

Appendix B. Shared decision making (SDM)-models (N=40) in order of publication year and first author

First author, publication year	SDM-model
Charles, 1997 ⁴⁹ <i>Explicitly informed the following models:</i> ^{5 17 18 22 24-26 28 32 38 45 51}	Four minimum or necessary criteria for classifying a physician-patient decision making interaction as SDM (i.e., necessary but not always sufficient). SDM involves that: 1. At least the physician and the patient are involved (Often more than two participants are involved, such as a relative, a friend or another physician); 2. Both parties share information (The physician should: a) Establish a conducive atmosphere so that the patient feels that her views about various treatment options are valued and needed, b) Elicit patient preferences, c) Transfer technical information on treatment options, risks and their probable benefits in an as unbiased, clear and simple a way as is possible, d) Help the patient to conceptualize the weighing process of risks versus benefits, and ask patients questions in order to ensure that patients' preferences are based on facts, e) Share his treatment recommendation and/or affirm the patient's treatment preference; The patient should be willing to take responsibility for disclosing preferences, asking questions, weighing and evaluating treatment alternatives, and formulating a treatment preference); 3. Both parties take steps to build a consensus about the preferred treatment; 4. An agreement is reached on the treatment to implement.
Charles, 1999 ¹⁷ <i>Explicitly informed the following models:</i> ^{5 22 24-26 28 32 38 43 45 51}	The SDM model has three analytical stages (These may occur together or in an iterative process): 1. Information exchange (Information exchange is two-way, from physician to patient and from patient to physician. The physician must inform the patient of all information that is relevant to making the decision (information about available treatment options, the benefits and risks of each and potential effects on the patient's psychological and social well-being); The patient needs to provide information on issues raised (Values, preferences, lifestyle, beliefs and knowledge about illness and its treatment) to ensure that both the physician and patient evaluate the information of the physician within the context of the patient's specific situation and needs); 2. Deliberation about treatment options (i.e., the process of expressing and discussing treatment preferences) (The deliberation has an interactional nature, and both physician and patient are assumed to have a legitimate investment in the treatment decision (The patient because her health is at stake and the physician out of concern for the patient's welfare). The physician and patient (plus potential others) need (both) to be willing to engage in the decision making process by expressing treatment preferences. The interaction process to be used to reach an agreement may be explicitly discussed at the outset of the encounter or may evolve implicitly as the interaction unfolds); 3. Deciding on the treatment to implement (Both parties, through the deliberation process, work towards reaching an agreement and both parties have an investment in the ultimate decision made).
Towle, 1999 ¹⁶	Competencies (knowledge, skills, abilities) for physicians for informed SDM include:

Explicitly informed the following models:^{5 22 24-26 29 32 38}

1. Develop a partnership with the patient;
2. Establish or review the patient's preferences for information;
3. Establish or review the patient's preferences for role in decision making and the existence and nature of any uncertainty about the course of action to take;
4. Ascertain and respond to patient's ideas, concerns, and expectations;
5. Identify choices and evaluate the research evidence in relation to the individual patient;
6. Present (or direct patient to) evidence; Help patient to reflect on and assess the impact of alternative decisions with regard to the patient's values and lifestyle;
7. Make or negotiate a decision in partnership with the patient and resolve conflict;
8. Agree an action plan and complete arrangements for follow up.

Preliminary list of competencies for patients for informed SDM include:

1. Define (for oneself) the preferred doctor patient relationship;
2. Find a physician and establish, develop, and adapt a partnership;
3. Articulate (for oneself) health problems, feelings, beliefs, and expectations in an objective and systematic manner;
4. Communicate with the physician in order to understand and share relevant information clearly and at the appropriate time in the medical interview;
5. Access information;
6. Evaluate information;
7. Negotiate decisions, give feedback, resolve conflict, agree on an action plan.

