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TITLE

Integrating Patient Values and Preferences in Health Care: A Systematic Review of Qualitative Evidence

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ABSTRACT

Objectives - To identify and thematically analyze how healthcare professionals (HCPs) integrate patient values and preferences ("values integration") in primary care for adults with noncommunicable diseases (NCDs).

Design – Systematic review and meta-aggregation methods were used for extraction, synthesis, and analysis of qualitative evidence.

Data sources – Relevant records were sourced using keywords to search 12 databases (ASSIA, CINAHL, DARE, EMBASE, ERIC, Google Scholar, GreyLit, Ovid-MEDLINE, PsycINFO, PubMed-MEDLINE, Scopus, and Web of Science).

Eligibility criteria – Records needed to be published between 2000-2020 and report qualitative methods and findings in English involving HCP participants regarding primary care for adult patients.

Data extraction and synthesis – Relevant data including participant quotations, authors' observations, interpretations, and conclusions were extracted, synthesized, and analyzed in a phased approach using a modified version of the Joanna Briggs Institute (JBI) Data Extraction Tool, as well as EPPI Reviewer and NVivo software. The JBI Critical Appraisal Checklist for Qualitative Research was used to assess methodological quality and assess overall confidence and trustworthiness of included records.

Results – Thirty-one records involving more than 1,032 HCP participants and 1,823 HCP-patient encounters were reviewed. Findings included 143 approaches to values integration in clinical care, thematically analyzed and synthesized into four themes: (1) *Approaches of Concern*; (2) *Approaches of Competence*; (3) *Approaches of Communication*; and, (4) *Approaches of Congruence*. Confidence in the dependability and credibility of included records was deemed high.

Conclusions – HCPs incorporate patient values and preferences in health care through a variety of approaches including showing concern for the patient as a person, demonstrating competence at managing diseases, communicating with patients as partners, and tailoring, adjusting, and balancing overall care. Themes in this review provide a novel framework for

understanding and addressing values integration in clinical care and provide useful insights for policymakers, educators, and practitioners.

Protocol registration – No. CRD42020166002 on PROSPERO international prospective register of systematic reviews https://www.crd.york.ac.uk/prospero/ (supplemental appendix A).

Strengths and limitations of this study

- This is the first systematic review to identify and thematically analyze approaches to values integration in clinical care.
- An extensive search strategy and well-defined study selection criteria were employed to find qualitative evidence related to this topic.
- Systematic, transparent methods were used to appraise the quality of included records, extract, and analyze data.
- Thematic analysis can present limitations as it involves subjective interpretation of previously reported evidence.

KEY MESSAGES

What is already known on this topic? Values integration is critical to evidence-based medicine (EBM) but underrepresented in EBM research.

What this study adds? This is the first systematic review to identify and thematically analyze approaches to values integration in clinical care.

How this study might affect research, practice, or policy? Findings provide a novel framework for HCPs to incorporate patient values and preferences in health care for individual patients, and provides a practical model for understanding and addressing values integration in research, practice, and policy.

INTRODUCTION

The practice of evidence-based medicine (EBM) calls for patient values and preferences to be considered and integrated by clinicians alongside the best available research and clinical expertise. [1] These three forces comprise the EBM "triad" (figure 1) and, when conscientiously and judiciously applied [2] by health care professionals (HCPs), it is believed that optimal patient-centered care can be achieved. [3]

Figure 1 – The Evidence-Based Medicine (EBM) Triad

(FIGURE 1 HERE)

Delivering patient-centered care relies on understanding the patient's values and preferences at every stage, [4] but acquiring this knowledge is challenging. Patients and their needs are heterogenous, difficult to predict, subject to change, and dependent on a many factors. [5]

Patient values and preferences are the unique understandings, preferences, concerns, expectations, and life circumstances of each patient. [6] *Values* are defined as a patient's attitudes and perceptions about certain health care options, and *preferences* are their preferred choices after accounting for their values. [7]

A recent systematic review of qualitative studies identified a taxonomy of what patients say they value in health care including uniqueness, autonomy, compassion, professionalism, responsiveness, partnership, and empowerment. [8] While this is useful for understanding what patients value and prefer, the question remains: How do HCPs *integrate* values and preferences into clinical care for individual patients? Very little research has been done on this critical component of EBM.

Research evidence (especially quantitative research, randomized controlled trials [RCTs] in particular) [9] has received most of the attention in EBM, with less systematic consideration given to values integration which has been "almost completely ignored" [10] resulting in a paucity of data on values integration in clinical decision-making. [11]

Research on patient values and preferences – and how HCPs approach values integration – tends to be reliant on qualitative evidence, [8] a level of evidence that does not appear in the standard EBM hierarchy of evidence. [12-14] Considerations for patient values and preferences are seldom encoded into clinical practice guidelines [15] and there are no established methods for addressing values integration when developing guidelines. [16]

Noncommunicable diseases (NCDs), also known as chronic diseases, are defined by the World Health Organization (WHO) as conditions of long duration resulting from a number of physical, behavioral, or environmental factors, and account for 7-out-of-10 deaths worldwide. [17] The four most common categories of NCDs include cancers, diabetes, cardiovascular (CV) diseases, and chronic respiratory diseases, often managed in primary and secondary care settings. [18]

Improvements in patient-centered care can lead to improved outcomes including lowering readmission rates, decreasing hospital lengths-of-stay, reducing mortality, and better management of chronic diseases overall.[17] Therefore, understanding how to better incorporate patient values and preferences in health care is an essential skill that can improve clinical outcomes [19] and patient satisfaction [20] to help reduce the burden of NCDs.

The primary objective of this review is to identify and thematically analyze how HCPs integrate patient values and preferences in primary care for adults with NCDs.

METHODS

Methodology

This review utilized a meta-aggregation methodology. [21] A protocol was prospectively published on the PROSPERO international register of systematic reviews, https://www.crd.york.ac.uk/prospero/ registration No. CRD42020166002 (supplemental appendix A).

Participants and phenomena of interest

Participants included practicing HCPs in primary and secondary care: professionals with experience in direct patient care in non-inpatient and non-emergency settings, including doctors, nurses, and other clinicians. [22] Phenomena of interest included HCP approaches, behaviors, attitudes, perceptions, experiences, perspectives, opinions, and observations regarding values integration in clinical care.

Information sources and search strategy

This review considered studies and other evidence published in 2000 or later with full text available in English reporting data derived from HCP participants. Only studies using qualitative methods including, but not limited to, interviews, focus groups, direct observations, surveys, narrative reviews, or content analysis were included.

Search terms were identified and adapted from an initial scoping of databases and an analysis of text from titles, abstracts, and index terms, followed by a systematic literature search of 12 databases (ASSIA, CINAHL, DARE, EMBASE, ERIC, Google Scholar, GreyLit, Ovid-MEDLINE, PsycINFO, PubMed-MEDLINE, Scopus, and Web of Science). The search was tailored to the unique formats, operators, and conventions of each database using a variety of search terms related to participants, phenomena of interest, context, setting, and qualitative methodologies and methods (supplemental appendix B).

Study eligibility and selection

Two reviewers (MT and GS) participated in a four-stage screening and selection process utilizing the EPPI Reviewer software [23] including independent double-screening [24] of ten percent of initial abstracts and titles, single screening of remaining titles and abstracts, full-text screening of all records not yet excluded, and forward-backward search and screening of additional citations. Conflicts among screeners were resolved by conference and mutual agreement or by a third reviewer. Inclusion/exclusion criteria were pre-determined by reviewers including:

- Evidence type (Excluded records that did not use any qualitative methods and did not report qualitative findings);
- Date (Excluded records published before the year 2000);
- Language (Excluded records for which full text was not available in the English language);
- Phenomena of interest (Excluded records that did not report findings related to incorporating patient values and preferences);
- Target group (Excluded records that did not involve HCP participants, or were not concerned with HCP interactions with adult patients);
- Disease/condition type (Excluded records that did not refer to primary or secondary care or one of the top four most common NCD categories [oncology (cancers), cardiovascular, endocrine related (diabetes), and respiratory]).

Appraisal of quality

This review sought to determine the trustworthiness of included records by considering the credibility, dependability, transferability, and confirmability of qualitative findings [25] utilizing

the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Qualitative Research, [21, 26, 27] a validated tool to help determine overall confidence in included records (supplemental appendix C).

Extraction, synthesis, and analysis

This review employed meta-aggregative methods for extraction, synthesis, and analysis. [21] Data including participant quotations, authors' observations, interpretations, and conclusions were extracted in a phased approach using a modified version of the JBI Data Extraction Tool [27] (supplemental appendix D) as well as NVivo [28] computer software allowing for simultaneous coding into nodes, themes, subthemes, and an initial synthesis of the information. [29]

After initial codes and nodes were collated and analyzed, they were categorized into a number of increasingly narrow sets of possible themes based on statements and ideas across data. Themes were further synthesized based on patterns and similarities in their meaning to arrive at a final set of primary themes that could be used as a basis for a meaningful summary and interpretation. Themes were only considered if there were two or more findings/codes/nodes underlying the theme.

Excluded data

Some records reported mixed methods, but quantitative data and/or data not derived from HCP participants was excluded from this review.

Patient and public involvement

It was not appropriate or possible to involve patients or the public in the design, conduct, reporting, or dissemination plans of this systematic review. However, a minority of the included records reported patient and public involvement in their methods.

RESULTS

Included records

The initial search identified 3,331 records and after full text screening 31 records were included (figure 2*).* [30] No systematic review regarding values integration was published between 2000 to 2020.

Characteristics of included records

Most records were peer-reviewed published reports of original research (two are separate reports from the same study [31, 32]), and one was an unpublished dissertation [33] (table 1). The most common methods of data collection were interviews (in-depth, semi-structured [in-person and telephone]) in 14 studies, observations (real-time, in-person, or audio/video recordings) in nine studies, and focus groups in six studies. Other methods included a survey, cognitive interviewing, narrative descriptions, narrative reviews, discourse analysis, conversation analysis, document analysis, Delphi technique, [34] and Video Reflexive Ethnography (VRE). [35] Eight studies employed more than one method.

At least 1,032 HCP participants are represented in the included records, including 477 nurses/nurse practitioners, 417 physicians, and 138 other HCP types including allied

health professionals, pharmacists, clinical administrators, nutritionists, social workers, and patient decision coaches. At least 1,823 HCP-patient consultations, encounters, or interactions (either observed or described) in various clinical settings are represented in the records.

Nearly half of the studies included were conducted in North America with 15 in the United States of America (USA) and two in Canada, followed by five in the United Kingdom (UK), three in Australia, three in the Netherlands, two in Norway, and one each in Belgium, Italy, Malaysia, and Portugal.

Methodological quality of included records

Confidence in the dependability and credibility of included records was deemed high. Most used appropriate qualitative methodologies, methods, and analytical approaches, resulting in meaningful findings and conclusions. However, most records failed to provide adequate reflexive statements locating researchers theoretically or culturally, and also failed to address the researchers' influence on the research and vice-versa (supplemental appendix C).

Figure 2 – PRISMA Flow Diagram

(FIGURE 2 HERE)

1 *Table 1 – Characteristics of Included Records*

Author (Year)	Ref.	Method(s)	Analytical Approach	HCPs (n)	Practice Setting(s)	HCP Experience	Encounters Observed	Location	Number of Findings (Appendix E)
Aita V (2005)	36	Chart Audits, Interviews, Narrative Descriptions, Note Taking, Participatory Observations	Coding, Group Analysis, Themes	Physicians (44)	18 Family Practice Clinics	Unspecified	1500	USA	25
Chhabra KR (2012)	37	Observations of Audio-Recorded Consultations	Theme-Oriented Discourse Analysis	Oncologists (15)	2 Cancer Centers	Unspecified	20	USA	27
Davis K (2017)	38	Semi-Structured Interviews	Coding, Themes	Physicians (33)	Multiple Clinics in 2 HMO Territories	Mean 13-20yrs	N/A	USA	20
Elwyn G (2000)	39	Focus Groups	Codes, Themes	GPs (6)	6 Service Settings	Mean 12yrs	N/A	UK	40
Feiring E (2020)	40	Document Analysis, In-Depth Interviews	Thematic Analysis	Various (8)	4 Specialist Institutions	Unspecified	N/A	Norway	16
Ford S (2002)*	32	Semi-Structured Interviews	Constant Comparative Analysis	Various (37)	Hospitals & Clinics	Unspecified	N/A	UK	17
Ford S (2003)*	31	Semi-Structured Interviews	Constant Comparative Analysis	Various (37)	Hospitals & Clinics	Unspecified	N/A	UK	54
Ford S (2006)	41	Observation of Video-Taped Consultations	Thematic Coding	GPs (13)	12 GP Surgeries	Unspecified	149	UK	16
Friedberg MW (2013)	42	Semi-Structured Interviews	Codes, Themes	Various (23)	8 Primary Care	Unspecified	N/A	USA	23
Golden SE (2017)	43	Interviews	Directed Content Analysis	Various (20)	7 Medical Centers	Mean 12yrs	N/A	USA	30
Gruß I (2019)	44	Observations, Semi-Structured Interviews	Codes, Template Analysis	Physicians (8)	1 Cancer Clinic	Unspecified	8	USA	24
Hall J (2011)	45	Narrative Review	Narrative Review	Various (Unspecified)	N/A	N/A	N/A	USA	18
Hart PL (2014	46	Mail Survey	Thematic Analysis	Nurses (374)	Hospital (43%) Non-Hospital (57%)	Mean 22.4yrs	N/A	USA	10
Hisham R (2016)	47	Focus Groups, In-Depth Interviews	Thematic Analysis	Physicians (18)	2 Rural Clinics	Mean 6.2yrs	N/A	Malaysia	7
Jefford M (2002)	48	Review	Review	Doctors (Unspecified)	Unspecified	Unspecified	N/A	Australia	27
Kennedy BM (2017)	49	Focus Groups, Survey	Thematic Categorization	Various (7)	1 Rural Clinic	Median 12yrs	N/A	USA	18
Landmark AM (2016)	50	Observations of Video-Recorded Encounters	Conversation Analysis	Physicians (17)	1 University Hospital	Unspecified	17	Norway	34

Lown B (2009)	51	Research Work Groups	Constant Comparative Analysis and Grounded Theory	PCPs (41)	Hospital-Based Practices	"At Least >3yrs Post-Residency"	N/A	USA	49
McLeod H (2017)	33	Observations of Video-Recorded Encounters, Video-Reflexive Ethnography (VRE)	Grounded Theory	PCPs (17)	1 Hospital-Based Clinic	Unspecified	15	USA	89
Murdoch J (2020)	52	Observations of Video-Recorded Consultations	Conversation Analysis	GPs (5)	3 General Practices	Range <10 to >20yrs	22	UK	37
Paiva D (2019)	53	Focus Groups	Grounded Theory	Various (12)	1 Institution	Range 1 to >10yrs	N/A	Portugal	36
Pieterse AH (2011)	54	Observations of Video-Recorded Consultations	Coded & Categorized Observations	Radiation Oncologists (10)	1 Hospital	Median 7yrs	25	Nether-lands	35
Salter C (2019)	55	Focus Group, Interview, Observations of Video-Recorded Consultations	Thematic Analysis	GPs (5)	3 General Practices	Range <10 to >20yrs	40	UK	40
Schulman-Green DJ (2006)	56	Focus Groups	Content Analysis	Various (11)	Hospital-Affiliated Practices	Unspecified	N/A	USA	14
Shepherd HL (2011)	57	Telephone Interviews	Framework Analysis	Physicians (22)	Unspecified	Mean 24yrs	N/A	Australia	19
Shortus T (2011)	58	In-Depth Interviews	Grounded Theory, Constant Comparison	Various (29)	"...a range of clinical settings..."	"...a range of clinical experience..."	N/A	Australia	29
Tracy CS (2003)	59	Semi-Structured Interviews	Constant Comparative Method	FPs (15)	15 Practices	Range 2-32yrs	N/A	Canada	18
Van Humbeeck L (2020)	60	Delphi, Cognitive Interviewing, Survey	Thematic Analysis	Various (174)	2 Hospitals	Range <1 to >21yrs	N/A	Belgium	26
Vermunt N (2019)	61	Semi-Structured Interviews	Framework Analysis	Physicians (33)	Hospitals and Community Clinics	Range 3-34yrs	N/A	Nether-lands	29
Visser LNC (2018)	62	Semi-Structured Interviews	Content Analysis	Oncologists (13)	Academic and General Hospitals	Range 4-41yrs	N/A	Nether-lands	31
Zulman DM (2020)	63	Delphi, Interviews, Observations	Evidence Review	Physicians (18)	Primary Care Clinics at 1 Academic Medical Center, 1 VA Hospital, 1 Federally Qualified Health Center	Unspecified	27	USA	47

*Ford 2002 and Ford 2003 are two reports from the same study. (CV "Cardiovascular;" DAS-O "Decision Analysis System for Oncology;" GP "General Practitioner;" HCP "Health Care Professional;" HCP Experience Early Career <11yrs, Mid-Career 11-20yrs, Late Career ≥21yrs [64]; HMO "Health Maintenance Organization;" N/A "Not Applicable;" PCP "Primary Care Physician;" SD "Standard Deviation;" VA "Veteran's Administration;" VRE "Video-Reflexive Ethnography")

FINDINGS

This review identified 143 approaches – specific behaviors, actions, practices, or experiences of HCPs – to integrating patient values and preferences in clinical care. These were thematically analyzed and synthesized into four primary themes – approaches of Concern, Competence, Communication, and Congruence – and several subthemes (table 2). See supplemental appendix E for a complete list of approaches.

Table 2 – Taxonomy of Themes: Approaches to Values Integration

CONCERN	COMPETENCE	COMMUNICATION	CONGRUENCE
• Advocating • Caring & Connecting • Empowering • Inviting • Listening • Partnering • Sensing	• Decision Making • Managing • Professionalism	• Acknowledging • Clarifying • Encouraging • Exchanging Information • Exploring • Language • Summarizing	• Adjusting & Tailoring • Balancing & Flexibility

Approaches of CONCERN

HCPs incorporate patient values and preferences when they demonstrate concern for the patient as a unique individual and as a partner in their own care, and show concern for diseases and their effects on the patient.

