS	International Patient Decision Aid Standards
#MDMTwitter	Hashtag to promote medical decision making related tweets on twitter
#SMDM20 #SMDM21 #SMDM22 etc.	Hashtag for each year's annual conference on twitter
NCI	National Cancer Institute (U.S.)
NHS	National Health Service (U.K.)
NICE	National Institute for Health and Care Excellence (U.K.)
NIH	National Institutes of Health (U.S.)
NQF	National Quality Forum (U.S.)
PCORI	Patient-Centered Outcomes Research Institute (U.S.)
USPSTF	U.S. Preventive Services Task Force