Elwyn, 2000²⁹

Explicitly informed the following models:^{5 15 22 25 26 38}

- Sequence of skills (competences) to involve patients in healthcare decisions:
- 1. Implicit or explicit involvement of patients in the decision making process** (Patients should fully understand that there is an opportunity to take part in a decision and that they are expected to take an active role);
 - 2. Explore ideas, fears, and expectations of the problem and possible treatments;**
 - 3. Portrayal of equipoise and options** (List options that are reasonably available, including, where relevant, the option of taking no action, and portraying options in an open, non-directive manner);
 - 4. Identify preferred data format and provide tailor-made information;**
 - 5. Checking process: Understanding of information and reactions** (Explore patients' ideas, fears, and expectations of possible options);
 - 6. Checking process: Acceptance of process and decision making role preference** (Involving the patient to the extent they desire to be involved. Role preference should be ascertained after options have been described);
 - 7. Make, discuss or defer decisions** (Ability to make transition from 'describing and checking' to achieving a decision, even if result is to postpone the process);
 - 8. Arrange follow-up** (Offer opportunity to reconsider issues on another occasion, even if a firm decision has been made).

Makoul, 2006⁵

Explicitly informed the following models:^{15 24-26 32 38}

Essential elements of SDM comprise:

1. Define and/or explain the problem;
2. Present options;
3. Discuss pros/cons (benefits/risks/costs);
4. Patient values/preferences;
5. Discuss patient ability/self-efficacy (i.e., to follow through with a plan);
6. Doctor knowledge/recommendations;
7. Check/clarify understanding;

8. Make or explicitly defer decision;
9. Arrange follow-up.

Montori,
2006⁴³

*Explicitly
informed the
following
models:* ^{25 26 45 51}

Phases of shared treatment decision making as they apply to chronic care decisions:

- 1. Establishing an ongoing partnership** (Relationship is between 'patient team' (patient, members of patient's network, patients with same condition) and 'healthcare team' (healthcare professionals, educators, personal trainers), partnership takes place in the healthcare space and the patient's space);
- 2. Information exchange** (Clinician shares 'technical' information about available choices and their potential outcomes; Patient shares technical information they obtained from other sources and information about personal and social context; Patient and clinician both share their values and preferences);
- 3. Deliberating on options** (Process of considering the pros and cons for each one of the relevant choices, and clinicians and patients working together to identify the best strategy);
- 4. Deciding and acting on the decision** (Patients and the healthcare team work on strategies to implement and support the decision in the patient's own space; Clinician should be willing to revisit the decision).

Murray, 2006²⁸

*Explicitly
informed the
following
models:* ^{22 25 26}

Doctor and patient:

- 1. Decide on an agenda for a consultation** (Exchange information (concerns, preferences and reasons for prioritizing), deliberate (listen to and respect the others' perspective), negotiate/decide on agenda for this consultation);
- 2. Decide on a treatment plan** (Doctor provides information about natural history of disease, and technical and medical information about treatment options, including pros and cons; If patient has accessed health information then agreement should be reached on the information to be used in the decision making process; Patient provides information on treatment preferences; Doctor provides information on preferences; Doctor and patient negotiate an agreed management plan, including opportunity for a change in decision if circumstances alter).

Simon, 2006¹⁵

Steps in SDM process:

1. Disclosure that a decision needs to be made;
2. Formulation of equality of partners;
3. Equipoise statement;
4. Informing on the options' benefits and risks;
5. Investigation of patient's understanding and expectations;
6. Identification of preferences;
7. Negotiation;
8. Shared decision;
9. Arrangement of follow-up.

Peek, 2008⁵¹

*Explicitly
informed the
following
model:* ⁴⁵

SDM consists of three conceptual domains:

- 1. Information-sharing** (Physicians explain/give information, listen, answer questions, and use layman's terms; Patients tell 'their story', report symptoms/answer questions, ask questions, and 'have a say');
- 2. Physician recommendations** (A single option is offered or multiple options are offered with single medical doctor recommendation);
- 3. Decision making** (Patients follow the recommendation regardless (in case of single option offered), make their own choice (in case of multiple options

offered with single medical doctor recommendation), agree/disagree in the office, or decide to adhere/non-adhere once at home).