This includes **advocating** on a patient's behalf, [51] such as talking to HCP colleagues to get additional insights, making referrals to other specialist, or advocating for second opinions on conditions and treatments. [59]

"Advocates for the patient (includes willingness to circumvent or adapt the system)" and "Physicians' advocacy within (or around) the health-care system helps patients implement jointly negotiated decisions." [51]

HCPs use **caring and connecting** behaviors like acting in a sincere, [60] relational, [51] and empathetic manner, making the patient feel comfortable and creating a safe space to talk, question, and/or disagree, [33] and using expressive touch. [63] Treating the patient as unique [60] and seeing the patient's perspective [63] are also approaches that demonstrate concern which can include HCPs sharing their own personal experiences, interests, or feelings. [51] HCPs also show compassion, empathy, and basic human concern [62] without being judgmental. [60] Other such approaches include remaining present, mindful, and "in the moment" [63] while providing care for immediate concerns, but also incorporating preventative care to demonstrate concern for the patient's overall wellbeing. [36]

"A physician participant highlighted the importance of the physician's effort to act in a relational way by saying, '…Express caring in that interaction – this is what the physician can do. And the quality of that caring is what enhances the intrinsic motivation of the patient to take the responsibility'." [51]

HCPs also show concern by **empowering** the patient through approaches that value the individual, enable self-management, and promote patient agency by recognizing, confirming, and validating patient autonomy [51] and respecting privacy. [60] Empowering also includes

creating an environment of equality, [39] establishing trust by sharing control, [51] inviting the patient to lead [55] or to set the pace [31] in clinical encounters, letting the patient have the final say in decisions, [60] or providing opportunities to reconsider previous decisions. [39]

> *"The patient is enabled to keep control of his or her own situation. The patient has authority in the decision-making process."* [60]

HCPs also show concern by **inviting** the involvement of others [43] in clinical decision-making, such as asking loved ones, family, or caregivers [60] to help the patient make choices, or seeking input from colleagues, specialists, and other HCPs for advice or second opinions. [51]

> *"You have to have the team. You have to have the physician buy-in. And often I ask them to bring somebody with them so that there's somebody else there who can hear the conversation…."* [43]

HCPs show concern by **listening**, including active listening without interruption [45] or simple silence as a response to certain patient emotions. [62]

> *"The most frequently mentioned skill was the ability to listen. Listening to patients was seen as a basic skill to enable 'assessment of the language that patients use in order to pitch information level' and to 'encourage discussion by listening to patients' views without interruption'."* [31]

HCPs show concern by **partnering** with the patient [63] by investing time with them, [55]

cultivating mutual respect to form a "therapeutic alliance," [33] and treating the patient as an equal partner. [31] Understanding the patient is a key element of partnering [52] as well as taking a long-term view of the patient's care.

> *"Partnership process – Strategies to establish and maintain a partnership with the patient."* [63]

HCPs also show concern by **sensing**, i.e. perceiving and acting in a sensitive manner, including interpersonal sensitivity, [45] cultural sensitivity, [46] or showing respect and deference for religious beliefs. [33] HCPs also may use intuition in the clinical encounter [45] to sense patient moods and feelings.

> *"There are two basic types of interpersonal sensitivity. The first type is simply to notice (and, relatedly, remember) the other person's appearance, words, or nonverbal behavior." And "The second, and most commonly investigated, kind of interpersonal sensitivity involves accuracy in interpreting cues."* [45]

Approaches of COMPETENCE

HCPs incorporate patient values and preferences when they competently address diseases, share decision-making, understand and use research evidence, and professionally manage patient care.

Competence includes many behaviors including **decision making**, when HCPs competently engage with the patient to support, direct, and share decision-making. Shared decision-making (SDM) was one of the most frequently mentioned approaches to incorporating patient values and preferences in the records. It is its own discipline in the patient-centered care paradigm with many adherents and a large body of evidence regarding its use and effectiveness with several SDM methods and techniques. However, as its name implies, SDM addresses values integration when making treatment decisions and does not account for the pre- and post-decision-making values and preferences that are important to patients and HCPs in their overall long-term relationships.

> *"The physician sharing decision making acknowledges that power is shared and integrates the patient's preferences into a mutual decision."* [51]

SDM also involves HCP competence with research evidence [39] as well as skills to help formulate the patient's stance on issues and options, [50] or to negotiate decisions. [51] HCPs may also use decision aids or tools to assist the patient in making treatment decisions [44] or use vivid descriptions, [50] a technique to aid the patient in arriving at their own conclusions. SDM also includes directing behaviors that involve the HCP giving their own opinion or recommendation to the patient [61] when asked or when the patient is unable to make a decision. [33] It also involves listing, an action by HCPs to suggest or "draw out patients' views about possible choices." [39]

> *"[If] you ask [patients] what they think is wrong with them, then they won't tell you. But if you give them a list of things that are in your mind,*

then they will usually identify some of their concerns." [39]

HCP competence also includes **managing** the patient care process to help achieve mutual goals without controlling the patient, including working on mutually setting an agenda [55] and priorities. [63] This also includes negotiating with patients to help them understand, assess, weigh, and prioritize options, [52] gaining clarity on agreements and disagreements, [51] and openly discussing the pros and cons of options. [61] All of this is with the intent of eventually gaining agreement on issues, mutual roles, possible solutions, and next steps. [58] Managing also refers to managing patient emotions which includes efforts to reduce patient anxiety and distress, [31] exploring and responding to emotions, allowing time for patients to process emotions, as well as HCPs displaying their own emotions. [62] Managing also involves planning & preparing behaviors such as action plans for treatment, [42] agreeing on priorities, [63] arranging follow-ups, [61] and collaborative goal setting. [52] It also includes preparing for the clinical encounter to maximize the efficiency of time with the patient and readiness to elicit and incorporate values and preferences. [52]

Another competency is to manage the administrative processes that are needed to support values integration, such as having clear systematic processes for patient encounters and consultations, [61] using electronic health records (EHR) and other methods of record keeping to capture and encode patient values and preferences for future access, [63] leaving time for questions in the encounter, [43] having smooth continuity of care including a system for follow-up, [53] and collaborative action planning. [55]

"This process involved a significant investment of time, negotiation,

deliberation, and shared decision making about the steps towards goal attainment, as well as setting a nominal target." [55]

Competent management also includes **professionalism**, i.e. approaching the patient in a professional and honest manner. Honesty, transparency, [43] responsiveness, [60] and a reality-based approach [58] to the patient play an important role in patient-centered care and values integration, as well as being consistent with information, care, and decisions. [53]

"Professional responsiveness, Professionalism – Healthcare providers explain what is possible and what is not…Healthcare providers are honest with patients…Healthcare providers do not judge the patient's situation…Healthcare providers respect the patient's privacy." [60]

Approaches of COMMUNICATION

HCPs incorporate patient values and preferences when they successfully communicate with the patient as a partner, share information and evidence, and manage patient engagement.

This includes approaches like **acknowledging** the patient's efforts to get and stay healthy or to adhere to treatment plans, [63] as well as expressing support or reassurance for the patient's preferences and validating their choices. [54]

"The second component of the practice involves acknowledging specific patient efforts in a genuine and positive manner." [63]

Values integration through communication also includes **clarifying** the patient's stances by checking on the status of their choices, feelings, values, and preferences, [55] framing and reframing [52] to help clarify their positions, and repeating to reinforce patient preferences. [53] It also includes revisiting patient decisions over time [58] as patients may change their minds. Values clarification methods [60] are also described in which HCPs actively engage with the patient to discuss positive and negative characteristics of options to clarify which are most important to the patient.

> *"The mutual clarification of values can be a rewarding exercise, as it not only ensures the best possible decision but also demonstrates to patients a genuine interest in incorporating their views."* [60]

Another communication approach is **encouraging** the patient to be active in the process, to participate in the clinical encounter/conversation, [37] encouraging patient questions, [31] and patient storytelling. [33] One technique, motivational interviewing, "uses an empathic nonconfrontational style to increase the motivation for behavior change, engage patients with treatment, and build therapeutic relationships." [53]

> *"By comparison, providers preferring 'personalized care' described their approach as encouraging rather than persuasive, and they were more accepting of different priorities and preferences."* [58]

Values integration via communication also includes **exchanging information** including explaining or defining the clinical problem [61] or sharing necessary biomedical information with the patient and informing them of the facts of the condition or diagnosis. [44]

> *"Clinicians emphasized sharing medical information with patients. We observed a few instances during which clinicians also prompted discussion of patients' goals and values. Clinicians reported a clear rationale in interviews as to why sharing biomedical information was central for them."* [44]

Information exchange also includes sharing and presenting research evidence, [44] as well as a willingness to see more information and encouraging patients to seek more information. [51]

> *"There was a general view that evidence-based information regarding diagnosis and treatment options must be shared with patients during a consultation."* [31]

Information exchange also includes patient education, [48] coaching, [63] tailoring information for the patient, as well as using teaching aids, written materials, [48] or other educational interventions. [49] Interviewing & eliciting approaches are other forms of information exchange and they were the most frequent behaviors described in the records. HCPs use various approaches to gain information from the patient, including directly eliciting patient values, [37] preferences, [38] goals, [56] and circumstances, [31] sometimes referred to as patient-

centered clinical interviewing. [36] It also involves getting patients to appraise various preferences openly and to identify their favored choices. [54]

> *"…this meant providing current information, risks and benefits, eliciting questions and adjusting information to patients' needs, being honest about the limits of the physician's and scientific knowledge, and presenting an opinion."* [51]

Communication also includes **exploring**, asking open-ended questions to better assess patient values, preferences, and expectations. [36] Studies noted the importance of openly exploring alternatives with the patient and exploring the clues and cues – verbal and non-verbal – that patients often provide. [31]

> *"Explore ideas, fears, and expectations of the problem and possible treatments." And, "Informants stated that experienced practitioners are continually alert to signals that patients accept the level of involvement being required of them and adapt accordingly."* [39]

Values integration also occurs through **language** when HCPs use tones and techniques such as deferential, directive, or inviting language, [37] emotion-oriented speech, [62] or common language, terms, or phrases with patients, [43] all of which can support the patient's values, preferences, and autonomy.

> *"'Deferential' language…physicians did not evaluate each treatment on behalf of the patient. Instead, they used language that minimized their role in the patient's decision and deferred to the patient's autonomy."* [37]

When HCPs **summarize** information, choices, or next steps for patients, they are also integrating values. This can be done as written or audio summaries of clinical discussions [48] or summaries of the encounter [31] at the end of clinical visits to ensure that the HCP and patient depart with a mutual understanding of the decisions and next steps. This also allows patients to more easily share information with caregivers or other HCPs.

Approaches of CONGRUENCE

HCPs incorporate patient values and preferences when they customize and harmonize care for each patient and balance their overall approach to care considering the patient's values and preferences, the best available research evidence, and their own clinical expertise.

Specifically, HCPs seek congruence by **adjusting and tailoring** care for each unique patient. HCPs adjust information based on a patient's needs, values, and preferences, [51] as well as tailor options for the patient [40] according the many factors that must be considered within the realm of the research evidence, the patient's values, and the HCP's own expertise.

> *"Identify preferred format and provide tailor-made information…This competence consists of making the correct range of options available and*

listing them in a logical sequence and in sufficient clarity so that patients perceive the opportunity to take part in the decision." [39]

HCPs also seek congruence by maintaining **balance & flexibility** regarding patient needs, values, information, communication style, decision-making, clinical/treatment approaches, and roles. [41] This also refers to HCP efforts to balance multiple factors such as evidence, information, issues, mutual needs, shared power and responsibilities for and with the patient. [53]

"The informants stressed the importance of maintaining flexibility: adherence to the 'informed choice' approach was considered 'another form of paternalism'." [39]

DISCUSSION

Incorporating patient values and preferences in health care is critical for patient-centered care, but it is complex and requires medical knowledge as well as "soft skills" such as social, psychological, and communication proficiencies. [65] The themes developed in this review provide a useful model for better understanding, exploring, and teaching this topic. When plotted on the EBM Triad (figure 3), these themes also provide a useful framework for operationalizing values integration into evidence-based clinical practice.

Figure 3 – The EBM Triad and Primary Themes of Approaches to Values Integration

(FIGURE 3 HERE)

Our findings fit well into the existing EBM discussion and contribute new evidence to this discussion by identifying and thematically analyzing, for the first time, the specific behaviors and approaches that practicing HCPs use to integrate patient values and preferences into everyday clinical care.

Previous studies have described the importance of approaches that show concern for patient autonomy, [32, 48] taking feelings seriously, [33] seeing the patient as a person, and showing concern about their problems, diseases, effects, treatments, and research evidence, [32, 66-70] as well as advising HCPs to make "statements of concern, empathy, and reassurance." [70]

Previous studies have also described "the competences of involving patients in healthcare choices," [39] the competencies required for shared decision-making, [32] technical competencies for involving patients, [41] "culturally competent care," [46] "competencies they [HCPs] can execute to involve patients in decision making," [51] and the importance of medical competency for HCPs. [8]

Previous research has also emphasized "provider-patient communication as key to achieving patient-centered care," [68] patient-centered [39] and physician-patient communication, [32] and the importance of skills to "communicate with patients about their treatment options." [42]

Finally, other EBM literature encourages HCPs to ensure that "clinical goals are congruent" with patient goals, [36] to "achieve congruence in the consultation," [41] to strive for

"congruency between [the patient's] preferred and actual involvement in decision making," [67] to seek "congruence between [patient's] options and their values," [71] and to find "more balance between science, clinical expertise, and patient values." [8]

Strengths and limitations

This review utilized accepted, thorough, and systematic methodologies and methods for qualitative synthesis, and included a wide range of databases in the search for records. Authors' interpretations and participant quotes were included extensively throughout the review. There remains a possibility that evidence has been missed searching only records published from 2000 in English, however adherence to robust systematic review methods helped to minimize this limitation.

Although there is a paucity of qualitative studies explicitly on the topic of "integrating" or "incorporating" patient values and preferences, this review identified records on related topics such as "patient-centered care," "implementing shared decision making," "HCP-patient communications," "eliciting goals," or "managing patient involvement," and similar. There were 17 previous reviews on related topics [8, 66-81] which did not qualify for inclusion in this review. However a forward-backward search of references in those reviews identified four records already selected for inclusion in this review [37, 39, 56, 59] strengthening confidence in the robustness of this review and saturation of the topic.

Double screening is considered best practice for systematic reviews, with single screening recommended primarily as an "appropriate methodological short cut" [82] for experienced researchers. [24] We double-screened ten percent of titles/abstracts and included reviewer

discussions and debates to arrive at mutually agreed screening criteria, before single screening was conducted for the remaining records.

Rigorous thematic analysis methods were used to synthesize the findings and identify key themes and ideas across all records. Thematic analysis involves interpretation of other researchers' previous interpretations which can present limitations. To minimize this limitation, we extensively reported direct verbatims and transcripts from HCP participants and authors when describing concepts, themes, and subthemes to prevent misinterpretation of the original evidence.

Implications for policy and practice

Integrating patient values and preferences in modern clinical practice is important and impacts health outcomes. [83] Findings from this review could help improve health policy, HCP clinical performance, or patient satisfaction and outcomes by describing specific and practical patient-centered approaches to values integration.

These findings can aid the inclusion of values integration in clinical guidelines which so far has been limited [15] and for which there are few systematic standards. [16] However, encoding values and preferences into a single guideline has challenges, so individual HCP skills to elicit and incorporate patient values and preferences will always be necessary. [84]

Medical education and training emphasizes patient-centered care and values integration in theory, but HCPs receive inadequate instruction on the skills needed to

deliver it. [85] This review's primary themes and descriptions of specific approaches provide a theoretical and practical framework for education and training on this topic.

Scope of practice varies for physicians, nurses, allied health professionals, and others, but this review shows they each have a role in – and something important to contribute to – values integration. These findings can influence policymakers who should consider the entire continuum of care and provide training, tools, funding, and support and encourage values integration at every level of care delivery. These findings also offer a structure to educate and assess HCPs and organizations as a whole on values integration beyond the consultation and "throughout the care delivery at every point." [86] HCPs and health systems need to consider patient values and preferences beyond just treatment decisions [87] and this study underscores the need to be aware of, and skilled at, a number of approaches.

This review can inform clinical practice to improve HCP-patient encounters, develop patient-centered tools, and improve patient outcomes [19] and satisfaction. [20] Advanced practice providers could benefit from better clinical communications skills [88] and the approaches described in this review could provide a guide for improvement. Despite evidence that patient decision aids improve specific outcomes, [89] many HCPs don't use them [90] due to lack of awareness, availability, difficulty of use, or inappropriate context. Findings from this review could be useful in guiding tool developers to make and disseminate more effective decision aids.

Future research

The broad themes described in this review provide multiple areas for future study. The primary themes of Concern, Competence, Communication, and Congruence should be explored further. While shared decision-making and HCP-patient communication are already well-represented in the literature, more study is needed on other approaches such as caring & connecting, planning & preparing, or goals setting, to name a few.

There is significant research in the area of shared decision-making between HCPs and patients, but very little in the area of values integration outside of the decision making process. Future research should explore this gap. Future studies could also seek to quantify many of the qualitative findings from this review to collect evidence on what contributes to better outcomes.

Finally, the theme of Congruence described in this review – how HCPs tailor, adjust, balance, and harmonize approaches for each patient – needs more scientific consideration. It is underrepresented in the published literature, yet it represents the essence of evidence-based medicine: the "conscientious, explicit, and judicious" [91] integration of patient values and preferences with the best research evidence and clinical expertise.

Reflexivity statement

The principal investigator for this review was a part-time graduate student (MT) at the University of Oxford while residing and working full-time in the U.S. in the pharmaceutical industry. MT has experience in designing, executing, and analyzing qualitative methods involving focus groups, interviews, Delphi methods, surveys, and literature/content analysis for health-related research. MT has authored or co-authored peer-reviewed and published

articles, however, had not previously conducted a systematic review. MT is not a clinician but has worked with clinicians for more than 25 years in hospital administration, health education and communications, research, policy, and advocacy.

Author GS, living in Canada, has a clinical background, and was also enrolled in the same Oxford graduate program. Authors AB and CH live in the UK, are both faculty members from the University of Oxford's MSc in Evidence-Based Health Care program. Both have academic and/or clinical backgrounds that include researching, writing, and teaching extensively on EBM and the role of patient values and preferences. They provided supervision throughout the review.

CONCLUSION

HCPs incorporate patient values and preferences in health care through a variety of approaches including: ***Concern*** for the patient as a person as well as diseases and their effects; ***Competence*** at skillfully addressing diseases, research evidence, and managing patient care; ***Communication*** with the patient as a partner, sharing information and evidence, and productively managing patient encounters; and, ***Congruence*** to tailor, adjust, and balance their approaches to overall care for each patient. Themes in this review provide a novel framework for understanding and addressing values integration in clinical care and provide useful insights for policymakers, educators, and practitioners.

Contributorship statement – As principal investigator, MT led the planning, conduct, and reporting of the study, submitted the manuscript, and is responsible for the overall content. As research assistant, GS contributed to the conduct of the literature screening and review as well as provided review and editing of the manuscript. As research supervisors, AMB and

CH contributed to the planning, oversight, and reporting, as well as provided review and editing of the manuscript.

Competing interests – CH receives grant funding from the NIHR School of Primary Care Research. He has received financial remuneration from an asbestos case and given legal advice on mesh and hormone pregnancy tests cases. He has received expenses and fees for his media work, for teaching EBM and is also paid for his GP work in NHS out of hours. He has also received income from the publication of a series of toolkit books and for appraising treatment recommendations in non-NHS settings. He is Director of CEBM and former editor in chief of BMJ-EBM. No competing interests for other authors.

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Data sharing statement – Data are available upon reasonable request. Data sharing not applicable, no datasets were generated or analyzed for this study. All data are from publicly available documents, and references are provided should readers wish to look at original sources.

Ethics approval – This study does not involve human or animal subjects, ethics approval not applicable.

REFERENCES

1 Guyatt GH, Haynes RB, Jaeschke RZ, et al. Users' Guides to the Medical Literature: XXV. Evidence-Based Medicine: Principles for Applying the Users' Guides to Patient Care. *JAMA* 2000;284:1290-6 doi:10.1001/jama.284.10.1290.

2 Sackett DL, Rosenberg WMC, Gray JAM, et al. Evidence based medicine: what it is and what it isn't. *BMJ* 1996;312:71 doi:10.1136/bmj.312.7023.71.

3 Mellis C. Evidence-based medicine: What has happened in the past 50 years?. *J Paediatr Child Health* 2015;51:65-8 doi:10.1111/jpc.12800.

4 Gooberman-Hill R. Qualitative approaches to understanding patient preferences. *The Patient: Patient-Centered Outcomes Research* 2012;5:215-23.

5 Lee YK, Low WY, Ng CJ. Exploring patient values in medical decision making: a qualitative study. *PLoS One* 2013;8:e80051 doi:10.1371/journal.pone.0080051 [doi].

6 Straus SE, Pattani R, Veroniki AA. Evidence-based medicine : how to practice and teach EBM. Edinburgh: Elsevier 2019.

7 Llewellyn-Thomas HA, Crump RT. Decision Support for Patients: Values Clarification and Preference Elicitation. *Medical Care Research and Review* 2013;70:50S-79S doi:http://ezproxy-prd.bodleian.ox.ac.uk:2094/10.1177/1077558712461182.

8 Bastemeijer CM, Voogt L, van Ewijk J,P., et al. What do patient values and preferences mean? A taxonomy based on a systematic review of qualitative papers. *Patient Educ Couns* 2017;100:871-81.

9 Fernandez A, Sturmberg J, Lukersmith S, et al. Evidence-based medicine: is it a bridge too far?. *Health research policy and systems* 2015;13:66 doi:10.1186/s12961-015-0057-0.

10 Kelly MP, Heath I, Howick J, et al. The importance of values in evidence-based medicine. *BMC medical ethics* 2015;16 doi:10.1186/s12910-015-0063-3.

11 Lown BA, Hanson JL, Clark WD. Mutual influence in shared decision making: A collaborative study of patients and physicians. *Health Expectations: An International Journal of Public Participation in Health Care & Health Policy* 2009;12:160-74.

12 Petrisor B, Bhandari M. The hierarchy of evidence: Levels and grades of recommendation. *Indian J Orthop* 2007;41:11-5 doi:10.4103/0019-5413.30519 [doi].

13 Porta M, Greenland S, Burón A. A dictionary of epidemiology. Oxford, England: Oxford University Press 2014.

14 EBM Levels of Evidence. Available at: https://www.cebm.ox.ac.uk/resources/levels-of-evidence/oxford-centre-for-evidence-based-medicine-levels-of-evidence-march-2009 Accessed September, 2020.

15 van DW, Pieterse AH, Koelewijn-van Loon M,S., et al. How can clinical practice guidelines be adapted to facilitate shared decision making? A qualitative key-informant study. *BMJ Qual Saf* 2013;22:855 doi:10.1136/bmjqs-2012-001502.

16 Zhang Y, Coello PA, Brożek J, et al. Using patient values and preferences to inform the importance of health outcomes in practice guideline development following the GRADE approach. *Health and quality of life outcomes* 2017;15:52.

17 Noncommunicable diseases. Available at: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases Accessed January 20, 2020.

18 Finley CR, Chan DS, Garrison S, et al. What are the most common conditions in primary care?. *Can Fam Physician* 2018;64:832.

19 Gluyas H. Patient-centred care: improving healthcare outcomes. *Nurs Stand* 2015;30:50,7; quiz 59 doi:10.7748/ns.30.4.50.e10186 [doi].

20 Wolf DM, Lehman L, Quinlin R, et al. Effect of patient-centered care on patient satisfaction and quality of care. *J Nurs Care Qual* 2008;23:316-21 doi:10.1097/01.NCQ.0000336672.02725.a5 [doi].

21 Lockwood D, Munn Z, Porritt K. Qualitative research synthesis: methodological guidance for systematic reviewers utilizing meta-aggregation. *Int J Evid Based Healthc* 2015;13:179-87.

22 Transforming and scaling up health professionals' education and training: World Health Organization Guidelines. Available at: https://www.who.int/publications/i/item/transforming-and-scaling-up-health-professionals'-education-and-training Accessed January, 2020.

23 EPPI Reviewer 4 For Systematic Reviews. Available at: http://eppi.ioe.ac.uk/cms/Default.aspx?alias=eppi.ioe.ac.uk/cms/er4 Accessed January, 2020.

24 Mahtani KR, Heneghan C, Aronson J. Single screening or double screening for study selection in systematic reviews?. *BMJ EBM* 2020;25:149-50 doi:10.1136/bmjebm-2019-111269.

25 Lincoln YS, Guba EG. Naturalistic inquiry. Beverly Hills; London: Sage 1985.

26 Lockwood C, Porrit K, Munn Z, Rittenmeyer L, Salmond S, Bjerrum M, Loveday H, Carrier J, Stannard D. Aromataris E, Munn Z (Editors). JBI Reviewer's Manual - Chapter 2: Systematic Review of Qualitative Evidence, . *Joanna Briggs Institute (JBI)* 2017.

27 Aromataris E, Munn Z (Editors). Joanna Briggs Institute Reviewer's Manual 2017:Chapter 2.

28 NVivo for Qualitative Research. Available at: https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home Accessed March, 2020.

29 Bryman A. Social research methods. Oxford: Oxford University Press 2012.

30 Liberati A, Altman DG, Tetzlaff J, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *PLoS Medicine* 2009;6 doi:10.1371/journal.pmed.1000100.

31 Ford S, Schofield T, Hope T. What are the ingredients for a successful evidence-based patient choice consultation?: A qualitative study. *Soc Sci Med* 2003;56:589-602 doi:http://dx.doi.org/10.1016/S0277-9536%2802%2900056-4.

32 Ford S, Schofield T, Hope T. Barriers to the evidence-based patient choice (EBPC) consultation. *Patient Educ Couns* 2002;47:179-85 doi:10.1016/S0738-3991(01)00198-7.

33 McLeod H. Respect and shared decision making in the clinical encounter, A Video-Reflexive Ethnography 2017.

34 Powell C. The Delphi technique: myths and realities. *J Adv Nurs* 2003;41:376-82 doi:10.1046/j.1365-2648.2003.02537.x.

35 Iedema R, Carroll K, Collier A, et al. Video-reflexive ethnography in health research and healthcare improvement : theory and application. Boca Raton: CRC Press 2018.

36 Aita V, McIlvain H, Backer E, et al. Patient-centered care and communication in primary care practice: what is involved?. *Patient Educ Couns* 2005;58:296-304.

37 Chhabra KR, Pollak KI, Lee SJ, et al. Physician communication styles in initial consultations for hematological cancer. *Patient Educ Couns* 2013;93:573-8 doi:https://dx.doi.org/10.1016/j.pec.2013.08.023.

38 Davis K, Bellini P, Hagerman C, et al. Physicians' Perceptions of Factors Influencing the Treatment Decision-making Process for Men With Low-risk Prostate Cancer. *Urology* 2017;107:86-95 doi:https://dx.doi.org/10.1016/j.urology.2017.02.056.

39 Elwyn G, Edwards A, Kinnersley P, et al. Shared decision making and the concept of equipoise: the competences of involving patients in healthcare choices. *Br J Gen Pract* 2000;50:892.

40 Feiring E, Friis T. Facilitators and barriers to clinicians' use of COPD action plans in self-management support: A qualitative study. *Patient Educ Couns* 2020;103:693-701 doi:http://dx.doi.org/10.1016/j.pec.2019.11.002.

41 Ford S, Schofield T, Hope T. Observing decision-making in the general practice consultation: who makes which decisions?. *Health Expectations* 2006;9.

42 Friedberg MW, Van Busum K, Wexler R, et al. A demonstration of shared decision making in primary care highlights barriers to adoption and potential remedies. *Health Aff (Millwood)* 2013;32:268 doi:10.1377/hlthaff.2012.1084.

43 Golden SE, Thomas CR, Moghanaki D, et al. Dumping the information bucket: A qualitative study of clinicians caring for patients with early stage non-small cell lung cancer. *Patient Educ Couns* 2017;100:861-70 doi:10.1016/j.pec.2016.12.023.

44 Gruß I, McMullen CK. Barriers to eliciting patient goals and values in shared decision-making breast cancer surgery consultations: An ethnographic and interview study. *Psycho - Oncology* 2019;28:2233-9 doi:http://ezproxy-prd.bodleian.ox.ac.uk:2094/10.1002/pon.5212.

45 Hall JA. Clinicians' accuracy in perceiving patients: Its relevance for clinical practice and a narrative review of methods and correlates. *Patient Educ Couns* 2011;84:319-24 doi:http://dx.doi.org/10.1016/j.pec.2011.03.006.

46 Hart PL, Mareno N. Cultural challenges and barriers through the voices of nurses. *J Clin Nurs* 2014;23:2223-33 doi:10.1111/jocn.12500.

47 Hisham R, Liew SM, Ng CJ, et al. Rural doctors' views on and experiences with evidence-based medicine: The FrEEDoM qualitative study. *PLoS ONE* 2016;11:e0152649 doi:http://dx.doi.org/10.1371/journal.pone.0152649.

48 Jefford M, Tattersall MHN. Informing and involving cancer patients in their own care. *The lancet oncology* 2002;3:629-37.

49 Kennedy BM, Rehman M, Johnson WD, et al. Healthcare Providers versus Patients' Understanding of Health Beliefs and Values. *Patient exp j* 2017;4:29-37.

50 Landmark AMD, Svennevig J, Gulbrandsen P. Negotiating treatment preferences: Physicians' formulations of patients' stance. *Soc Sci Med* 2016;149:26-36 doi:https://dx.doi.org/10.1016/j.socscimed.2015.11.035.

51 Lown BA, Hanson JL, Clark WD. Mutual influence in shared decision making: A collaborative study of patients and physicians. *Health Expect* 2009;12:160-74 doi:http://dx.doi.org/10.1111/j.1369-7625.2008.00525.x.

52 Murdoch J, Salter C, Ford J, et al. The "unknown territory" of goal-setting: Negotiating a novel interactional activity within primary care doctor-patient consultations for patients with multiple chronic conditions. *Soc Sci Med* 2020;256:113040 doi:https://dx.doi.org/10.1016/j.socscimed.2020.113040.

53 Paiva D, Abreu L, Azevedo A, et al. Patient-centered communication in type 2 diabetes: The facilitating and constraining factors in clinical encounters. *Health Serv Res* 2019;54:623-35 doi:10.1111/1475-6773.13126 [doi].

54 Pieterse AH, Henselmans I, de Haes, H. C. J. M., et al. Shared decision making: Prostate cancer patients' appraisal of treatment alternatives and oncologists' eliciting and responding behavior, an explorative study. *Patient Educ Couns* 2011;85:e251-9 doi:http://dx.doi.org/10.1016/j.pec.2011.05.012.

55 Salter C, Shiner A, Lenaghan E, et al. Setting goals with patients living with multimorbidity: qualitative analysis of general practice consultations. *The British journal of general practice : the journal of the Royal College of General Practitioners* 2019;69:e479 doi:10.3399/bjgp19X704129.

56 Schulman-Green D, Naik AD, Bradley EH, et al. Goal setting as a shared decision making strategy among clinicians and their older patients. *Patient Educ Couns* 2006;63:145-51.

57 Shepherd HL, Butow PN, Tattersall MHN. Factors which motivate cancer doctors to involve their patients in reaching treatment decisions. *Patient Educ Couns* 2011;84:229-35 doi:https://dx.doi.org/10.1016/j.pec.2010.10.018.

58 Shortus T, Kemp L, McKenzie S, et al. 'Managing patient involvement': provider perspectives on diabetes decision-making. *Health Expectations* 2013;16.

59 Tracy CS, Dantas GC, Upshur REG. Evidence-based medicine in primary care: qualitative study of family physicians. *BMC Fam Pract* 2003;4:6.

60 Van Humbeeck L, Malfait S, Holvoet E, et al. Value discrepancies between nurses and patients: A survey study. *Nurs Ethics* 2020;27:1044-55 doi:https://dx.doi.org/10.1177/0969733020906595.

61 Vermunt N, Elwyn G, Westert G, et al. Goal setting is insufficiently recognised as an essential part of shared decision-making in the complex care of older patients: a framework analysis. *BMC Fam Pract* 2019;20:76 doi:https://dx.doi.org/10.1186/s12875-019-0966-z.

62 Visser LNC, Schepers S, Tollenaar MS, et al. Patients' and oncologists' views on how oncologists may best address patients' emotions during consultations: An interview study. *Patient Educ Couns* 2018;101:1223-31 doi:S0738-3991(18)30077-6 [pii].

63 Zulman DM, Haverfield MC, Shaw JG, et al. Practices to foster physician presence and connection with patients in the clinical encounter. *JAMA: Journal of the American Medical Association* 2020;323:70-81.

64 Dyrbye LN, Varkey P, Boone SL, et al. Physician Satisfaction and Burnout at Different Career Stages. *Mayo Clin Proc* 2013;88:1358-67 doi:https://doi.org/10.1016/j.mayocp.2013.07.016.

65 Salloch S, Otte IC, Reinacher-Schick A, et al. Physician perspectives on the impact of patient preferences and the role of next-of-kin of patients in evidence-based decision-making: A qualitative interview study from oncology. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen* 2018;131:46-52.

66 Contreary K, Collins A, Rich EC. Barriers to evidence-based physician decision-making at the point of care: A narrative literature review. *Journal of Comparative Effectiveness Research* 2017;6:51-63 doi:10.2217/cer-2016-0043.

67 Covvey JR, Kamal KM, Gorse EE, et al. Barriers and facilitators to shared decision-making in oncology: a systematic review of the literature. *Supportive Care Cancer* 2019;27:1613-37 doi:http://dx.doi.org/10.1007/s00520-019-04675-7.

68 Dwamena F, Holmes-Rovner M, Gaulden CM, et al. Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev* 2012;2012:CD003267 doi:http://dx.doi.org/10.1002/14651858.CD003267.pub2.

69 Harrington J, Noble LM, Newman SP. Improving patients' communication with doctors: a systematic review of intervention studies. *Patient Educ Couns* 2004;52:7-16 doi:S073839910300017X [pii].

70 Lewin SA, Skea ZC, Entwistle V, et al. Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev* 2001:CD003267.

71 Stacey D, Legare F, Lewis K, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev* 2017;4:CD001431 doi:10.1002/14651858.CD001431.pub5 [doi].

72 Gravel K, Légaré F, Graham ID. Barriers and facilitators to implementing shared decision-making in clinical practice: a systematic review of health professionals' perceptions. *Implementation science : IS* 2006;1:16 doi:10.1186/1748-5908-1-16.

73 Harrison M, Milbers K, Hudson M, et al. Do patients and health care providers have discordant preferences about which aspects of treatments matter most? Evidence from a systematic review of discrete choice experiments. *BMJ Open* 2017;7:e014719-014719 doi:10.1136/bmjopen-2016-014719 [doi].

74 Johnson RA, Huntley A, Hughes RA, et al. Interventions to support shared decision making for hypertension: A systematic review of controlled studies. *Health Expectations* 2018;21:1191-207 doi:http://ezproxy-prd.bodleian.ox.ac.uk:2094/10.1111/hex.12826.

75 Laidsaar-Powell RC, Butow PN, Bu S, et al. Physician-patient-companion communication and decision-making: A systematic review of triadic medical

consultations. *Patient Educ Couns* 2013;91:3-13 doi:http://dx.doi.org/10.1016/j.pec.2012.11.007.

76 Légaré F, Ratté S, Gravel K, et al. Barriers and facilitators to implementing shared decision-making in clinical practice: Update of a systematic review of health professionals' perceptions. *Patient Educ Couns* 2008;73:526-35 doi:https://doi.org/10.1016/j.pec.2008.07.018.

77 Mangin D, Stephen G, Bismah V, et al. Making patient values visible in healthcare: a systematic review of tools to assess patient treatment priorities and preferences in the context of multimorbidity. *BMJ open* 2016;6:e010903.

78 Marsh K, Caro J, Hamed A, et al. Amplifying Each Patient's Voice: A Systematic Review of Multi-criteria Decision Analyses Involving Patients. *Appl Health Econ Health Policy* 2017;15:155-62 doi:10.1007/s40258-016-0299-1.

79 Truglio-Londrigan M, Slyer JT. Shared Decision-Making for Nursing Practice: An Integrative Review. *The open nursing journal* 2018;12:1 doi:10.2174/1874434601812010001.

80 Truglio-Londrigan M, Slyer JT, Singleton JK, et al. A qualitative systematic review of internal and external influences on shared decision-making in all health care settings. *JBI Libr Syst Rev* 2012;10:4633-46.

81 Zwolsman S, Te Pas E, Hooft L, et al. Barriers to GPs' use of evidence-based medicine: A systematic review. *Br J Gen Pract* 2012;62:e511-21 doi:http://dx.doi.org/10.3399/bjgp12X652382.

82 Waffenschmidt S, Knelangen M, Sieben W, et al. Single screening versus conventional double screening for study selection in systematic reviews: a methodological systematic review.(Report). *BMC Medical Research Methodology* 2019;19 doi:10.1186/s12874-019-0782-0.

83 Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open* 2013;3:e001570 doi:10.1136/bmjopen-2012-001570.

84 Lewis DK, Robinson J, Wilkinson E. Factors involved in deciding to start preventive treatment: qualitative study of clinicians' and lay people's attitudes. *BMJ* 2003;327:841 doi:10.1136/bmj.327.7419.841.

85 Henschen BL, Ryan ER, Evans DB, et al. Perceptions of Patient-Centered Care among First-Year Medical Students. *Teach Learn Med* 2019;31:26-33 doi:10.1080/10401334.2018.1468260 [doi].

86 Armstrong MJ, Mullins CD. Value Assessment at the Point of Care: Incorporating Patient Values throughout Care Delivery and a Draft Taxonomy of Patient Values. *Value in Health : The Journal of the International Society for Pharmacoeconomics and Outcomes Research* 2017;20:292.

87 Lee YK, Low WY, Ng CJ. Exploring patient values in medical decision making: a qualitative study. *PloS one* 2013;8.

88 Back AL, Fromme EK, Meier DE. Training Clinicians with Communication Skills Needed to Match Medical Treatments to Patient Values. *J Am Geriatr Soc* 2019;67:S435-41 doi:https://doi.org/10.1111/jgs.15709.

89 O'connor A. Using patient decision aids to promote evidence-based decision making. *Evid Based Med* 2001;6:100 doi:10.1136/ebm.6.4.100.

90 Brace C, Schmocker S, Huang H, et al. Physicians' Awareness and Attitudes Toward Decision Aids for Patients With Cancer. *JCO* 2010;28:2286-92 doi:10.1200/JCO.2009.25.2874.

91 Sackett DL, Straus S, Richardson W, et al. Evidence-based medicine: how to practice and teach EBM. Edinburgh: Churchill Livingstone 2000.