Lown, 2009¹⁸

*Explicitly informed the following model:*⁴⁵

Six categories of patient and physician themes and corresponding attitudes and behaviours that enhance SDM:

1. Patient and physician act in relational ways (Patient and physician each seek a personal connection, and demonstrate trust and consideration and/or empathy; Physician uses non-verbal behaviour to connect with the patient, and takes time during the encounter and afterwards);

2. Patient feelings, preferences and information about self (Patient is aware of and expresses feelings, recognizes and expresses personal priorities and preferences about participation and care, considers significant others' needs when making choices, describes symptoms and their personal significance, and answers questions honestly; Physician listens and explores patient's personal information, feelings, needs and preferences, and conveys respect for those);

3. Patient and physician discuss information and options (Patient and physician each are willing to listen and be open to ideas from the other; Patient asks questions, shares understanding of information, and explains thinking process; Physician provides medical information, elicits questions, and adjusts information-giving to the patient's needs and preferences, presents options, including risks and benefits, based on recent literature, is honest about limits of physician's knowledge and scientific information, and presents opinion);

4. Patient and physician seek information, support and advice (Patient gathers support from significant others, and gathers information from sources other than this physician; Physician demonstrates willingness to seek and/or seeks additional information and encourages the patient to do the same, acknowledges/seeks and respects the expertise of other professionals, and seeks personal support);

5. Patient and physician share control/negotiate a decision (Patient and physician accept risk or uncertainty; Patient advocates for self within the relationship, and negotiates / agrees to disagree; Physician validates patient self-advocacy, integrates patient's feelings and preferences into a mutual decision, and includes significant others in discussion);

6. Patient and physician act on behalf of the patient (Patient takes responsibility for acting on agreed upon plans; Physician advocates for the patient).

Karkazis, 2010³⁴

Six-step model for the SDM process:

1. Set the stage and develop an appropriate team (Well before the clinical consultation consider the range of expertise needed, how to frame the decisions to parents, and how to enhance parents' understanding of the decision);

2. Establish (parents') preferences for information and discuss the role of all parties in making a decision; 3. Identify and address (parents') emotions that might interfere with (parents') effective participation in the decision making process;

4. Define (parents') concerns about the (child's) diagnosis and explore how (parents') weigh values in order to outline treatment options in a way that addresses (parents') concerns (Clinicians must acknowledge to the parents that clinicians' values are not more "right" than theirs, and help parents consider their own assumptions and biases);

5. Identify options and present evidence (Identify and present all options objectively, including no surgery, the possible consequences of each option in a

realistic way, how likely the consequences are, and type and quality of the evidence underlying options), provide a recommendation based on what evidence or other argument, explore (parents') ideas and assumptions, and correct misperceptions relating to the options;

6. Share responsibility for making a decision, which need not be shared (The values of the parents (and child when appropriate) should guide the decision making process).

Légaré, 2011²⁵

Explicitly informed the following models: ^{26 32}

Assumes that at least two healthcare professionals from different professions collaborate to achieve SDM with the patient, either concurrently or sequentially. Six-step interprofessional SDM model at the individual (micro) level:

1. Patient with a health condition and Equipoise (Patient presents a health problem that requires a decision; Professionals share their knowledge and understanding of the options with the patient while recognizing equipoise (i.e., more than one option exists, including the option to maintain the status quo) and the need for a decision));

2. Exchange of information (The health professional(s) and the patient share information about the potential benefits and harms of the options);

3. Clarification of values/preferences (Values clarification by all actors involved in the decision making process; Values of all actors may influence the decision; All actors should understand the values that are at play);

4. Feasibility of the options (The interprofessional team, including the patient, analyses the feasibility of the options before determining individual preferences);

5. Preferred choice/Actual decision (The patient identifies his preferred option with help from others. Ideally the final decision is agreed upon by all, and the healthcare professional must at least endorse the decision);

6. Implementation and health outcomes (Supporting the patient so that the option chosen has a favourable impact on the health outcomes that he values most. The extent to which the option is implemented as planned and health outcomes must be evaluated to further inform the decision making process).