Figure 1 – The Evidence-Based Medicine (EBM) Triad

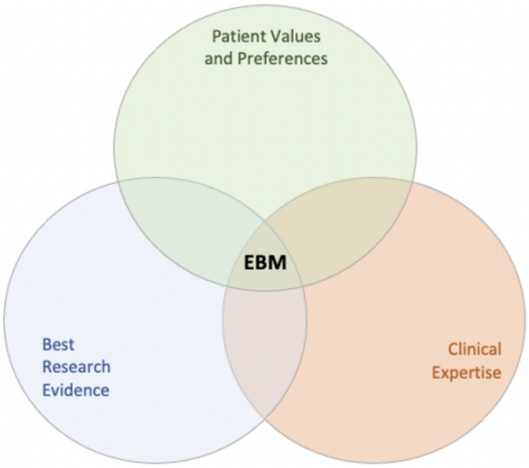

Figure 1 – The Evidence-Based Medicine (EBM) Triad

220x135mm (144 x 144 DPI)

Figure 2 – PRISMA Flow Diagram

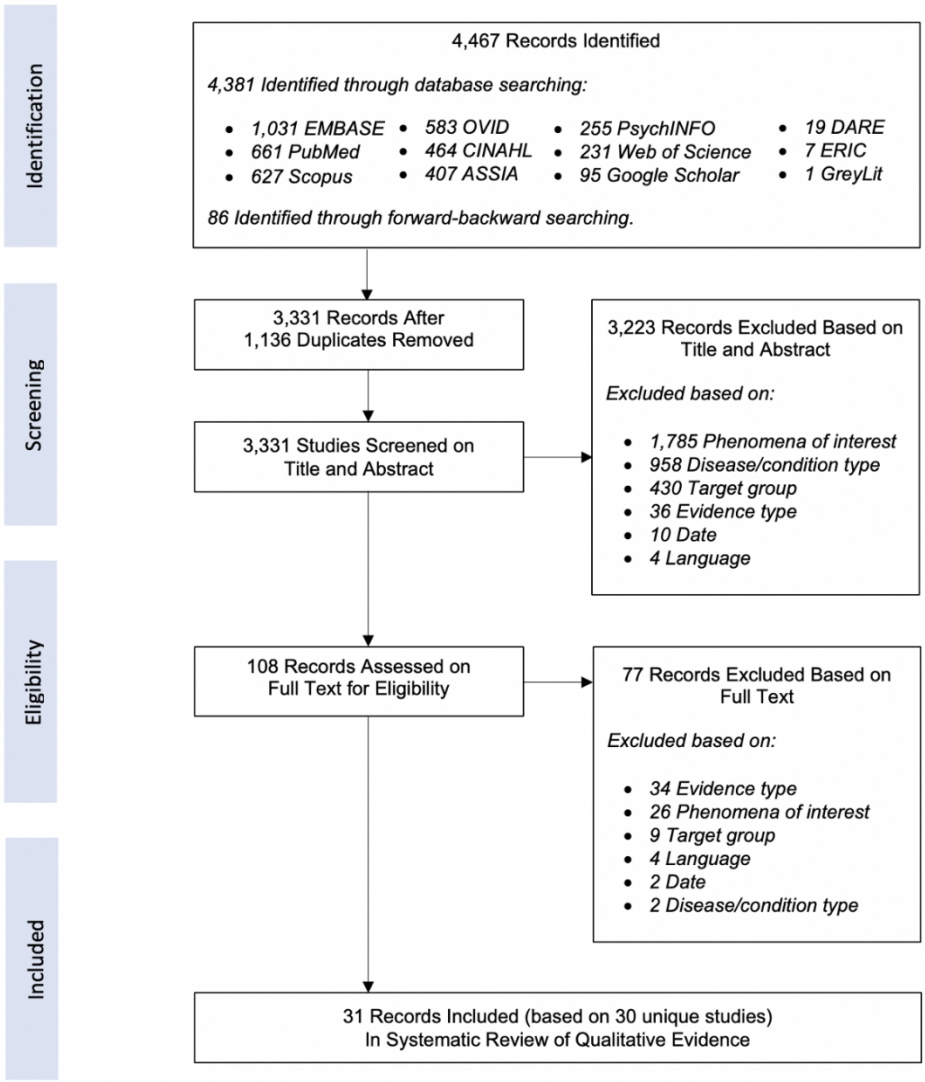

Figure 2 – PRISMA Flow Diagram

219x265mm (144 x 144 DPI)

Figure 3 – The EBM Triad and Primary Themes of Approaches to Values Integration

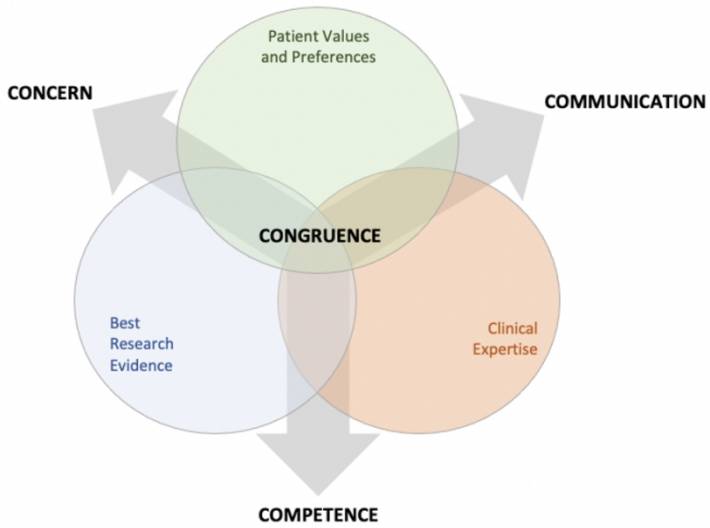

Figure 3 – The EBM Triad and Primary Themes of Approaches to Values Integration

225x156mm (144 x 144 DPI)

SUPPLEMENTAL MATERIALS

Appendix A – Protocol Registration, 11 May 2020

No. CRD42020166002 – https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=166002

NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

To enable PROSPERO to focus on COVID-19 submissions, this registration record has undergone basic automated checks for eligibility and is published exactly as submitted. PROSPERO has never provided peer review, and usual checking by the PROSPERO team does not endorse content. Therefore, automatically published records should be treated as any other PROSPERO registration. Further detail is provided here.

Citation

Michael Tringale, Genia Stephen, Carl Heneghan, Anne-Marie Boylan. Incorporating patient values and preferences in health care for adults with noncommunicable diseases: A systematic review of qualitative evidence.. PROSPERO 2020 CRD42020166002 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020166002

Review question

What are the approaches, barriers, and facilitators that practicing health care professionals (HCPs) experience regarding the integration of patient values and preferences in primary and secondary care for adults with noncommunicable diseases (NCDs)?

Searches

This review is concerned with identifying studies regarding HCPs and their experiences incorporating patient values and preferences into their evidence based care (Sackett 1996). Reviewers will use the Joanna Briggs Institute (JBI) search method (Aromataris and Munn 2017) with terms adapted from an initial scoping of electronic databases MEDLINE and CINAHL with an analysis of text from titles, abstracts, and index terms used to describe references. Then, full systematic literature searches will be tailored and conducted for 12 databases including ASSIA, CINAHL, DARE, EMBASE, ERIC, Google Scholar, GreyLit, GreyNet, MEDLINE (via Ovid and PubMed), PsycINFO, Scopus and Web of Science.

Types of study to be included

This review will consider studies and other evidence with full text available in English that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, action research, other interpretive studies, and methods such as interviews, focus groups, and surveys. Also considered will be mixed-methods studies reporting relevant qualitative data or analysis regarding the topic and population of interest. This review is concerned with current relevant practice so only studies from the year 2000 or later will be included.

Condition or domain being studied

This review will consider studies involving care for adults in the four major NCD groups: cancers, cardiovascular diseases, diabetes, and chronic respiratory diseases (WHO 2020).

Participants/population

The population of interest is practicing HCPs in primary and secondary care. To the extent that some studies of patient populations may also include relevant HCP data, these studies may be included but only the HCP perspectives will be extracted.

Intervention(s), exposure(s)

The population of interest is practicing HCPs in primary and secondary care. To the extent that some studies of patient populations may also include relevant HCP data, these studies may be included but only the HCP perspectives will be extracted.

Comparator(s)/control

None

Context

This review will consider evidence from non-emergency and non-inpatient settings where clinicians provide primary or secondary care for adults with NCDs.

Main outcome(s)

• Approaches to integrating patient values and preferences into clinical care.

• Barriers to integrating patient values and preferences into clinical care.

• Facilitators to integrating patient values and preferences into clinical care.

• Thematic analysis, interpretation, and insights.

Measures of effect

Main outcomes will be presented as qualitative data such as verbatims from, and interpretations of, included studies, as well as an author synthesis and interpretation of the qualitative evidence reviewed.

Additional outcome(s)

• Practice recommendations for integration of patient values and preferences into evidence based care.

• Further research recommendations.

Measures of effect

Additional outcomes will be presented as recommendations by the author.

Data extraction (selection and coding)

Prospective studies will be saved in RefWorks for cataloging and reference management, imported to EPPI Reviewer for screening, and uploaded to NVivo for data extraction and coding. The primary author will screen titles and abstracts for inclusion, with double-screening of a random sample by a secondary reviewer (Taylor-Phillips et al, 2017), with disagreement resolved by discussion or with a third reviewer/advisor. A full text screening will be performed to identify references for final inclusion.

Qualitative data will be extracted from included references using a modified version of the JBI Data Extraction Tool (Aromataris and Munn 2017) to include specific details about the population, context, study methods, the phenomena of interest relevant to the review question. Data will be synthesized using a meta-aggregation approach and a narrative synthesis. Where textual pooling is not possible, findings will be presented in narrative form.

Risk of bias (quality) assessment

In addition to double-screening references, quality appraisal will be performed by the primary author using the JBI Critical Appraisal Checklist for Qualitative Research (Aromataris and Munn 2017) with a random sample assed by the second reviewer with disagreement resolved by discussion or with a third reviewer/advisor. The CONQual approach (Munn et al, 2014) will also be used wherein an overall ranking will be assigned to rate the confidence of any synthesized qualitative findings which will be presented in a summary of findings table describing the dependability and credibility of each finding.

Strategy for data synthesis

The data will be analyzed using meta-aggregation and thematic synthesis. Qualitative research findings will be pooled using the coding and synthesis strategies and tools enabled by NVivo including further collection and synthesis of findings to generate a set of statements that represent the aggregation, organization, and categorization of the findings based on similarity in meaning. These categories will then be subjected to further synthesis to produce a single comprehensive set of findings that can be used as the basis for analysis, interpretation, reporting, and recommendations.

Analysis of subgroups or subsets

Data related to different contexts such as disease severities, prognoses, multimorbidities, and/or HCP types, to the extent that such data will be available in the included studies, may be analyzed as subgroups.

Contact details for further information

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NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

Organisational affiliation of the review

University of Oxford
www.ox.ac.uk

Review team members and their organisational affiliations

Michael Tringale. University of Oxford
Genia Stephen. University of Oxford
Dr Carl Heneghan. University of Oxford
Dr Anne-Marie Boylan. University of Oxford

Type and method of review

Narrative synthesis, Synthesis of qualitative studies, Systematic review, Other

Anticipated or actual start date

01 February 2020

Anticipated completion date

01 December 2020

Funding sources/sponsors

Self-funded with a Research Support Grant from Kellogg College, University of Oxford

Conflicts of interest

Language

English

Country

United States of America

Stage of review [1 change]

Review Completed published

Details of final report/publication(s) or preprints if available [1 change]

Pre-reviewed, pre-graded, pre-published summary of results and conclusions includes:

Results: From 3331 potential records, 35 met inclusion criteria. Findings comprised: 146 approaches to incorporating patient values and preferences grouped into 18 main themes with 12 subthemes; 92 barriers grouped into 4 main themes with 13 subthemes; 46 facilitators grouped into 5 main themes with 8 subthemes; and, 52 epistemologies related to incorporating patient values and preferences. Four primary concepts summarize all of these findings: Concern, Competence, Communication, and Congruence.

Conclusions: HCPs incorporate patient values and preferences into health care through actions of Concern, Competence, Communication, and Congruence, and there are numerous philosophies that influence how HCPs regard and approach patient values and preferences. HCPs face a number of barriers to incorporating patient values and preferences but they are also facilitated by several factors.

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

MeSH headings have not been applied to this record

Date of registration in PROSPERO

05 July 2020

Date of first submission

NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

11 May 2020

Stage of review at time of this submission [2 changes]

Stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.
The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.

Versions
05 July 2020
18 November 2020
29 November 2020

Appendix B – Search Strategy Details

NOTE: Unless otherwise stated, all searches were limited to publication dates 2000 to 2020, English language only. Standard "MeSH" terms (Medial Subject Headings) established by the National Library of Medicine for use with Medline and other databases were of some use for this review's search. Main MeSH headings of interest included:

- Communication
- Communication Barrier/s
- Communication Method/s
- Consumer Preference/s
- Decision-Making, Shared
- Evidence-Based Medicine
- Evidence-Based Nursing
- Evidence-Based Practice
- Health Communication
- Implementation Science
- Patient Advocacy
- Patient-Centered Care
- Patient Preference/s
- Patient Participation
- Physician-Patient Relation/s (Relationship/s)
- Professional-Patient Relations

EMBASE – Excerpta Medica DataBASE
https://www.elsevier.com/solutions/embase-biomedical-research
(January 2000 to May 2020) 1031 studies identified

Primary keywords and search string in "advanced search" tool; preselect English only, titles, abstracts and indexed terms:

1. ((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") ADJ10 (perspective* OR attitude* OR opinion* OR behavior* OR behaviour* OR practices))
2. (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) ADJ5 (values OR preferences))
3. (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")
4. (patient NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))
5. 1 and 2 and 3 and 4

PubMed-Medline
http://www.pubmed.com/
(January 2000 to May 2020) 661 studies identified

Primary keywords and search string in "advanced" search tool; preselect English only, titles, abstracts and indexed terms:

(((((((((((("physician*"[Title] OR "health professional*"[Title]) OR "healthcare professional*"[Title]) OR "health care professional*"[Title]) OR "practitioner*"[Title]) OR "specialist*"[Title]) OR "doctor*"[Title]) OR "nurse*"[Title]) OR "provider*"[Title]) OR "clinician*"[Title]) OR ("clinic*"[All Fields] AND (("staff"[All Fields] OR "staff s"[All Fields]) OR "staffs"[All Fields]))) AND (((((("perspective*"[Title] OR "attitude*"[Title]) OR "opinion*"[Title]) OR "behavior*"[Title]) OR "behaviour*"[Title]) OR ((((((((((("practicability"[All Fields] OR "practicable"[All Fields]) OR "practical"[All Fields]) OR "practicalities"[All Fields]) OR "practicality"[All Fields]) OR "practically"[All Fields]) OR "practicals"[All Fields]) OR "practice"[All Fields]) OR "practice s"[All Fields]) OR "practiced"[All Fields]) OR "practices"[All Fields]) OR "practicing"[All Fields]))) AND ((((((((("qualitative"[Title] OR "review"[Title]) OR "synthesis"[Title]) OR "analysis"[Title]) OR "narrative"[Title]) OR "interview*"[Title]) OR "observation*"[Title]) OR "survey*"[Title]) OR "focus group*"[All Fields])) AND ((((("patient*"[Title] OR "client*"[Title]) OR "individual*"[Title]) OR "consumer*"[All Fields]) AND ("values"[Title] OR (((((((("prefer"[All Fields] OR "preferable"[All Fields]) OR "preferably"[All Fields]) OR "preferred"[All Fields]) OR "preference"[All Fields]) OR "preferences"[All Fields]) OR "preferred"[All Fields]) OR "preferring"[All Fields]) OR "prefers"[All Fields])))

Scopus

https://www.elsevier.com/solutions/scopus

(January 2000 to July 2020) 627 studies identified

Primary keywords and search string: (NOTE: 147,000 results originally from this string; Scopus provides pre-set search inclusion/exclusion options to choose. To narrow this search I selected publication year range 2000-2020; included only Med, Nursing, Health Professions; only USA, UK, CAN, and the 4 primary NCDs of interested to this study, Oncology, CV, Respiratory, Diabetes.)

("primary care" OR "specialist care" OR "secondary care") AND (diabetes OR asthma OR cardiovascular OR cancer OR COPD) AND (((((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") W/10 (perspective* OR attitude* OR opinion* OR behavior* OR behaviour* OR practices)) AND ((integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) W/5 (values OR preferences)))) AND (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")) AND NOT ("patient-reported" OR "advance planning" OR palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR children OR pediatric OR teen* OR adolescent* OR surge* OR emergenc* OR resuscitat* OR terminal*)) AND NOT (patient W/3 (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR understanding OR awareness OR education OR satisfaction))

OVID-Medline

https://www.ovid.com/product-details.901.html

(January 2000 to May 2020) 583 studies identified

Primary keywords and search string in "advanced search" tool; preselect English only, titles, abstracts and indexed terms:

1. ((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") ADJ10 (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR practices))

2. (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) ADJ5 (values OR preferences))
3. (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")
4. (patient NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))
5. 1 and 2 and 3 and 4

CINAHL – Cumulative Index to Nursing and Allied Health Literature
https://www.ebscohost.com/nursing/products/cinahl-databases/the-cinahl-database
(January 2000 to July 2020) 464 studies identified after duplicates removed)

Primary keywords and search string; titles and abstracts:

(((qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*") AND (physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") AND (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR practices*) AND (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ("patient* values" OR "patient* preferences" OR "client* values" OR "client* preferences" OR "individual* values" OR "individual* preferences" OR "consumer* values" OR "consumer* preferences")) NOT (palliative OR "end of life" OR "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))

ASSIA – Applied Social Science Index and Abstracts
https://search.proquest.com/assia?_ga=2.36367776.1827441237.1546299943-1531284045.1543164998
(January 2000 to July 2020) 407 studies identified

Primary keywords and search string:

(ab(((patient NEAR/2 (values OR preferences))) AND ((physician OR doctor OR provider) NEAR/5 (practices OR perspectives OR attitudes OR opinions))) AND qualitative) OR ti((patient AND (values OR preferences)) AND (physician OR doctor OR provider)) OR ti(patient values) OR ((((((physician OR "health professional" OR "healthcare professional" OR "health care professional" OR practitioner OR specialist OR doctor OR nurse OR provider OR "clinician" OR staff) NEAR/10 (perspectives OR attitudes OR opinions OR behavior OR behaviour OR practices)) AND ((integrate OR implement OR incorporate OR consider OR promote OR approaches OR barriers OR facilitate OR facilitators) NEAR/5 ((patient OR client OR individual OR consumer) NEAR/3 (values OR preferences)))) AND (qualitative OR review OR synthesis OR analysis OR narrative OR interviews OR observations OR survey OR "focus groups")) NOT (palliative OR "end of life" "end-of-life" OR "advanced directives" OR child OR surgery OR emergency OR resuscitation OR terminal)) AND pd(20000101-20200630))

PsychINFO
https://www.apa.org/pubs/databases/psycinfo/index.aspx
(January 2000 to July 2020) 255 studies identified

Primary keywords and search string using "advanced search" tool; limited to abstracts:

1. ((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") ADJ10 (perspective* OR attitude* OR opinion* OR behavior* OR behaviour* OR practices))
2. (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) ADJ5 (values OR preferences))
3. (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")
4. (patient NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))
5. 1 and 2 and 3 and 4

Web of Science
http://apps.webofknowledge.com/
(January 2000 to July 2020) 231 studies identified

Primary keywords and search string:

(((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") NEAR/10 (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR practices)) AND ((integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) NEAR/5 ((patient* OR client* OR individual* OR consumer*) NEAR/3 (values OR preferences))) AND (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")) NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*)

Google Scholar
https://scholar.google.com/
(January 2000 to April 2020) 95 studies identified

Primary keywords and search strategy:

- Screened for “qualitative” and/or “review”
- Exact phrases "patient values" and/or "patient preferences"
- Must include “physician” "health professional" “doctor” “nurse” or variants
- Also included anything re. various types of cancers or "patient/physician communication & relationship" or "joint/shared decision-making" etc.
- Excluded "end of life" "terminal" "end stage" "directives" "advanced care planning" arthritis, fibromyalgia (non-top NCDs) or resuscitation

DARE – Database of Abstracts of Reviews for Effectiveness
https://www.crd.york.ac.uk/CRDWeb/
(January 2000 to July 2020) 19 studies identified

Primary keywords and search string; select DARE database only; publication year 2000 to 2020; search titles only:

((qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*") AND (physician* OR "health professional*" OR "healthcare

professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") AND (perspective* OR attitude* OR opinion* OR behavior* OR behavior*))

ERIC – Education Resources Information Center
https://eric.ed.gov/
(January 2000 to July 2020) 7 studies identified

Primary keywords and search string; full text available only:

("patients values" OR "patients preferences")

GreyLit
http://greylit.org/
(2000 to 2020) 1 study identified

Primary keywords and search string (note this database was discontinued in 2017, but remains searchable up to that date):

"patients preferences" (6 results) narrowed with additional keyword “values”

Forward-Backward Searches
(January 2000 to August 2020) 86 studies identified

Appendix C – Appraisal Checklist & Quality Assessment of Included Records

JBI Critical Appraisal Checklist for Qualitative Research

Reviewer_____Date_____

Author _____Year_____Record Number_____.

		Yes	No	Unclear	Not applicable
1.	Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2.	Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3.	Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4.	Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5.	Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6.	Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7.	Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8.	Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Quality Assessment of Included Records

Key to JBI Critical Appraisal Checklist for Qualitative Research	
JBI-Q1	Is there congruity between stated philosophical perspective and research methodology?
JBI-Q2	Is there congruity between research methodology and research question or objective?
JBI-Q3	Is there congruity between the research methodology and the data collection methods?
JBI-Q4	Is there congruity between the research methodology and the representation and analysis of data?
JBI-Q5	Congruity between the research methodology and the interpretation of results.
JBI-Q6	Is there a statement locating the researcher culturally or theoretically?
JBI-Q7	Is the influence of the researcher on the research, and vice-versa, addressed?
JBI-Q8	Are participants voices adequately represented?
JBI-Q9	Is the research ethical according to current criteria, or evidence of ethical approval by an appropriate body?
JBI-Q10	Do the conclusions flow from the analysis, or interpretation, of the data?

Author (Year)	Ref.	JBI-Q1	JBI-Q2	JBI-Q3	JBI-Q4	JBI-Q5	JBI-Q6	JBI-Q7	JBI-Q8	JBI-Q9	JBI-Q10
Aita V et al. (2005)	36	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Chhabra KR et al. (2012)	37	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Davis K et al. (2017)	38	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Elwyn G et al. (2000)	39	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Feiring E et al. (2020)	40	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Ford S et al. (2002)	32	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Ford S et al. (2003)	31	Yes	Yes	Yes	Yes	Yes	No	No	Yes	yes	Yes
Ford S et al. (2006)	41	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Friedberg MW et al. (2013)	42	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Golden SE et al. (2017)	43	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gruß I et al. (2019)	44	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Hall J et al. (2011)	45	Yes	Yes	Yes	Yes	Yes	No	No	No	N/A	Yes
Hart PL et al. (2014)	46	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hisham R et al. (2016)	47	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Jefford M et al. (2002)	48	Yes	Yes	Yes	Yes	Yes	No	No	No	N/A	Yes
Kennedy BM et al. (2017)	49	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Landmark AM et al. (2016)	50	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Lown B et al. (2009)	51	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
McLeod H et al. (2017)	33	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Murdoch J et al. (2020)	52	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Paiva D et al. (2019)	53	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Pieterse AH et al. (2011)	54	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes

Author (Year)	Ref.	JBI-Q1	JBI-Q2	JBI-Q3	JBI-Q4	JBI-Q5	JBI-Q6	JBI-Q7	JBI-Q8	JBI-Q9	JBI-Q10
Salter C et al. (2019)	55	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Schulman-Green DJ et al. (2006)	56	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Shepherd HL et al. (2011)	57	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Shortus T et al. (2011)	58	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tracy CS et al. (2003)	59	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Van Humbeeck et al. (2020)	60	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Vermunt N et al. (2019)	61	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Visser LNC et al. (2018)	62	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Zulman DM et al. (2020)	63	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Appendix D – Data Extraction Tool

Modified version of the JBI Data Extraction Tool

Item to be Extracted	Data
Study ID	
Publication Year	
Title	
Publication	
Study Reference in Full	
Study Aim/Objective/Phenomena of Interest	
Qual Methodology	
Qual Method(s)	
Analytical Approach	
HCP Participant Type	
No. HCP Participants	
Level of HCP Experience	
Setting (Clinical Context)	
Location (Geography)	
No. Practices/Sites/Clinics	
No. Clinical Consultations, Encounters, Interactions	
NCD Category	
Qual Findings	
Author Conclusions	
Reviewer Comments	
Extraction Completed Date	

Appendix E – Findings & Citations: Table of Approaches to Values Integration

Primary Themes	*Subthemes*	*Healthcare Professional Approaches/Behaviors*	*Citation(s)*
Approaches of CONCERN	Advocating	Advocating for the Patient	*Aita, Davis, Elwyn, Ford'02, Ford'03, Lown, Paiva, Tracy*
		Making Referrals, Seeking Second Opinions	*Aita, Chhabra, Ford'06, Friedberg, McLeod, Murdoch, Tracy, Visser*
	Caring & Connecting	Acting in a Relational Way	*Aita, Lown, Paiva, Zulman*
		Being Genuine/Sincere	*Aita, McLeod, Salter, Shortus, Van Humbeeck, Zulman*
		Comforting/Reassuring/Supporting the Patient	*Aita, Feiring, Ford'02, Ford'03, Friedberg, Grub, Hart, Jefford, Kennedy, Landmark, Lown, McLeod, Murdoch, Paiva, Pieterse, Salter, Schulman-Green, Shepherd, Tracy, Van Humbeeck, Visser, Zulman*
		Creating a Safe Space to Talk/Question/Disagree	*Chhabra, Elwyn, Feiring, Ford'02, Ford'03, Golden, Grub, Hisham, Jefford, Landmark, Lown, McLeod, Paiva, Pieterse, Salter, Shepherd, Tracy, Van Humbeeck*
		Expressive Touch	*Hall, McLeod, Zulman*
		Focus on Prevention	*Aita, Murdoch*
		Making the Patient Feel Comfortable	*Ford'02, Lown, McLeod, Visser*
		Mindfulness	*Grub, Lown, McLeod, Zulman*
		Seeing Patient Perspective/Having (vs. "showing/exhibiting/displaying") Empathy	*Aita, Davis, Elwyn, Ford'03, Friedberg, Golden, Grub, Hall, Kennedy, Landmark, Lown, McLeod, Murdoch, Paiva, Pieterse, Schulman-Green, Van Humbeeck, Vermunt, Visser, Zulman*
		Sharing Doctor's Own Personal Experiences, Making the Doctor Approachable	*Kennedy, McLeod*

Primary Themes	Subthemes	Healthcare Professional Approaches/Behaviors	Citation(s)
		Sharing Personal Interests, Feelings, Experiences	*Lown, McLeod*
		Showing/Exhibiting/Displaying (vs. "having") Compassion, Empathy, Caring	*Ford'03, Golden, Grub, Kennedy, Lown, McLeod, Murdoch, Paiva, Van Humbeeck, Visser, Zulman*
		Showing Curiosity About the Patient/Condition	*Hall, Zulman*
		Treating Patient as a Unique Person/Individual	*McLeod, Van Humbeeck*
		Valuing Feeling Comfortable	*McLeod, Pieterse, Visser*
	Empowering	Enabling Patient Self-Management, Patient Agency	*Chhabra, Feiring, Landmark, McCleod, Murdoch, Paiva, Salter*
		Establishing Equality	*Elwyn, Ford'03, Lown, McLeod, Murdoch, Van Humbeeck*
		Giving Patient Control, Final Say, Patient Empowerment	*Ford'02 Ford'03, Grub, Kennedy, Lown, McLeod, Murdoch, Salter, Shepherd, Van Humbeeck, Visser, Zulman*
		Having Patience, Letting the Patient Set the Pace	*Ford'03, McLeod, Visser*
		Invites Patient to Lead	*McLeod, Salter*
		Opportunities to Reconsider	*Elwyn, Ford'03, Pieterse*
		Recognizing, Confirming, Validating Patient Autonomy	*Chhabra, Elwyn, Ford'02, Ford'03, Ford'06, Jeffords, Lown, McLeod, Shortus, Van Humbeeck*
		Respectful Environments/Clinics/Waiting Rooms	*Aita, Ford'03, McLeod*
		Respecting Privacy	*Ford'03, McLeod, Van Humbeeck*
		Sharing Control Overall	*Lown, McLeod*
		Trusting/Respecting the Patient	*Elwyn, Ford'03, Ford'06, Golden, Hart, Kennedy, Lown, McLeod, Paiva, Shortus, Vermunt, Zulman*
		Valuing the Individual Patient	*Hart, McLeod*
	Inviting	Invite/Involve Carers/Caregivers	*Ford'03, Paiva*
		Invite/Involve Family/Loved Ones	*Chhabra, Davis, Elwyn, Friedberg, Golden, Hart, Lown, Paiva, Salter, Van Humbeeck, Visser, Zulman*
		Invite/Involve Others	*Elwyn*

Primary Themes	*Subthemes*		*Healthcare Professional Approaches/Behaviors*	*Citation(s)*
			Seeks Input from Colleagues and Other Experts	*Elwyn, Hisham*
	Listening		Active Listening, Without Interruption	*Elwyn, Ford'03, Ford'06, Hall, Landmark, Lown, McLeod, Paiva, Salter, Zulman*
			Silence, Attentive or As a Response to Emotion	*Visser, Zulman*
	Partnering		Develop Partnership with the Patient	*Aita, Elwyn, Kennedy, McLeod, Zulman*
			Forms Therapeutic Alliance/Relationship with Patient	*McLeod, Paiva*
			Mutual Respect Between Patient and HCP	*Elwyn, Ford'03, McLeod, Paiva, Vermunt*
			Personalizing Approach/Decisions/Care	*Chhabra, Feiring, Friedberg, Jefford, McLeod, Murdoch, Paiva, Salter, Shortus, Van Humbeeck, Zulman*
			Takes the Long-Term View	*Davis, Golden, Murdoch, Schulman-Green, Shortus*
			Understanding the Patient	*Davis, Elwyn, Feiring, Ford'03, Ford'06, McLeod, Friedberg, Golden, Kennedy, Landmark, Lown, Salter, Van Humbeeck, Visser, Zulman*
	Sensing		Cultural Sensitivity	*Aita, Hart, Kennedy, Lown, McLeod, Shepherd,*
			Interpersonal Sensitivity, Overall Concern	*Ford'03, Hall, McLeod, Paiva, Pieterse, Zulman*
			Non-Judgmental	*Lown*
			Respect/Include Religion	*McLeod, Van Humbeeck*
			Using Intuition	*Tracy*
Approaches of COMPETENCE	Decision Making	Decision Support	Patient Decision Aids/Tools	*Davis, Ford'03, Friedberg, Grub, Jefford, Lown, McLeod, Shortus, Vermunt*
			Stories, Vivid Descriptions	*Aita, Ford'03, Landmark, Lown, McLeod, Paiva*
		Directing	Giving an Opinion to the Patient	*Ford'03, Fored'06, Landmark, Lown, McLeod, Tracy*
			Listing	*Elwyn, Salter*
			Making Recommendations	*Aita, Chhabra, Davis, Feiring, Ford'03, Friedberg, Golden,*

Primary Themes	Subthemes		Healthcare Professional Approaches/Behaviors	Citation(s)
				Kennedy, Landmark, McLeod, Murdoch, Paiva, Pieterse, Schulman-Green, Shepherd, Shortus, Tracy, Vermunt
		Sharing Decisions	Competence with Research Evidence	*Elwyn, Ford'02, Ford'06, McLeod*
			Formulating the Patient's Stance/Priorities	*Grub, Landmark, Murdoch*
			Negotiate Decisions	*Aita, Elwyn, Ford'03, Hall, Landmark, Lown, McLeod, Murdoch, Paiva, Salter, Shepherd, Shortus, Tracy, Vermunt*
			Shared Decision-Making (SDM)	*Chhabra, Davis, Elwyn, Ford'02, Ford'03, Ford'06, Friedberg, Golden, Grub, Hall, Jefford, Landmark, Lown, McLeod, Murdoch, Paiva, Pieterse, Salter, Schulman-Green, Shepherd, Shortus, Van Humbeeck, Vermunt, Visser, Zulman*
			Understanding Diseases/Treatments	*Ford'03, Davis, Elwyn, Feiring, Golden, Grub, Kennedy, McLeod*
	Managing	Agenda Setting	Mutual Agenda Setting	*Ford'06, McLeod, Murdoch, Salter, Shortus, Zulman*
			Mutually Set Priorities	*Aita, Lown, McLeod, Murdoch, Salter, Shortus, Vermunt, Zulman*
		Emotions	Anxiety (Prevent, Recognize or Reduce)	*Chhabra, Davis, Elwyn, Feiring, Ford'03, Golden, Hall, Jefford, Landmark, Salter, Shepherd, Tracy, Visser, Zulman*
			Distress Management	*Chhabra, Golden, Hall, Jefford, Kennedy, McLeod, Paiva, Visser, Zulman*
			Processing Emotions	*Hall, Landmark, Lown, McLeod, Paiva, Visser, Zulman*
		Negotiating	Assess, Evaluate Treatment Options	*Davis, Friedberg, Golden, Grub, McLeod, Murdoch, Pieterse,*

Primary Themes	Subthemes		Healthcare Professional Approaches/Behaviors	Citation(s)
				Salter, Shepherd, Vermunt
			Deliberate, Weigh, Negotiate Options	*Davis, Elwyn, Ford'03, Friedberg, Golden, Grub, Landmark, McLeod, Pieterse, Shepherd*
			Contesting Patient Understanding/Responses	*Murdoch, Pieterse, Salter*
			Discuss Pros/Cons of Options	*Chhabra, McLeod, Shepherd, Van Humbeeck, Vermunt*
			Giving, Outlining, Providing Options	*Davis, Chhabra, Elwyn, Ford'02, Ford'03, Friedberg, Golden, Grub, Jefford, McLeod, Pieterse, Shortus, Tracy, Van Humbeeck*
			Handling Agreement & Disagreement	*Chhabra, Landmark, Lown, McLeod, Pieterse, Schulman-Green, Shortus*
			Mutual Agreement	*Pieterse*
			Negotiate Roles/Responsibilities of Patient and HCP	*Elwyn, Lown, Murdoch, Salter, Shepherd*
		Planning & Preparing	Action Plans	*Elwyn, Feiring, Murdoch, Salter, Vermunt*
			Agreeing on Priorities	*Aita, McLeod, Ford'06, Lown, Murdoch, Salter, Shortus, Van Humbeeck, Vermunt, Zulman*
			Arranging Follow-Up	*Elwyn, Ford'03, Ford'06, Golden, Landmark, Lown, McLeod, Salter, Shepherd, Vermunt*
			Mutual Planning	*McLeod, Paiva, Salter, Schulman-Green, Shortus*
			Collaborative Goal Setting	*Murdoch, Paiva, Salter, Vermunt*
			Prepare for the Consultation	*Ford'03, Salter, Shortus Zulman*
			Preparing for Personalization	*Shortus, Zulman*
		Processing	Actively Manage the Patient's Involvement	*Shortus*
			Allowing/Investing Time	*Friedberg, Lown, McLeod, Salter*
			Coordination/Continuity of Care	*Aita, Davis, Feiring, Ford'03, Friedberg, Landmark, McLeod, Salter*
			Don't Rush, Take Time	*Ford'03, Lown, McLeod, Schulman-Green*

Primary Themes	*Subthemes*	*Healthcare Professional Approaches/Behaviors*	*Citation(s)*
		EHR, Recording, Record-Keeping Documenting	*For'02, Friedberg, Hisham, Jefford, McLeod, Zulman*
		Following-Up	*Davis, Elwyn, Feiring, Ford'03, Ford'06, Golden, Landmark, McLeod, Pieterse, Vermunt*
		Keeps a Long-Term Focus	*David, Murdoch, Schulman-Green, Shortus*
		Leaving Time for Questions	*Golden*
		Systematic Process, Stages, Approaches to the Consultation and Care	*Vermunt*
	Professionalism	Being Consistent with Information/Care/Decisions	*Paiva, Vermunt*
		Honesty and Transparency	*Feiring, Ford'03, Golden, Jefford, Lown, McLeod, Shortus, Van Humbeeck*
		Responsiveness	*Aita, Jefford, McLeod, Pieterse, Shepherd, Shortus, Van Humbeeck, Vermunt*
		Realistic Approach the Patient, Care	*Aita, Jefford, Murdoch, Pieterse, Salter, Shortus, Tracy*
Approaches of COMMUNICATION	Acknowledging	Acknowledging Patient's Role, Effort	*Ford'03, Grub, Hart, Lown, McLeod, Murdoch, Visser, Zulman*
		Celebrating Successes	*McLeod, Zulman*
		Legitimizing Personal Preferences, Validating the Patient	*Landmark, Lown, McLeod, Murdoch, Pieterse, Salter, Tracy, Zulman*
		Reassurances	*Ford'03, Kennedy, Landmark, McLeod, Pieterse, Salter, Tracy, Van Humbeeck, Visser, Zulman*
		Showing Own Emotions	*Hall, Landmark, Lown, McLeod, Visser, Zulman*
		Showing Understanding	*Chhabra, Davis, Elwyn, Fore'03, Grub, Jefford, Kennedy, Landmark, Lown, McLeod, Murdoch*
		Valuing, Acknowledging, Validating, Responding to Patient Emotions	*Aita, Chhabra, Feiring, Ford'02, Ford'03, Grub, Hall, Jefford, Landmark, Lown, McLeod, Paiva, Visser, Zulman*
	Clarifying	Checking, Rechecking	*Elwyn, Ford'03, Ford'06, Landmark,*

Primary Themes	Subthemes		Healthcare Professional Approaches/Behaviors	Citation(s)
				Murdoch, Paiva, Pieterse
			Clarifying Values, Preferences, Views	*Elwyn, Ford'03, Friedberg, Landmark, Lown, Murdoch, Pieterse, Vermunt*
			Framing & Reframing	*Elwyn, Golden, Landmark, McLeod, Murdoch, Vermunt, Zulman*
			Repeating	*Paiva, Pieterse*
			Revisiting (Decisions Over Time)	*McLeod, Shortus*
	Encouraging		Approving/Amplifying Patient Appraisals/Choices	*Pieterse*
			Encouraging/Inviting Patient Comments/Questions	*Chhabra, Fored'03, Jefford, Hisham, Landmark, McLeod, Murdoch, Pieterse, Salter*
			Encouraging Patient to Prepare	*Murdoch, Salter*
			Encouraging Storytelling	*McLeod*
			Inviting Patient Participation	*Chhabra, McLeod, Pieterse, Salter*
			Motivational Interviewing	*McLeod, Paiva, Zulman*
	Exchanging Information	Defining	Explain, Define, Describe the Problem for Patient	*Elwyn, Ford'03, Kennedy, Vermunt*
			Inform Patient of Condition/Diagnosis/Biomedical	*Aita, Ford'03, Grub, McLeod, Murdoch, Salter, Schulman-Green, Shortus*
		Educating	Coaching	*Jeffords, Zulman*
			Information Giving	*Golden, Grub, Jefford, McLeod, Paiva, Van Humbeeck, Visser*
			Information/Education Aids, Materials, Tools	*Davis, Golden, Jefford, McLeod, Zulman*
			Patient Education	*Chhabra, Davis, Feiring, Friedberg, Vermunt*
			Sharing Knowledge with the Patient	*Ford'03, Golden, McLeod, Paiva*
		Interviewing & Eliciting	Eliciting Goals	*Aita, Chhabra, Grub, Lown, McLeod, Murdoch, Salter, Schulman-Green, Shortus, Vermunt, Zulman*
			Eliciting Patient Appraisals (Strengths of Preferences)	*Pieterse*
			Eliciting Preferences	*Chhabra, Davis, Elwyn, Ford'02, Ford'03, Ford'06, Friedberg, Golden Grub, Hart, Hisham, Jefford,*