Légaré, 2011²⁶

Explicitly informed the following model: ³²

For the SDM process to be interprofessional, at least two healthcare providers from different professions must collaborate with the patient either concurrently or sequentially. SDM is an iterative six-step process:

1. Decision to be made (A health professional makes explicit that a choice needs to be made and identifies more than 1 option);

2. Information exchange (The health professional(s) and the patient share information about potential harms and benefits, including evidence-based information and information on the affective and emotional aspects of the decision);

3. Clarification of values/preferences (Values clarification by all actors involved in the decision making process; Values of all actors may influence the decision; All actors should understand the values that are at play);

4. Feasibility of the options (The interprofessional team, including the patient, analyses the feasibility of the options before determining individual preferences);

5. Preferred choice/Actual decision (The patient identifies his preferred option with help from others. Ideally the final decision is agreed upon by all, and the healthcare professional must at least endorse the decision);

6. Implementation and outcomes (The patient should be supported so that the option chosen has a favourable impact on the outcomes that the patient values most; The extent to which the option is implemented as planned and outcomes must be evaluated to further inform the decision making process).

Elwyn, 2012¹⁴

Explicitly informed the following models: ^{20 22 23 27 32 37 39 47}

Three key steps of SDM for clinical practice:

- 1. Choice talk** (Step back, making sure that patients are aware that a choice exists and know that reasonable options are available, this may be initiated by either patient or clinician, justify choice, i.e., preferences matter, check reaction and defer closure.);
- 2. Option talk** (Check knowledge, list options, providing more detailed information about treatment options including harms and benefits, explore preferences, provide patient decision support, and summarize);
- 3. Decision talk** (Focus on preferences, elicit preferences, supporting the work of considering preferences and deciding what is best, move to a decision, and offer review).

The clinician supports deliberation throughout the process. Deliberation defined as: A process where patients become aware of choice, understand their options, and have time and support to consider 'what matters most to them'.

Elwyn, 2013²²

Three-talk model of SDM:

- 1. Justify:** Explain the need to deliberate about a decision, create a partnership to support the work – 'team talk';
- 2. Inform:** Two-way exchange of high-quality information and opinions – 'options talk';
- 3. Elicit:** Listen to patient's preferences about treatment and outcome goals, concerns, and priorities;
- 4. Integrate:** 'diagnose preferences', make recommendations, seek patient's views, and make or defer decisions – 'decision talk'.

Eliacin, 2014³⁶

SDM is a process with three key components:

1. Information sharing between patient and provider;
 2. General discussion about treatment options;
 3. Final decision that is mutually agreed upon by provider and the patient.
- The patient-provider relationship is an essential foundation for shared decision making and facilitates the implementation of the three components of shared decision making.

Kane, 2014⁴¹

Six-step process model of SDM:

- 1) Invite the patient to participate** (Let patient know that he/she has options and that patient's goals and concerns are a key part of decision making process);
- 2) Present available treatment options;**
- 3) Provide balanced information on benefits and risks** (Ensure patients correctly understand information);
- 4) Assist patients in evaluating options based on their goals, make sure to understand patients' preferences;**
- 5) Facilitate deliberation and decision making** (Let patients know they have time for considering treatment choices, and ask what else they need to feel comfortable making decisions);
- 6) Implement SDM** (Identify and present next steps, assess patient understanding, and discuss any possible challenges with implementation).

Shay, 2014¹³

Explicitly informed the following model: ⁴⁵

Patients' conceptual definition of SDM includes two key phases of SDM:

Phase 1: An interactive exchange, Phase 2: Making the decision.

Phase 1 includes four interdependent components:

- 1. Mutual exchange of information** (Patient shares concerns or problems; Physician shares relevant medical information and treatment options);
- 2. Open-mindedness and respect for one another** (Physicians bring in medical expertise, patients bring in their unique knowledge about their body and symptoms; Physician and patient should both listen and be open-minded about what the other says. Physicians should: a) Make time to talk with a patient on a more personal level and b) Respect the expertise of the patient, solicit patients' thoughts and concerns, and take time to answer questions before forming a recommendation);
- 3. Patient self-advocacy** (Patients are responsible to advocate for themselves throughout the SDM process (Ask questions, guide the conversation if needed, share opinions, and speak up if needed));
- 4. Physician should provide a personalized recommendation and explain the reasoning for the recommendation in general and for the individual patient.**

In Phase 2 a decision is made that is in the best interest of the patient.

About half of the patients: Decision making is mutual between the patient and physician.

The other half of patients: Ultimately the patient always decides. The patient has to take final responsibility, even if patient and physician shared in the communication process leading to the decision.

Volk, 2014²⁴

Explicitly informed the following model: ⁴⁶

Six steps process for achieving SDM:

- 1. Describe the need for a decision** (Describe health issue or decision, communicate uncertainty, and emphasize need for a decision);
 - 2. Review the options** (Discuss the options, provide balanced explanation of pros and cons of each option, provide probabilities, and assess patient's comprehension);
 - 3. Explore patient's values** (Discuss patient's views of the options, and explore patient's values);
 - 4. Determine patient's preferred role in making the decision;**
 - 5. Negotiate a course of action** (Assess patient's readiness to make a decision, elicit patient's initial preferences for the options, provide a recommendation if the patient prefers this, and negotiate a mutually agreed upon course of action);
 - 6. Make plans for follow-up** (Help undecided patients to access additional support to make the decision, make plan to review the decision or deferment, and document in the medical record the discussion, the use of decision aid (if applicable) and the decision).
- Four behaviours are important throughout the SDM process:** 1) Encourage patient questions, 2) Provide guidance in decision making process, 3) Tailor information to patient, 4) Establish a partnership with patient.

Gillick, 2015⁵⁰

Re-engineered SDM (goal-centric):

1. Physician clarifies the patient's underlying health status (Make sure the patient understands the diagnosis, prognosis, and likely trajectory of disease in the context of their other medical problems);
2. Physician initiates conversation about goals of care, asks patient to prioritise their goals of care (Patients should think about what is most important

personally, given some understanding of their medical condition and how that condition is likely to evolve over time);

3. Physician formulates the prioritised goals in terms of the three major medical goals of care (life-prolongation, maintenance of function, maximising comfort) in ways acceptable to patient;
4. Physician translates goals of care in a specific treatment based on the physician's knowledge of the consequences of the various treatments;
5. Patient retains the ultimate authority to accept or reject the proposed treatment.

Stiggebout,
2015¹⁹

*Explicitly
informed the
following
model:*³¹

The following steps are distinguished:

1. The professional informs the patient that a decision is to be made and that the patient's opinion is important;
2. The professional explains the options and the pros and cons of each relevant option;
3. The professional and patient discuss the patient's preferences; The professional supports the patient in deliberation;
4. The professional and patient discuss patient's decisional role preference, make or defer the decision, and discuss possible follow-up.

Grim, 2016³⁷

A model for SDM in mental health services, with five steps:

- 1. Preparation** (Before the meeting: Develop agenda (Inform the patient about the purpose and estimated duration of the meeting prior to the meeting), and provide user with decision support);
- 2. Choice talk** (Step back, offer choice, justify choice (i.e., preferences matter), check reaction, defer closure. Physician provides guidance to the patient in this step);
- 3. Option talk** (Check knowledge (Patient should be open to have his/her knowledge corrected), list options, describe options, harms and benefits in language devoid of medical jargon, explore patient's preferences (Provider should support patient in considering the pros and cons and to assess implications of the options), and summarize);
- 4. Decision talk** (Focus on preferences, elicit preferences, offer time to considerate the options, move to a decision, offer to make a recommendation if patient so wishes, and offer review of what has been discussed);
- 5. Follow up** (Make further contact with provider possible after decision has been made, plan return visit for review and follow-up, make it possible for patient to follow one's progress, to know how long a decision will remain in effect, and to review or revisit a decision).

Decision support is important during all steps of the decision process.

Jansen, 2016⁴⁸

Steps for shared decision making process about deprescribing in older people:

- 1. Creating awareness that options exist:** Clinician and patient acknowledge that a decision can be made about continuation or discontinuation of medicines, and that this requires input from both clinician and patient;
- 2. Discussing the options and their benefits and harms:** Ensuring that the patient knows what options are available (including the option to continue medicines) and understands the process of deprescribing, the expected benefits and harms of each option, and how likely they are to occur;
- 3. Exploring patient preferences for the different options:** Help patients identify their preferences, goals, and priorities regarding deprescribing;

4. Making the decision: Integrating the patient's preferences and priorities with information on benefits and harms. Decisions may be made by the patient, made collaboratively, or deferred to the clinician.