Primary Themes	Subthemes		Healthcare Professional Approaches/Behaviors	Citation(s)
				Kennedy, Landmark, Lown, McLeod, Murdoch, Pieterse, Salter, Schulman-Green, Shepherd, Shortus, Tracy, Van Humbeeck, Vermunt, Visser, Zulman
			Eliciting Values	*Aita, Chhabra, Davis, Elwyn, Ford'02, Ford'03, Friedberg, Golden, Grub, Hart, Hall, Hisham, Kennedy, Landmark, Lown, McLeod, Murdoch, Schulman-Green, Tracy, Van Humbeeck, Vermunt*
			Eliciting Circumstances	*Aita, Salter, Schulman-Green, Tracy, Zulman*
			Eliciting Patient Feelings	*Feiring, Golden, Hall, Landmark, Lown, McLeod, Pieterse, Visser*
			Patient-Centered Interviewing	*Aita, Paiva, Vermunt, Zulman*
		Presenting Evidence	Discussing Risks/Benefits/Side-Effects/Trade-Offs	*Chhabra, Elwyn, Ford'02, Ford'03, Friedberg, Golden, Jefford, Lown, McLeod, Paiva, Pieterse, Shepherd, Vermunt*
			Presenting, Sharing, Explaining Evidence	*Ford'03, Friedberg, Grub, McLeod, Pieterse, Tracy, Vermunt*
			Willingness to See More Information, Encourages Patient to Look for More Information	*Ford'03, Jefford, Lown, Visser*
	Exploring		Asking Questions	*Chhabra, Ford'02, Ford'03, Jefford, McLeod*
			Assessing Values, Preferences, Expectations	*Ford'03, Grub, Landmark, Shepherd*
			Explore Ideas, Perspective, Alternatives	*Elwyn, Landmark, Shepherd, Visser*
			Explore Cues and Clues (Verbal and Non-Verbal)	*Chhabra, Elwyn, Ford'03, Hall, Kennedy, McLeod, Salter, Visser, Zulman*
			Explore Fears, Concerns, Distresses, Emotions	*Elwyn, Ford'02, Ford'03, Ford'06, Golden, Lown, Salter, Visser, Zulman*
			Signaling (Pausing, Thinking Out Loud, Non-Verbal Cues)	*Chhabra, Elwyn, Jefford, Hall, McLeod, Murdoch, Pieterse, Visser, Zulman*

Primary Themes	*Subthemes*	*Healthcare Professional Approaches/Behaviors*	*Citation(s)*
	Language	Deferential Language	*Chhabra*
		Directive Language	*Ford'02*
		Emotion-Oriented Speech	*Visser*
		Use Common Language, No Jargon	*Lown, Paiva, Pieterse*
		Using Inviting Language	*Chhabra*
		Variations in Tone of Voice	*Hall, McLeod, Visser, Zulman*
	Summarizing	Highlight/Repeat Patient's Appraisal/Choice	*Pieterse*
		Providing Summaries to the Patient (Written or Audio)	*Hart, Jefford*
		Summarizing in the Encounter	*Landmark*
Approaches of CONGRUENCE	Adjusting & Tailoring	Adjust Approach Based on Patient's Needs, Values, Preferences	*Ford'03, Hall, Jefford, Lown, Paiva, Visser, Zulman*
		Tailor Options for the Patient	*Elwyn, Feiring, Ford'03, Friedberg, Golden, Hart, McLeod, Paiva, Pieterse, Shepherd, Shortus, Van Humbeeck, Zulman*
	Balancing & Flexibility	Flexibility In Overall Approach to Care	*Aita, Elwyn, Ford'02, Ford'03, Ford'06, McLeod, Shortus, Tracy, Van Humbeeck, Vermunt, Visser*
		Balancing Information, Issues, Needs, Power, and Responsibilities	*Ford'03, Friedberg, Golden, Grub, Hisham, Jefford, Lown, McLeod, Paiva, Pieterse, Salter, Shortus*

PRISMA 2020 for Abstracts Checklist **[For: Tringale, Michael et al, bmjopen-2022-067268]**

Section and Topic	Item #	Checklist item	Reported (Yes/No)
TITLE			
Title	1	Identify the report as a systematic review.	P. 6
BACKGROUND			
Objectives	2	Provide an explicit statement of the main objective(s) or question(s) the review addresses.	P. 6
METHODS			
Eligibility criteria	3	Specify the inclusion and exclusion criteria for the review.	P. 7
Information sources	4	Specify the information sources (e.g. databases, registers) used to identify studies and the date when each was last searched.	P. 6
Risk of bias	5	Specify the methods used to assess risk of bias in the included studies.	P. 7
Synthesis of results	6	Specify the methods used to present and synthesise results.	P. 6-7
RESULTS			
Included studies	7	Give the total number of included studies and participants and summarise relevant characteristics of studies.	P. 7
Synthesis of results	8	Present results for main outcomes, preferably indicating the number of included studies and participants for each. If meta-analysis was done, report the summary estimate and confidence/credible interval. If comparing groups, indicate the direction of the effect (i.e. which group is favoured).	P. 7
DISCUSSION			
Limitations of evidence	9	Provide a brief summary of the limitations of the evidence included in the review (e.g. study risk of bias, inconsistency and imprecision).	P. 8
Interpretation	10	Provide a general interpretation of the results and important implications.	P. 7
OTHER			
Funding	11	Specify the primary source of funding for the review.	P. 37
Registration	12	Provide the register name and registration number.	P. 8

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: http://www.prisma-statement.org/

PRISMA 2020 Checklist (Modified for Qualitative Synthesis)

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review of qualitative evidence.	P. 6
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	P. 6-8
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	P. 9-11
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	P. 11
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	P. 12-13
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	P. 12
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	P. 12 and Appendix B
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	P. 12-13
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	P. 12-13
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	P. 14
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	P. 14
Study risk of bias assessment	11	Specify the methods used to assess quality of the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	P. 13-14
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Not applicable
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	P. 12-13
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	P. 12-13
	13c	Describe any methods used to synthesize or visually display results of individual studies and syntheses.	P. 12-13
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	P. 11-15
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Not applicable
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Not

PRISMA 2020 Checklist (Modified for Qualitative Synthesis)

Section and Topic	Item #	Checklist item	Location where item is reported
			applicable
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	P. 35-36 "Reflexivity Statement"
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	P. 13-14
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	P. 15-16
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	P. 32
Study characteristics	17	Cite each included study and present its characteristics.	P. 17-18 Table 1
Risk of bias in studies	18	Present assessments of quality for each included study.	P. 16 and Appendix C
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Summary of Complete Findings, Appendix E
Results of syntheses	20a	For each synthesis, briefly summarise the methodological quality among contributing studies.	Appendix C
	20b	Present results of all qualitative syntheses conducted.	P. 19-30 and Table 2
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Not Applicable
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Not Applicable
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	P. 35-36 "Reflexivity Statement"
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	P. 16 and Appendix C
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	P. 30-32
	23b	Discuss any limitations of the evidence included in the review.	P. 30-32
	23c	Discuss any limitations of the review processes used.	P. 32-33
	23d	Discuss implications of the results for practice, policy, and future research.	P. 33-35
OTHER INFORMATION			

PRISMA 2020 Checklist (Modified for Qualitative Synthesis)

Section and Topic	Item #	Checklist item	Location where item is reported
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	P. 8, 11 and Appendix A
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	P. 8, 11 and Appendix A
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	P. 8, 11 and Appendix A
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	P. 37
Competing interests	26	Declare any competing interests of review authors.	P. 37
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	P. 37

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

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BMJ Open

Integrating Patient Values and Preferences in Health Care: A Systematic Review of Qualitative Evidence

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TITLE

Integrating Patient Values and Preferences in Health Care: A Systematic Review of Qualitative Evidence

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ABSTRACT

Objectives - To identify and thematically analyze how healthcare professionals (HCPs) integrate patient values and preferences ("values integration") in primary care for adults with noncommunicable diseases (NCDs).

Design – Systematic review and meta-aggregation methods were used for extraction, synthesis, and analysis of qualitative evidence.

Data sources – Relevant records were sourced using keywords to search 12 databases (ASSIA, CINAHL, DARE, EMBASE, ERIC, Google Scholar, GreyLit, Ovid-MEDLINE, PsycINFO, PubMed-MEDLINE, Scopus, and Web of Science).

Eligibility criteria – Records needed to be published between 2000-2020 and report qualitative methods and findings in English involving HCP participants regarding primary care for adult patients.

Data extraction and synthesis – Relevant data including participant quotations, authors' observations, interpretations, and conclusions were extracted, synthesized, and analyzed in a phased approach using a modified version of the Joanna Briggs Institute (JBI) Data Extraction Tool, as well as EPPI Reviewer and NVivo software. The JBI Critical Appraisal Checklist for Qualitative Research was used to assess methodological quality of included records.

Results – Thirty-one records involving more than 1,032 HCP participants and 1,823 HCP-patient encounters were reviewed. Findings included 143 approaches to values integration in clinical care, thematically analyzed and synthesized into four themes: (1) *Approaches of Concern*; (2) *Approaches of Competence*; (3) *Approaches of Communication*; and, (4) *Approaches of Congruence*. Confidence in the quality of included records was deemed high.

Conclusions – HCPs incorporate patient values and preferences in health care through a variety of approaches including showing concern for the patient as a person, demonstrating competence at managing diseases, communicating with patients as partners, and tailoring, adjusting, and balancing overall care. Themes in this review provide a novel framework for understanding and addressing values integration in clinical care and provide useful insights for policymakers, educators, and practitioners.

Protocol registration – No. CRD42020166002 on PROSPERO international prospective register of systematic reviews https://www.crd.york.ac.uk/prospero/ (supplemental appendix A).

Strengths and limitations of this study

- This is the first systematic review to identify and thematically analyze approaches to values integration in clinical care.
- An extensive search strategy and well-defined study selection criteria were employed to find qualitative evidence related to this topic.
- Systematic, transparent methods were used to appraise the quality of included records, extract, and analyze data.
- Thematic analysis can present limitations as it involves subjective interpretation of previously reported evidence.

INTRODUCTION

The practice of evidence-based medicine (EBM) calls for patient values and preferences to be considered and integrated by clinicians alongside the best available research and clinical expertise. [1] These three forces comprise the EBM "triad" (figure 1) and, when conscientiously and judiciously applied [2] by health care professionals (HCPs), it is believed that optimal patient-centered care can be achieved. [3]

Figure 1 – The Evidence-Based Medicine (EBM) Triad

(FIGURE 1 HERE)

Delivering patient-centered care relies on understanding the patient's values and preferences at every stage, [4] but acquiring this knowledge is challenging. Patients and their needs are heterogenous, difficult to predict, subject to change, and dependent on a many factors. [5]

Patient values and preferences are the unique understandings, preferences, concerns, expectations, and life circumstances of each patient. [6] *Values* are defined as a patient's attitudes and perceptions about certain health care options, and *preferences* are their preferred choices after accounting for their values. [7]

A recent systematic review of qualitative studies identified a taxonomy of what patients say they value in health care including uniqueness, autonomy, compassion, professionalism, responsiveness, partnership, and empowerment. [8] While this is useful for understanding what patients value and prefer, the question remains: How do HCPs *integrate* values and preferences into clinical care for individual patients? Very little research has been done on this critical component of EBM.

Research evidence (especially quantitative research, randomized controlled trials [RCTs] in particular) [9] has received most of the attention in EBM, with less systematic consideration given to values integration which has been "almost completely ignored" [10] resulting in a paucity of data on values integration in clinical decision-making. [11]

Research on patient values and preferences – and how HCPs approach values integration – tends to be reliant on qualitative evidence, [8] a level of evidence that does not appear in the standard EBM hierarchy of evidence. [12-14] Considerations for patient values and preferences are seldom encoded into clinical practice guidelines [15] and there are no established methods for addressing values integration when developing guidelines. [16]

Noncommunicable diseases (NCDs), also known as chronic diseases, are defined by the World Health Organization (WHO) as conditions of long duration resulting from a number of physical, behavioral, or environmental factors, and account for 7-out-of-10 deaths worldwide. [17] The four most common categories of NCDs include cancers, diabetes, cardiovascular (CV) diseases, and chronic respiratory diseases. These are often managed in primary and secondary care settings [18] and require ongoing therapeutic relationships involving more frequent HCP-patient interaction which makes values integration even more important.

Improvements in patient-centered care can lead to improved outcomes including lowering readmission rates, decreasing hospital lengths-of-stay, reducing mortality, and better management of chronic diseases overall.[17] Therefore, understanding how to better incorporate patient values and preferences in health care is an essential skill that can improve clinical outcomes [19] and patient satisfaction [20] to help reduce the burden of NCDs.

The primary objective of this review is to identify and thematically analyze how HCPs integrate patient values and preferences in primary care for adults with NCDs.

METHODS

Methodology

This review utilized a meta-aggregation methodology. [21] A protocol was prospectively published on the PROSPERO international register of systematic reviews, https://www.crd.york.ac.uk/prospero/ registration No. CRD42020166002 (supplemental appendix A).

Participants and phenomena of interest

Participants included practicing HCPs in primary and secondary care: professionals with experience in direct patient care in non-inpatient and non-emergency settings, including doctors, nurses, and other clinicians. [22] Phenomena of interest included HCP approaches, behaviors, attitudes, perceptions, experiences, perspectives, opinions, and observations regarding values integration in clinical care.

Information sources and search strategy

Authors were interested in current relevant practice so this review's pre-planned search considered studies and other evidence published between January 2000 and August 2020 with full text available in English reporting data derived from HCP participants. Only studies using qualitative methods including, but not limited to, interviews, focus groups, direct observations, surveys, narrative reviews, or content analysis were included.

Search terms were identified and adapted from an initial scoping of databases and an analysis of text from titles, abstracts, and index terms, followed by a systematic literature search of 12 databases (ASSIA, CINAHL, DARE, EMBASE, ERIC, Google Scholar, GreyLit, Ovid-MEDLINE, PsycINFO, PubMed-MEDLINE, Scopus, and Web of Science). The search was tailored to the unique formats, operators, and conventions of each database using a variety of search terms related to participants, phenomena of interest, context, setting, and qualitative methodologies and methods (supplemental appendix B).

Study eligibility and selection

Two reviewers (MT and GS) participated in a four-stage screening and selection process utilizing the EPPI Reviewer software [23] including independent double-screening [24] of ten percent of initial abstracts and titles, single screening of remaining titles and abstracts, full-text screening of all records not yet excluded, and forward-backward search and screening of additional citations. Conflicts among screeners were resolved by conference and mutual agreement or by a third reviewer. Inclusion/exclusion criteria were pre-determined by reviewers including:

- Evidence type (Excluded records that did not use any qualitative methods and did not report qualitative findings);
- Date (Excluded records published before the year 2000);
- Language (Excluded records for which full text was not available in the English language);
- Phenomena of interest (Excluded records that did not report findings related to

incorporating patient values and preferences);

- Target group (Excluded records that did not involve HCP participants, or were not concerned with HCP interactions with adult patients);
- Disease/condition type (Excluded records that did not refer to primary or secondary care or one of the top four most common NCD categories [oncology (cancers), cardiovascular, endocrine related (diabetes), and respiratory]).

Appraisal of quality

The objectivity of qualitative research can be strengthened through the use of quality methods.[25] This review utilized the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Qualitative Research, [21, 26, 27] a validated tool to help determine the methodological quality of included records in systematic reviews (supplemental appendix C).

Extraction, synthesis, and analysis

This review employed meta-aggregative methods for extraction, synthesis, and analysis. [21] Data including participant quotations, authors' observations, interpretations, and conclusions were extracted in a phased approach using a modified version of the JBI Data Extraction Tool [27] (supplemental appendix D). One author with experience in qualitative methods and coding conducted line-by-line coding using NVivo [28] computer software allowing for simultaneous coding and an initial synthesis of the information. [29]

Using an inductive approach, extraction began with reading and re-reading records to become familiar with the content followed by hand-coding of all records. This enabled the

development of a preliminary coding scheme for organizing and managing data in NVivo, wherein the author continued to inductively and iteratively code the data. Codes were collated, analyzed, grouped, and categorized into a number of increasingly narrow sets of codes based on statements and ideas across data. Themes, developed from the codes, were further synthesized based on patterns and similarities in their meaning to arrive at a final set of primary themes that could be used as a basis for a meaningful summary and interpretation. Themes were only considered if there were two or more codes underlying the theme.

Excluded data

Some records reported mixed methods, but quantitative data and/or data not derived from HCP participants was excluded from this review.

Patient and public involvement

It was not appropriate or possible to involve patients or the public in the design, conduct, reporting, or dissemination plans of this systematic review. However, a minority of the included records reported patient and public involvement in their methods.

RESULTS

Included records

The initial search identified 3,331 records and after full text screening 31 records were included (figure 2*).* [30] No systematic review regarding values integration was published between 2000 to 2020.

Characteristics of included records

Most records were peer-reviewed published reports of original research (two are separate reports from the same study [31, 32]), and one was an unpublished dissertation [33] (table 1). The most common methods of data collection were interviews (in-depth, semi-structured [in-person and telephone]) in 17 studies, [31, 32, 34-48] observations (real-time, in-person, or audio/video recordings) in nine studies, [33, 34, 39, 48-53] and focus groups in six studies. [40, 41, 54-57] Other methods included surveys, [45, 55, 58] Delphi technique, [45, 48] narrative description, [34] narrative review, [59] document analysis, [36] evidence review, [60] research work groups, [61] chart audits, [34] note taking, [34] and Video Reflexive Ethnography (VRE). [62] Nine studies employed more than one method. [33, 34, 36, 39-41, 45, 48, 55]

At least 1,032 HCP participants are represented in the included records, including 477 nurses/nurse practitioners, 417 physicians, and 138 other HCP types including allied health professionals, pharmacists, clinical administrators, nutritionists, social workers, and patient decision coaches. At least 1,823 HCP-patient consultations, encounters, or interactions (either observed or described) in various clinical settings are represented in the records.

Nearly half of the studies included were conducted in North America with 15 in the United States of America (USA) and two in Canada, followed by five in the United Kingdom (UK), three in Australia, three in the Netherlands, two in Norway, and one each in Belgium, Italy, Malaysia, and Portugal.

Methodological quality of included records

Confidence in the quality of included records was deemed high. Most used appropriate qualitative methodologies, methods, and analytical approaches, resulting in meaningful findings and conclusions. However, most records failed to provide adequate reflexive statements locating researchers theoretically or culturally, and also failed to address the researchers' influence on the research and vice-versa (supplemental appendix C).

Figure 2 – PRISMA Flow Diagram

(FIGURE 2 HERE)

1 *Table 1 – Characteristics of Included Records*

Author (Year)	Ref.	Method(s)	Analytical Approach	HCPs (n)	Practice Setting(s)	HCP Experience	Encounters Observed	Location	Number of Findings (Appendix E)
Aita V (2005)	34	Chart Audits, Interviews, Narrative Descriptions, Note Taking, Participatory Observations	Coding, Group Analysis, Themes	Physicians (44)	18 Family Practice Clinics	Unspecified	1500	USA	25
Chhabra KR (2012)	49	Observations of Audio-Recorded Consultations	Theme-Oriented Discourse Analysis	Oncologists (15)	2 Cancer Centers	Unspecified	20	USA	27
Davis K (2017)	35	Semi-Structured Interviews	Coding, Themes	Physicians (33)	Multiple Clinics in 2 HMO Territories	Mean 13-20yrs	N/A	USA	20
Elwyn G (2000)	54	Focus Groups	Codes, Themes	GPs (6)	6 Service Settings	Mean 12yrs	N/A	UK	40
Feiring E (2020)	36	Document Analysis, In-Depth Interviews	Thematic Analysis	Various (8)	4 Specialist Institutions	Unspecified	N/A	Norway	16
Ford S (2002)*	32	Semi-Structured Interviews	Constant Comparative Analysis	Various (37)	Hospitals & Clinics	Unspecified	N/A	UK	17
Ford S (2003)*	31	Semi-Structured Interviews	Constant Comparative Analysis	Various (37)	Hospitals & Clinics	Unspecified	N/A	UK	54
Ford S (2006)	50	Observation of Video-Taped Consultations	Thematic Coding	GPs (13)	12 GP Surgeries	Unspecified	149	UK	16
Friedberg MW (2013)	37	Semi-Structured Interviews	Codes, Themes	Various (23)	8 Primary Care	Unspecified	N/A	USA	23
Golden SE (2017)	38	Interviews	Directed Content Analysis	Various (20)	7 Medical Centers	Mean 12yrs	N/A	USA	30
Gruß I (2019)	39	Observations, Semi-Structured Interviews	Codes, Template Analysis	Physicians (8)	1 Cancer Clinic	Unspecified	8	USA	24
Hall J (2011)	59	Narrative Review	Narrative Review	Various (Unspecified)	N/A	N/A	N/A	USA	18
Hart PL (2014	58	Mail Survey	Thematic Analysis	Nurses (374)	Hospital (43%) Non-Hospital (57%)	Mean 22.4yrs	N/A	USA	10
Hisham R (2016)	40	Focus Groups, In-Depth Interviews	Thematic Analysis	Physicians (18)	2 Rural Clinics	Mean 6.2yrs	N/A	Malaysia	7
Jefford M (2002)	60	Review	Review	Doctors (Unspecified)	Unspecified	Unspecified	N/A	Australia	27
Kennedy BM (2017)	55	Focus Groups, Survey	Thematic Categorization	Various (7)	1 Rural Clinic	Median 12yrs	N/A	USA	18
Landmark AM (2016)	51	Observations of Video-Recorded Encounters	Conversation Analysis	Physicians (17)	1 University Hospital	Unspecified	17	Norway	34

Lown B (2009)	61	Research Work Groups	Constant Comparative Analysis and Grounded Theory	PCPs (41)	Hospital-Based Practices	"At Least >3yrs Post-Residency"	N/A	USA	49
McLeod H (2017)	33	Observations of Video-Recorded Encounters, Video-Reflexive Ethnography (VRE)	Grounded Theory	PCPs (17)	1 Hospital-Based Clinic	Unspecified	15	USA	89
Murdoch J (2020)	52	Observations of Video-Recorded Consultations	Conversation Analysis	GPs (5)	3 General Practices	Range <10 to >20yrs	22	UK	37
Paiva D (2019)	56	Focus Groups	Grounded Theory	Various (12)	1 Institution	Range 1 to >10yrs	N/A	Portugal	36
Pieterse AH (2011)	53	Observations of Video-Recorded Consultations	Coded & Categorized Observations	Radiation Oncologists (10)	1 Hospital	Median 7yrs	25	Nether-lands	35
Salter C (2019)	41	Focus Group, Interview, Observations of Video-Recorded Consultations	Thematic Analysis	GPs (5)	3 General Practices	Range <10 to >20yrs	40	UK	40
Schulman-Green DJ (2006)	57	Focus Groups	Content Analysis	Various (11)	Hospital-Affiliated Practices	Unspecified	N/A	USA	14
Shepherd HL (2011)	42	Telephone Interviews	Framework Analysis	Physicians (22)	Unspecified	Mean 24yrs	N/A	Australia	19
Shortus T (2011)	43	In-Depth Interviews	Grounded Theory, Constant Comparison	Various (29)	"...a range of clinical settings..."	"...a range of clinical experience..."	N/A	Australia	29
Tracy CS (2003)	44	Semi-Structured Interviews	Constant Comparative Method	FPs (15)	15 Practices	Range 2-32yrs	N/A	Canada	18
Van Humbeeck L (2020)	45	Delphi, Cognitive Interviewing, Survey	Thematic Analysis	Various (174)	2 Hospitals	Range <1 to >21yrs	N/A	Belgium	26
Vermunt N (2019)	46	Semi-Structured Interviews	Framework Analysis	Physicians (33)	Hospitals and Community Clinics	Range 3-34yrs	N/A	Nether-lands	29
Visser LNC (2018)	47	Semi-Structured Interviews	Content Analysis	Oncologists (13)	Academic and General Hospitals	Range 4-41yrs	N/A	Nether-lands	31
Zulman DM (2020)	48	Delphi, Interviews, Observations	Evidence Review	Physicians (18)	Primary Care Clinics at 1 Academic Medical Center, 1 VA Hospital, 1 Federally Qualified Health Center	Unspecified	27	USA	47

*Ford 2002 and Ford 2003 are two reports from the same study. (CV "Cardiovascular;" DAS-O "Decision Analysis System for Oncology;" GP "General Practitioner;" HCP "Health Care Professional;" HCP Experience Early Career <11yrs, Mid-Career 11-20yrs, Late Career ≥21yrs [63]; HMO "Health Maintenance Organization;" N/A "Not Applicable;" PCP "Primary Care Physician;" SD "Standard Deviation;" VA "Veteran's Administration;" VRE "Video-Reflexive Ethnography")

FINDINGS

This review identified 143 approaches – specific behaviors, actions, practices, or experiences of HCPs – to integrating patient values and preferences in clinical care. These were thematically analyzed and synthesized into four primary themes – approaches of Concern, Competence, Communication, and Congruence – and several subthemes (table 2). See supplemental appendix E for a complete list of approaches.

Table 2 – Taxonomy of Themes: Approaches to Values Integration

CONCERN	COMPETENCE	COMMUNICATION	CONGRUENCE
• Advocating • Caring & Connecting • Empowering • Inviting • Partnering • Sensing	• Decision Making • Managing • Professionalism	• Acknowledging • Clarifying • Encouraging • Exchanging Information • Exploring • Language • Listening • Summarizing	• Adjusting & Tailoring • Balancing & Flexibility

Approaches of CONCERN

HCPs incorporate patient values and preferences when they demonstrate concern for the patient as a unique individual and as a partner in their own care, and show concern for diseases and their effects on the patient.

This includes **advocating** on a patient's behalf, [61] such as talking to HCP colleagues to get additional insights, making referrals to other specialist, or advocating for second opinions on conditions and treatments. [44]

"Advocates for the patient (includes willingness to circumvent or adapt the system)" and "Physicians' advocacy within (or around) the health-care system helps patients implement jointly negotiated decisions." [61]

HCPs use **caring and connecting** behaviors like acting in a sincere, [45] relational, [61] and empathetic manner, making the patient feel comfortable and creating a safe space to talk, question, and/or disagree, [33] and using expressive touch. [48] Treating the patient as unique [45] and seeing the patient's perspective [48] are also approaches that demonstrate concern which can include HCPs sharing their own personal experiences, interests, or feelings. [61] HCPs also show compassion, empathy, and basic human concern [47] without being judgmental. [45] Other such approaches include remaining present, mindful, and "in the moment" [48] while providing care for immediate concerns, but also incorporating preventative care to demonstrate concern for the patient's overall wellbeing. [34]

"A physician participant highlighted the importance of the physician's effort to act in a relational way by saying, '…Express caring in that interaction – this is what the physician can do. And the quality of that caring is what enhances the intrinsic motivation of the patient to take the responsibility'." [61]

HCPs also show concern by **empowering** the patient through approaches that value the individual, enable self-management, and promote patient agency by recognizing, confirming, and validating patient autonomy [61] and respecting privacy. [45] Empowering also includes

creating an environment of equality, [54] establishing trust by sharing control, [61] inviting the patient to lead [41] or to set the pace [31] in clinical encounters, letting the patient have the final say in decisions, [45] or providing opportunities to reconsider previous decisions. [54]

> *"The patient is enabled to keep control of his or her own situation. The patient has authority in the decision-making process."* [45]

HCPs also show concern by **inviting** the involvement of others [38] in clinical decision-making, such as asking loved ones, family, or caregivers [45] to help the patient make choices, or seeking input from colleagues, specialists, and other HCPs for advice or second opinions. [61]

> *"You have to have the team. You have to have the physician buy-in. And often I ask them to bring somebody with them so that there's somebody else there who can hear the conversation…."* [38]

HCPs show concern by **partnering** with the patient [48] by investing time with them, [41] cultivating mutual respect to form a "therapeutic alliance," [33] and treating the patient as an equal partner. [31] Understanding the patient is a key element of partnering [52] as well as taking a long-term view of the patient's care.

> *"Partnership process – Strategies to establish and maintain a partnership with the patient."* [48]

HCPs also show concern by **sensing**, i.e. perceiving and acting in a sensitive manner, including interpersonal sensitivity, [59] cultural sensitivity, [58] or showing respect and deference for religious beliefs. [33] HCPs also may use intuition in the clinical encounter [59] to sense patient moods and feelings.

> *"There are two basic types of interpersonal sensitivity. The first type is simply to notice (and, relatedly, remember) the other person's appearance, words, or nonverbal behavior." And "The second, and most commonly investigated, kind of interpersonal sensitivity involves accuracy in interpreting cues."* [59]

Approaches of COMPETENCE

HCPs incorporate patient values and preferences when they competently address diseases, share decision-making, understand and use research evidence, and professionally manage patient care.

Competence includes many behaviors including **decision making**, when HCPs competently engage with the patient to support, direct, and share decision-making. Shared decision-making (SDM) was one of the most frequently mentioned approaches to incorporating patient values and preferences in the records. It is its own discipline in the patient-centered care paradigm with many adherents and a large body of evidence regarding its use and effectiveness with several SDM methods and techniques. However, as its name implies, SDM addresses values integration when making treatment decisions and does not account for the

pre- and post-decision-making values and preferences that are important to patients and HCPs in their overall long-term relationships.

> *"The physician sharing decision making acknowledges that power is shared and integrates the patient's preferences into a mutual decision."* [61]

SDM also involves HCP competence with research evidence [54] as well as skills to help formulate the patient's stance on issues and options, [51] or to negotiate decisions. [61] HCPs may also use decision aids or tools to assist the patient in making treatment decisions [39] or use vivid descriptions, [51] a technique to aid the patient in arriving at their own conclusions. SDM also includes directing behaviors that involve the HCP giving their own opinion or recommendation to the patient [46] when asked or when the patient is unable to make a decision. [33] It also involves listing, an action by HCPs to suggest or "draw out patients' views about possible choices." [54]

> *"[If] you ask [patients] what they think is wrong with them, then they won't tell you. But if you give them a list of things that are in your mind, then they will usually identify some of their concerns."* [54]

HCP competence also includes **managing** the patient care process to help achieve mutual goals without controlling the patient, including working on mutually setting an agenda [41] and priorities. [48] This also includes negotiating with patients to help them understand, assess, weigh, and prioritize options, [52] gaining clarity on agreements and disagreements, [61] and openly discussing the pros and cons of options. [46] All of this is with the intent of eventually

gaining agreement on issues, mutual roles, possible solutions, and next steps. [43] Managing also refers to managing patient emotions which includes efforts to reduce patient anxiety and distress, [31] exploring and responding to emotions, allowing time for patients to process emotions, as well as HCPs displaying their own emotions. [47] Managing also involves planning & preparing behaviors such as action plans for treatment, [37] agreeing on priorities, [48] arranging follow-ups, [46] and collaborative goal setting. [52] It also includes preparing for the clinical encounter to maximize the efficiency of time with the patient and readiness to elicit and incorporate values and preferences. [52]

Another competency is to manage the administrative processes that are needed to support values integration, such as having clear systematic processes for patient encounters and consultations, [46] using electronic health records (EHR) and other methods of record keeping to capture and encode patient values and preferences for future access, [48] leaving time for questions in the encounter, [38] having smooth continuity of care including a system for follow-up, [56] and collaborative action planning. [41]

> *"This process involved a significant investment of time, negotiation, deliberation, and shared decision making about the steps towards goal attainment, as well as setting a nominal target."* [41]

Competent management also includes **professionalism**, i.e. approaching the patient in a professional and honest manner. Honesty, transparency, [38] responsiveness, [45] and a reality-based approach [43] to the patient play an important role in patient-centered care and values integration, as well as being consistent with information, care, and decisions. [56]

> *"Professional responsiveness, Professionalism – Healthcare providers explain what is possible and what is not…Healthcare providers are honest with patients…Healthcare providers do not judge the patient's situation…Healthcare providers respect the patient's privacy."* [45]

Approaches of COMMUNICATION

HCPs incorporate patient values and preferences when they successfully communicate with the patient as a partner, share information and evidence, and manage patient engagement.

This includes approaches like **acknowledging** the patient's efforts to get and stay healthy or to adhere to treatment plans, [48] as well as expressing support or reassurance for the patient's preferences and validating their choices. [53]

> *"The second component of the practice involves acknowledging specific patient efforts in a genuine and positive manner."* [48]

Values integration through communication also includes **clarifying** the patient's stances by checking on the status of their choices, feelings, values, and preferences, [41] framing and reframing [52] to help clarify their positions, and repeating to reinforce patient preferences. [56] It also includes revisiting patient decisions over time [43] as patients may change their minds. Values clarification methods [45] are also described in which HCPs actively engage with the

patient to discuss positive and negative characteristics of options to clarify which are most important to the patient.

> *"The mutual clarification of values can be a rewarding exercise, as it not only ensures the best possible decision but also demonstrates to patients a genuine interest in incorporating their views."* [45]

Another communication approach is **encouraging** the patient to be active in the process, to participate in the clinical encounter/conversation, [49] encouraging patient questions, [31] and patient storytelling. [33] One technique, motivational interviewing, "uses an empathic nonconfrontational style to increase the motivation for behavior change, engage patients with treatment, and build therapeutic relationships." [56]

> *"By comparison, providers preferring 'personalized care' described their approach as encouraging rather than persuasive, and they were more accepting of different priorities and preferences."* [43]

Values integration via communication also includes **exchanging information** including explaining or defining the clinical problem [46] or sharing necessary biomedical information with the patient and informing them of the facts of the condition or diagnosis. [39]

> *"Clinicians emphasized sharing medical information with patients. We observed a few instances during which clinicians also prompted discussion of patients' goals and values. Clinicians reported a clear*

rationale in interviews as to why sharing biomedical information was central for them." [39]

Information exchange also includes sharing and presenting research evidence, [39] as well as a willingness to see more information and encouraging patients to seek more information. [61]

"There was a general view that evidence-based information regarding diagnosis and treatment options must be shared with patients during a consultation." [31]

Information exchange also includes patient education, [60] coaching, [48] tailoring information for the patient, as well as using teaching aids, written materials, [60] or other educational interventions. [55] Interviewing & eliciting approaches are other forms of information exchange and they were the most frequent behaviors described in the records. HCPs use various approaches to gain information from the patient, including directly eliciting patient values, [49] preferences, [35] goals, [57] and circumstances, [31] sometimes referred to as patient-centered clinical interviewing. [34] It also involves getting patients to appraise various preferences openly and to identify their favored choices. [53]

"…this meant providing current information, risks and benefits, eliciting questions and adjusting information to patients' needs, being honest about the limits of the physician's and scientific knowledge, and presenting an opinion." [61]

Communication also includes **exploring**, asking open-ended questions to better assess patient values, preferences, and expectations. [34] Studies noted the importance of openly exploring alternatives with the patient and exploring the clues and cues – verbal and non-verbal – that patients often provide. [31]

> *"Explore ideas, fears, and expectations of the problem and possible treatments." And, "Informants stated that experienced practitioners are continually alert to signals that patients accept the level of involvement being required of them and adapt accordingly."* [54]

Values integration also occurs through **language** when HCPs use tones and techniques such as deferential, directive, or inviting language, [49] emotion-oriented speech, [47] or common language, terms, or phrases with patients, [38] all of which can support the patient's values, preferences, and autonomy.

> *"'Deferential' language…physicians did not evaluate each treatment on behalf of the patient. Instead, they used language that minimized their role in the patient's decision and deferred to the patient's autonomy."* [49]

HCPs show concern by **listening**, including active listening without interruption [59] or simple silence as a response to certain patient emotions. [47]

> *"The most frequently mentioned skill was the ability to listen. Listening to patients was seen as a basic skill to enable 'assessment of the language*

that patients use in order to pitch information level' and to 'encourage discussion by listening to patients' views without interruption'." [31]

When HCPs **summarize** information, choices, or next steps for patients, they are also integrating values. This can be done as written or audio summaries of clinical discussions [60] or summaries of the encounter [31] at the end of clinical visits to ensure that the HCP and patient depart with a mutual understanding of the decisions and next steps. This also allows patients to more easily share information with caregivers or other HCPs.

Approaches of CONGRUENCE

HCPs incorporate patient values and preferences when they customize and harmonize care for each patient and balance their overall approach to care considering the patient's values and preferences, the best available research evidence, and their own clinical expertise.

Specifically, HCPs seek congruence by **adjusting and tailoring** care for each unique patient. HCPs adjust information based on a patient's needs, values, and preferences, [61] as well as tailor options for the patient [36] according the many factors that must be considered within the realm of the research evidence, the patient's values, and the HCP's own expertise.

"Identify preferred format and provide tailor-made information…This competence consists of making the correct range of options available and listing them in a logical sequence and in sufficient clarity so that patients perceive the opportunity to take part in the decision." [54]

HCPs also seek congruence by maintaining **balance & flexibility** regarding patient needs, values, information, communication style, decision-making, clinical/treatment approaches, and roles. [50] This also refers to HCP efforts to balance multiple factors such as evidence, information, issues, mutual needs, shared power and responsibilities for and with the patient. [56]

> *"The informants stressed the importance of maintaining flexibility: adherence to the 'informed choice' approach was considered 'another form of paternalism'."* [54]

DISCUSSION

Incorporating patient values and preferences in health care is critical for patient-centered care, but it is complex and requires medical knowledge as well as "soft skills" such as social, psychological, and communication proficiencies. [64] The themes developed in this review provide a useful model for better understanding, exploring, and teaching this topic. When plotted on the EBM Triad (figure 3), these themes also provide a useful framework for operationalizing values integration into evidence-based clinical practice.

Figure 3 – The EBM Triad and Primary Themes of Approaches to Values Integration

(FIGURE 3 HERE)

Our findings fit well into the existing EBM discussion and contribute new evidence to this discussion by identifying and thematically analyzing, for the first time, the specific behaviors and approaches that practicing HCPs use to integrate patient values and preferences into everyday clinical care.