Langer, 2016³⁸

The sample SDM model consists of six steps:

- 1. Discuss preferred roles in treatment planning;**
- 2. Specify decisions to be made;**
- 3. Present the available options for each decision** (The top few choices for each decision should be presented);
- 4. Determine pros and cons of each option** (Elicitation of the pros and cons from each decision maker's perspective);
- 5. Design preliminary treatment plan** (The clinician and family discuss the pros and cons of each option and formulate an initial treatment plan);
- 6. Implement progress monitoring** (Continually evaluate the effectiveness of the treatment plan through targeted assessment measures so that adjustments can be made).

Van de Pol,
2016⁴⁷

SDM is seen as a dynamic process. The model consists of the following six steps:

- 1. Preparation** (History, review of previous discussion or documentation regarding treatment in general or on specific issues and problem analysis (Functional assessment of all current problems));
- 2. Goal talk** (Explain that disease has occurred and that choices need to be made, explain that every patient has own preferences and priorities, identify proxy decision maker if appropriate, identify patient values and goals of care, and elicit goals of care);
- 3. Choice talk** (Summarise the preceding steps and verify your recapitulation, explain that there are several treatment possibilities and offer choice, always including option of no treatment, invite patient/proxy to formulate treatment aim and support the patient, convey that only the patient can be the expert on treatment aims, priorities and preferences, and check if the patient/proxy has understood everything);
- 4. Option talk** (List personalised treatment options, discuss risks, benefits and side effects of every treatment option, check which risks and side effects the patient is willing to take, and observe how the patient reacts);
- 5. Decision talk** (Inquire if the patient/proxy is ready to make a decision, and if not, go back to the preceding steps, focus on the preferences of the patient and make a decision with the patient/proxy. If the patient wants the doctor to decide, discuss this explicitly, and connect to the identified patient values, goals of care and treatment aims);
- 6. Evaluation talk** (Discuss the decision making process. If not everybody is satisfied with the decision making process, enquire about the dissatisfaction and go back to a preceding step. Prepare a treatment plan based on the decision).

Dobler, 2017³⁰

SDM lung cancer screening counselling entails:

1. Clinician and patient work together to determine whether lung cancer screening makes intellectual, emotional, and practical sense given the patient's overall personal and medical situation, as well as their informed preferences and values;
2. A conversation aid is used to support communication about the relative benefits and harms of screening or not, using tailored estimates of risk and state-of-the-art information design.

- Elwyn, 2017²⁰ The SDM process is a fluid transition between three different kinds of talk:
1. Team talk (Work together, describe choices, offer support, and ask about goals);
2. Option talk (Discuss alternatives, using risk communication principles);
3. Decision talk (Get to informed preferences, and make preference-based decisions).
- Park, 2017³³ SDM in paediatrics consists of four attributes:
1. The active participation of parents, children, and health professionals;
2. Collaborative partnership, i.e., mutuality and equality between parents, children and health professionals (Important components of partnership are open-mindedness, mutual respect, and trust);
3. Reaching a compromise, i.e., reaching an outcome via mutual agreement (Health professionals define and explain, and present the available options and their advantages and disadvantages; Parents, children, and health professionals establish the outcomes important to the patient and determine patient's preferences, and reach a decision);
4. Common goal for child's health (Seeking a common goal or shared purpose).
- Probst, 2017⁴⁰ The clinician should initiate the SDM conversation according to four general steps:
*Explicitly informed the following model:*³⁹
1. Acknowledge That a Clinical Decision Needs to Be Made (The clinician should make it clear what he or she is going to discuss and why. A clear statement should be made indicating that a decision with various options needs to be discussed);
2. Share Information in Regard to Management Options and the Potential Harms, Benefits, and Outcomes of Each (Information should be provided in a stepwise fashion at a pace the patient can understand. Information should be expressed free of medical jargon);
3. Explore Patient Values, Preferences, and Circumstances (Ask about and discuss what matters to the patient and what social factors may be at play);
4. Decide Together on the Best Option for the Patient, Given His or Her Values, Preferences, and Circumstances (The conversation should result in a mutual decision. It is the clinician's responsibility to understand the patient's preferences and values and help him or her make a decision most consistent with these. The clinician should not unduly sway the patient).
- Rennke, 2017³² The multistep SDM pathway consists of the following four steps:
1. Information gathering (The provider solicits medical history and patient preferences for decision making);
2. Information sharing (Patient education about the medical issue and available treatments);
3. Decision discussion (This involves the pros/cons of each option, alternative diagnostic or management strategies, and how these decisions fit with a patient's preferences, abilities and resources, or what has been called 'contextualizing care');
4. Make (shared) decision, Check understanding.
- Lenzen, 2018²⁷ Practical framework for shared decision making about goals and actions:
1. Preparation: Informing the patient about the aim of the consultation; Inviting the patient to ask questions or raise points for discussion;

- 2. Goal setting:** Exploring the patient's current and desired situations; Giving information tailored to the patient; Supporting the patient in formulating feasible goals;
- 3. Action planning:** Making sure the patient knows that he/she has a choice (Choice talk); Discussing possible options for actions with the patient (Option talk); Deciding on actions together with the patient (Decision talk);
- 4. Evaluation:** Continuously reflecting on the patient's progress, and adjusting goals and actions.

Moore, 2018⁴⁶

SDM is an iterative three-stage process:

- 1. Prepare for collaboration:** Clinicians communicate that decisions need to be made, options exist, and patient participation can help determine a plan to meet the patient's needs; invite the patient to participate; negotiate priorities;
- 2. Exchange information about options, inclusive of patients' values and preferences:** Clinicians identify patient knowledge, concerns and values; Clinicians and patients exchange information about goals and treatment options, with benefits and risks; Clinicians and patients clarify and correct perceptions about options, resources, values, and preferences; Clinicians and patients check for a good match between patient priorities and available options; Clinicians and patients deliberate, and reach a decision or plan or defer the decision; Value the expertise of the patient and the clinician;
- 3. Affirm and implement the decision or plan:** Clinicians and patients summarize the plan to confirm mutual understanding, congruence with patient priorities and goals, and the patient's understanding of the condition and its consequence; Clinicians and patients discuss strategies for promoting adherence, assessing success, and modify the plan as needed; Clinicians document the decision-making process, the plan, and expected outcomes.

Probst, 2018³⁹

The SDM process occurs in a conversation and should include the following three steps:

- 1. Acknowledge that clinical decision needs to be made with the patient;
- 2. Engage in conversation with the patient to share information about the current clinical scenario as well as options for future care, while exploring the patient's values, preferences, and circumstances. Every effort must be made to speak in clear language and avoid medical jargon to maximize patient understanding. This step typically happens in a dynamic, circular fashion;
- 3. Reach an agreement regarding the best plan of action on the basis of the patient's informed preferences.

Rusiecki, 2018²¹

A circular SDM model in which the order of the steps is fluid:

- 1. Identify the issue;
- 2. Equipose;
- 3. List options with pros/cons;
- 4. Explore patient's values and concerns;
- 5. Check patient's understanding;
- 6. Negotiate a decision;
- 7. Review treatment/follow-up plan.

Saidinejad, 2018³⁵

Principles of shared decision making with patient and caregivers:

- 1. A mutually respectful patient-provider relationship;

2. Minimizing communication barriers (language, cultural, social, etc.);
3. Allowing patient to express understanding of the medical problem being treated, available options, and management plan in a meaningful fashion;
4. A transparent and honest discussion of treatment options, as well as risks and benefits;
5. Patients are assisted in understanding the feasibility of each option;
6. Allowing time for the patient/caregiver/family to deliberate and discuss option;
7. Review with patients the choice they opted for, the next steps, and expectation for outcome;
8. Provide strict return precautions.

Truglio-Londrigan, 2018⁴⁵

SDM is a comprehensive ongoing process and entails three categories:

1. Communication and Relationship building

Relationship Building - Trust and Respect - The patient identifies a need or question. Individuals enter into a relationship where there is collaboration and sharing of power, and they must work towards building a trusting and respectful relationship. *Information Exchange – Communication* - Communication is both interpersonal and intrapersonal. The interpersonal communication is the mutual exchange of information and involves active listening. Intrapersonal communication entails: a) Mutual reflection i.e., the provider and patient reflect together via communication, exchanging thoughts about decisions, and patient's perspective, and b) Individual reflection, which takes place autonomously within the individual provider or patient;

2. Working toward shared decision making

Assessment - The provider must come to know the patient, the patient's family and home/community, and patient's specific preferences. *Teaching-learning* - Providers teach and provide patients with the necessary information on diagnosis, treatment, and strength of the evidence, in optimal format for patients to learn and understand the information. *Balance* - Provider should use equipoise if >1 best practices are available. Finding balance requires deliberation and negotiation leading to consensus about the decision. *Decision* - Consensus about the decision;

3. Action for SDM

Takes action - The patient takes action to see the decision through, which may prompt a re-evaluation of the decision together with the provider. *No action* - The patient takes no action and may then choose to return to the provider to re-evaluate the decision or not to return.

Bomhof-Roordink, 2019⁴²

SDM in oncology whereby oncologist and patient behaviors unfold over time, during as well as outside consultations.

1. Oncologist determines possible treatment options for patients **before or during consultations**;
2. Oncologist expresses importance of patient's opinion;
- 3a. Oncologist provides information about the disease, and presents the treatment options including pros and cons and their associated probabilities. Oncologist explains treatment outcomes into some detail at least. Oncologist is open and honest, and his/her information is accurate, clear, and complete. Oncologist determines patient's level of understanding and clarifies any issues if necessary;
- 3b. Patient asks questions when things are not clear;

- 4a. Oncologist learns about the patient;
- 4b. Patient expresses thoughts and feelings openly;
- 5a. Oncologist supports deliberation throughout the decision process, using the knowledge he/she gained about the patient;
- 5b. Patient thinks about what is important for him/her and considers and weighs the options;
6. **Outside consultations:** Patient considers treatment options; Patient consults others; Patient accesses information;
- 7a. Oncologist asks about preferences;
- 7b. Patient expresses preferences about the treatment options, after oncologist has asked for it or at own initiative;
- 7c. Oncologist provides a treatment recommendation, and his/her expertise lends him/her the authority to do so;
8. Oncologist and/or patient make treatment decision.

Chor, 2019³¹

A five-step framework:

1. Identify that a decision needs to be made and acknowledge the equipoise around this decision;
2. Explain medical options including the components of the pelvic examination, and the potential medical and psychosocial benefits and harms of the options; Provide patients the opportunity to ask questions;
3. Elicit values, preferences, and experiences and engage in how these may inform the decision;
4. Jointly arrive at a decision or agree to defer the decision;
5. Educate regarding pelvic health and warning signs, and ensure that the patient feels welcome for future follow-up.

Joseph-Williams, 2019²³

'Implement-SDM' :

- 1. Preparation phase;**
- 2. Choice introduction;**

3. Increasingly tailored option presentation: Clinician uses emerging knowledge about the patient's clinical history and preferences to continually tailor the discussion to that individual patient; presentation is responsive and tailored to the needs of individual patients and to contextual factors;

4. Planning discussion: Emphasis may be on consolidating preferences and making decisions, or on summarising preferences and encouraging an ongoing reflective and iterative process until decision can be made.

From Choice introduction through Planning discussion: Clinician, patient and family preferences evolving from prior to informed; Preference checking and elicitation; Decision, emotional, and practical support. Multi-stage and distributed (across time and multiple persons) decisions.

Ng, 2019⁴⁴

Dual-layer process of shared decision making:

Layer 1: Disease prioritisation:

1. Primary care providers (PCPs) provide information on: Status of patient's medical conditions; Clinical outcomes of each disease (if uncontrolled);

2. Patients provide information about: Their understanding of each disease and its impact; The disease that they are most concerned about or affects them most;

3. The PCP and patient discuss, negotiate and agree on: The disease(s) to focus on for this consultation; When to revisit the other diseases.

Layer 2: Treatment prioritisation

4. PCPs provide information on: Treatment options available; Pros and cons of each treatment option;

5. Patients provide information on: Their understanding of each treatment option and its attributes; The treatment attributes that they value most or are concerned of;

6. The PCP and patient discuss, negotiate and agree on: The treatment option; When to revisit the decision if undecided;