Previous studies have described the importance of approaches that show concern for patient autonomy, [32, 60] taking feelings seriously, [33] seeing the patient as a person, and showing concern about their problems, diseases, effects, treatments, and research evidence, [32, 65-69] as well as advising HCPs to make "statements of concern, empathy, and reassurance." [69]

Previous studies have also described "the competences of involving patients in healthcare choices," [54] the competencies required for shared decision-making, [32] technical competencies for involving patients, [50] "culturally competent care," [58] "competencies they [HCPs] can execute to involve patients in decision making," [61] and the importance of medical competency for HCPs. [8]

Previous research has also emphasized "provider-patient communication as key to achieving patient-centered care," [67] patient-centered [54] and physician-patient communication, [32] and the importance of skills to "communicate with patients about their treatment options." [37]

Finally, other EBM literature encourages HCPs to ensure that "clinical goals are congruent" with patient goals, [34] to "achieve congruence in the consultation," [50] to strive for "congruency between [the patient's] preferred and actual involvement in decision making,"

[66] to seek "congruence between [patient's] options and their values," [70] and to find "more balance between science, clinical expertise, and patient values." [8]

Strengths and limitations

This review utilized accepted, thorough, and systematic methodologies and methods for qualitative synthesis, and included a wide range of databases in the search for records. Authors' interpretations and participant quotes were included extensively throughout the review. There remains a possibility that evidence has been missed searching only records published from 2000 in English, however adherence to robust systematic review methods helped to minimize this limitation.

Although there is a paucity of qualitative studies explicitly on the topic of "integrating" or "incorporating" patient values and preferences, this review identified records on related topics such as "patient-centered care," "implementing shared decision making," "HCP-patient communications," "eliciting goals," or "managing patient involvement," and similar. There were 17 previous reviews on related topics [8, 65-80] which did not qualify for inclusion in this review. However a forward-backward search of references in those reviews identified four records already selected for inclusion in this review [44, 49, 54, 57] strengthening confidence in the robustness of this review and saturation of the topic. The original record search period between January 2000 and August 2020 is now two years old and, while no other qualitative systematic review has been published on this topic between August 2020 and October 2022, it is possible that additional qualitative evidence has been published which is not included in this review.

Double screening is considered best practice for systematic reviews, with single screening recommended primarily as an "appropriate methodological short cut" [81] for experienced researchers. [24] We double-screened ten percent of titles/abstracts and included reviewer discussions and debates to arrive at mutually agreed screening criteria, before single screening was conducted for the remaining records. One author conducted the initial coding and further developed themes in discussion with other authors. All authors contributed to the review, analysis, and interpretation of findings.

Rigorous thematic analysis methods were used to synthesize the findings and identify key themes and ideas across all records. Thematic analysis involves interpretation of other researchers' previous interpretations which can present limitations. To minimize this limitation, we extensively reported direct verbatims and transcripts from HCP participants and authors when describing concepts, themes, and subthemes to prevent misinterpretation of the original evidence.

Implications for policy and practice

Integrating patient values and preferences in modern clinical practice is important and impacts health outcomes. [82] Findings from this review could help improve health policy, HCP clinical performance, or patient satisfaction and outcomes by describing specific and practical patient-centered approaches to values integration.

These findings can aid the inclusion of values integration in clinical guidelines which so far has been limited [15] and for which there are few systematic standards. [16] However, encoding values and preferences into a single guideline has challenges, so individual

HCP skills to elicit and incorporate patient values and preferences will always be necessary. [83]

Medical education and training emphasizes patient-centered care and values integration in theory, but HCPs receive inadequate instruction on the skills needed to deliver it. [84] This review's primary themes and descriptions of specific approaches provide a theoretical and practical framework for education and training on this topic.

Scope of practice varies for physicians, nurses, allied health professionals, and others, but this review shows they each have a role in – and something important to contribute to – values integration. These findings can influence policymakers who should consider the entire continuum of care and provide training, tools, funding, and support and encourage values integration at every level of care delivery. These findings also offer a structure to educate and assess HCPs and organizations as a whole on values integration beyond the consultation and "throughout the care delivery at every point." [85] HCPs and health systems need to consider patient values and preferences beyond just treatment decisions [86] and this study underscores the need to be aware of, and skilled at, a number of approaches.

This review can inform clinical practice to improve HCP-patient encounters, develop patient-centered tools, and improve patient outcomes [19] and satisfaction. [20] Advanced practice providers could benefit from better clinical communications skills [87] and the approaches described in this review could provide a guide for improvement. Despite evidence that patient decision aids improve specific outcomes, [88] many HCPs don't

use them [89] due to lack of awareness, availability, difficulty of use, or inappropriate context. Findings from this review could be useful in guiding tool developers to make and disseminate more effective decision aids.

Future research

The broad themes described in this review provide multiple areas for future study. The primary themes of Concern, Competence, Communication, and Congruence should be explored further. While shared decision-making and HCP-patient communication are already well-represented in the literature, more study is needed on other approaches such as caring & connecting, planning & preparing, or goals setting, to name a few. Future research could consider whether the themes described in this review vary, or are more common, among specific noncommunicable disease groups, HCP types, or care settings.

There is significant research in the area of shared decision-making between HCPs and patients, but very little in the area of values integration outside of the decision making process. Future research should explore this gap. Future studies could also seek to quantify many of the qualitative findings from this review to collect evidence on what contributes to better outcomes. Many of the approaches described from the data and the resulting themes may be applicable to clinical care for other chronic diseases, but separate independent studies are encouraged.

Finally, the theme of Congruence described in this review – how HCPs tailor, adjust, balance, and harmonize approaches for each patient – needs more scientific consideration. It is underrepresented in the published literature, yet it represents the essence of evidence-

based medicine: the "conscientious, explicit, and judicious" [90] integration of patient values and preferences with the best research evidence and clinical expertise.

Reflexivity statement

The principal investigator for this review was a part-time graduate student (MT) at the University of Oxford while residing and working full-time in the U.S. in the pharmaceutical industry. MT has experience in designing, executing, and analyzing qualitative methods involving focus groups, interviews, Delphi methods, surveys, and literature/content analysis for health-related research. MT has authored or co-authored peer-reviewed and published articles, however, had not previously conducted a systematic review. MT is not a clinician but has worked with clinicians for more than 25 years in hospital administration, health education and communications, research, policy, and advocacy.

Author GS, living in Canada, has a clinical background, and was also enrolled in the same Oxford graduate program. Authors AB and CH live in the UK, are both faculty members from the University of Oxford's MSc in Evidence-Based Health Care program. Both have academic and/or clinical backgrounds that include researching, writing, and teaching extensively on EBM and the role of patient values and preferences. They provided supervision throughout the review.

CONCLUSION

HCPs incorporate patient values and preferences in health care through a variety of approaches including: ***Concern*** for the patient as a person as well as diseases and their effects; ***Competence*** at skillfully addressing diseases, research evidence, and managing

patient care; ***Communication*** with the patient as a partner, sharing information and evidence, and productively managing patient encounters; and, ***Congruence*** to tailor, adjust, and balance their approaches to overall care for each patient. Themes in this review provide a novel framework for understanding and addressing values integration in clinical care and provide useful insights for policymakers, educators, and practitioners.

Contributorship statement – As principal investigator, MT led the planning, conduct, and reporting of the study, submitted the manuscript, and is responsible for the overall content. As research assistant, GS contributed to the conduct of the literature screening and review as well as provided review and editing of the manuscript. As research supervisors, AMB and CH contributed to the planning, oversight, and reporting, as well as provided review and editing of the manuscript.

Competing interests – CH receives grant funding from the NIHR School of Primary Care Research. He has received financial remuneration from an asbestos case and given legal advice on mesh and hormone pregnancy tests cases. He has received expenses and fees for his media work, for teaching EBM and is also paid for his GP work in NHS out of hours. He has also received income from the publication of a series of toolkit books and for appraising treatment recommendations in non-NHS settings. He is Director of CEBM and former editor in chief of BMJ-EBM. No competing interests for other authors.

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Data sharing statement – Data are available upon reasonable request. Data sharing not applicable, no datasets were generated or analyzed for this study. All data are from publicly available documents, and references are provided should readers wish to look at original sources.

Ethics approval – This study does not involve human or animal subjects, ethics approval not applicable.

REFERENCES

1 Guyatt GH, Haynes RB, Jaeschke RZ, et al. Users' Guides to the Medical Literature: XXV. Evidence-Based Medicine: Principles for Applying the Users' Guides to Patient Care. *JAMA* 2000;284:1290-6 doi:10.1001/jama.284.10.1290.

2 Sackett DL, Rosenberg WMC, Gray JAM, et al. Evidence based medicine: what it is and what it isn't. *BMJ* 1996;312:71 doi:10.1136/bmj.312.7023.71.

3 Mellis C. Evidence-based medicine: What has happened in the past 50 years?. *J Paediatr Child Health* 2015;51:65-8 doi:10.1111/jpc.12800.

4 Gooberman-Hill R. Qualitative approaches to understanding patient preferences. *The Patient: Patient-Centered Outcomes Research* 2012;5:215-23.

5 Lee YK, Low WY, Ng CJ. Exploring patient values in medical decision making: a qualitative study. *PLoS One* 2013;8:e80051 doi:10.1371/journal.pone.0080051 [doi].

6 Straus SE, Pattani R, Veroniki AA. Evidence-based medicine : how to practice and teach EBM. Edinburgh: Elsevier 2019.

7 Llewellyn-Thomas HA, Crump RT. Decision Support for Patients: Values Clarification and Preference Elicitation. *Medical Care Research and Review* 2013;70:50S-79S doi:http://ezproxy-prd.bodleian.ox.ac.uk:2094/10.1177/1077558712461182.

8 Bastemeijer CM, Voogt L, van Ewijk J,P., et al. What do patient values and preferences mean? A taxonomy based on a systematic review of qualitative papers. *Patient Educ Couns* 2017;100:871-81.

9 Fernandez A, Sturmberg J, Lukersmith S, et al. Evidence-based medicine: is it a bridge too far?. *Health research policy and systems* 2015;13:66 doi:10.1186/s12961-015-0057-0.

10 Kelly MP, Heath I, Howick J, et al. The importance of values in evidence-based medicine. *BMC medical ethics* 2015;16 doi:10.1186/s12910-015-0063-3.

11 Lown BA, Hanson JL, Clark WD. Mutual influence in shared decision making: A collaborative study of patients and physicians. *Health Expectations: An International Journal of Public Participation in Health Care & Health Policy* 2009;12:160-74.

12 Petrisor B, Bhandari M. The hierarchy of evidence: Levels and grades of recommendation. *Indian J Orthop* 2007;41:11-5 doi:10.4103/0019-5413.30519 [doi].

13 Porta M, Greenland S, Burón A. A dictionary of epidemiology. Oxford, England: Oxford University Press 2014.

14 EBM Levels of Evidence. Available at: https://www.cebm.ox.ac.uk/resources/levels-of-evidence/oxford-centre-for-evidence-based-medicine-levels-of-evidence-march-2009. Accessed September, 2020.

15 van DW, Pieterse AH, Koelewijn-van Loon M,S., et al. How can clinical practice guidelines be adapted to facilitate shared decision making? A qualitative key-informant study. *BMJ Qual Saf* 2013;22:855 doi:10.1136/bmjqs-2012-001502.

16 Zhang Y, Coello PA, Brożek J, et al. Using patient values and preferences to inform the importance of health outcomes in practice guideline development following the GRADE approach. *Health and quality of life outcomes* 2017;15:52.

17 Noncommunicable diseases. Available at: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases. Accessed January 20, 2020.

18 Finley CR, Chan DS, Garrison S, et al. What are the most common conditions in primary care?. *Can Fam Physician* 2018;64:832.

19 Gluyas H. Patient-centred care: improving healthcare outcomes. *Nurs Stand* 2015;30:50,7; quiz 59 doi:10.7748/ns.30.4.50.e10186 [doi].

20 Wolf DM, Lehman L, Quinlin R, et al. Effect of patient-centered care on patient satisfaction and quality of care. *J Nurs Care Qual* 2008;23:316-21 doi:10.1097/01.NCQ.0000336672.02725.a5 [doi].

21 Lockwood D, Munn Z, Porritt K. Qualitative research synthesis: methodological guidance for systematic reviewers utilizing meta-aggregation. *Int J Evid Based Healthc* 2015;13:179-87.

22 Transforming and scaling up health professionals' education and training: World Health Organization Guidelines. Available at: https://www.who.int/publications/i/item/transforming-and-scaling-up-health-professionals%E2%80%99-education-and-training. Accessed January, 2020.

23 EPPI Reviewer 4 For Systematic Reviews. Available at: http://eppi.ioe.ac.uk/cms/Default.aspx?alias=eppi.ioe.ac.uk/cms/er4. Accessed January, 2020.

24 Mahtani KR, Heneghan C, Aronson J. Single screening or double screening for study selection in systematic reviews?. *BMJ EBM* 2020;25:149-50 doi:10.1136/bmjebm-2019-111269.

25 Lincoln YS, Guba EG. Naturalistic inquiry. Beverly Hills; London: Sage 1985:Chapter 11, p.293.

26 Lockwood C, Porrit K, Munn Z, Rittenmeyer L, Salmond S, Bjerrum M, Loveday H, Carrier J, Stannard D. Aromataris E, Munn Z (Editors). JBI Reviewer's Manual - Chapter 2: Systematic Review of Qualitative Evidence, . *Joanna Briggs Institute (JBI)* 2017.

27 Aromataris E, Munn Z (Editors). Joanna Briggs Institute Reviewer's Manual 2017:Chapter 2.

28 NVivo for Qualitative Research. Available at: https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home. Accessed March, 2020.

29 Bryman A. Social research methods. Oxford: Oxford University Press 2012.

30 Liberati A, Altman DG, Tetzlaff J, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care

interventions: Explanation and elaboration. *PLoS Medicine* 2009;6 doi:10.1371/journal.pmed.1000100.

31 Ford S, Schofield T, Hope T. What are the ingredients for a successful evidence-based patient choice consultation?: A qualitative study. *Soc Sci Med* 2003;56:589-602 doi:http://dx.doi.org/10.1016/S0277-9536%2802%2900056-4.

32 Ford S, Schofield T, Hope T. Barriers to the evidence-based patient choice (EBPC) consultation. *Patient Educ Couns* 2002;47:179-85 doi:10.1016/S0738-3991(01)00198-7.

33 McLeod H. Respect and shared decision making in the clinical encounter, A Video-Reflexive Ethnography 2017.

34 Aita V, McIlvain H, Backer E, et al. Patient-centered care and communication in primary care practice: what is involved?. *Patient Educ Couns* 2005;58:296-304.

35 Davis K, Bellini P, Hagerman C, et al. Physicians' Perceptions of Factors Influencing the Treatment Decision-making Process for Men With Low-risk Prostate Cancer. *Urology* 2017;107:86-95 doi:https://dx.doi.org/10.1016/j.urology.2017.02.056.

36 Feiring E, Friis T. Facilitators and barriers to clinicians' use of COPD action plans in self-management support: A qualitative study. *Patient Educ Couns* 2020;103:693-701 doi:http://dx.doi.org/10.1016/j.pec.2019.11.002.

37 Friedberg MW, Van Busum K, Wexler R, et al. A demonstration of shared decision making in primary care highlights barriers to adoption and potential remedies. *Health Aff (Millwood)* 2013;32:268 doi:10.1377/hlthaff.2012.1084.

38 Golden SE, Thomas CR, Moghanaki D, et al. Dumping the information bucket: A qualitative study of clinicians caring for patients with early stage non-small cell lung cancer. *Patient Educ Couns* 2017;100:861-70 doi:10.1016/j.pec.2016.12.023.

39 Gruß I, McMullen CK. Barriers to eliciting patient goals and values in shared decision-making breast cancer surgery consultations: An ethnographic and interview study. *Psycho - Oncology* 2019;28:2233-9 doi:http://ezproxy-prd.bodleian.ox.ac.uk:2094/10.1002/pon.5212.

40 Hisham R, Liew SM, Ng CJ, et al. Rural doctors' views on and experiences with evidence-based medicine: The FrEEDoM qualitative study. *PLoS ONE* 2016;11:e0152649 doi:http://dx.doi.org/10.1371/journal.pone.0152649.

41 Salter C, Shiner A, Lenaghan E, et al. Setting goals with patients living with multimorbidity: qualitative analysis of general practice consultations. *The British journal of general practice : the journal of the Royal College of General Practitioners* 2019;69:e479 doi:10.3399/bjgp19X704129.

42 Shepherd HL, Butow PN, Tattersall MHN. Factors which motivate cancer doctors to involve their patients in reaching treatment decisions. *Patient Educ Couns* 2011;84:229-35 doi:https://dx.doi.org/10.1016/j.pec.2010.10.018.

43 Shortus T, Kemp L, McKenzie S, et al. 'Managing patient involvement': provider perspectives on diabetes decision-making. *Health Expectations* 2013;16.

44 Tracy CS, Dantas GC, Upshur REG. Evidence-based medicine in primary care: qualitative study of family physicians. *BMC Fam Pract* 2003;4:6.

45 Van Humbeeck L, Malfait S, Holvoet E, et al. Value discrepancies between nurses and patients: A survey study. *Nurs Ethics* 2020;27:1044-55 doi:https://dx.doi.org/10.1177/0969733020906595.

46 Vermunt N, Elwyn G, Westert G, et al. Goal setting is insufficiently recognised as an essential part of shared decision-making in the complex care of older patients: a framework analysis. *BMC Fam Pract* 2019;20:76 doi:https://dx.doi.org/10.1186/s12875-019-0966-z.

47 Visser LNC, Schepers S, Tollenaar MS, et al. Patients' and oncologists' views on how oncologists may best address patients' emotions during consultations: An interview study. *Patient Educ Couns* 2018;101:1223-31 doi:S0738-3991(18)30077-6 [pii].

48 Zulman DM, Haverfield MC, Shaw JG, et al. Practices to foster physician presence and connection with patients in the clinical encounter. *JAMA: Journal of the American Medical Association* 2020;323:70-81.

49 Chhabra KR, Pollak KI, Lee SJ, et al. Physician communication styles in initial consultations for hematological cancer. *Patient Educ Couns* 2013;93:573-8 doi:https://dx.doi.org/10.1016/j.pec.2013.08.023.

50 Ford S, Schofield T, Hope T. Observing decision-making in the general practice consultation: who makes which decisions?. *Health Expectations* 2006;9.

51 Landmark AMD, Svennevig J, Gulbrandsen P. Negotiating treatment preferences: Physicians' formulations of patients' stance. *Soc Sci Med* 2016;149:26-36 doi:https://dx.doi.org/10.1016/j.socscimed.2015.11.035.

52 Murdoch J, Salter C, Ford J, et al. The "unknown territory" of goal-setting: Negotiating a novel interactional activity within primary care doctor-patient consultations for patients with multiple chronic conditions. *Soc Sci Med* 2020;256:113040 doi:https://dx.doi.org/10.1016/j.socscimed.2020.113040.

53 Pieterse AH, Henselmans I, de Haes, H. C. J. M., et al. Shared decision making: Prostate cancer patients' appraisal of treatment alternatives and oncologists' eliciting and responding behavior, an explorative study. *Patient Educ Couns* 2011;85:e251-9 doi:http://dx.doi.org/10.1016/j.pec.2011.05.012.

54 Elwyn G, Edwards A, Kinnersley P, et al. Shared decision making and the concept of equipoise: the competences of involving patients in healthcare choices. *Br J Gen Pract* 2000;50:892.

55 Kennedy BM, Rehman M, Johnson WD, et al. Healthcare Providers versus Patients' Understanding of Health Beliefs and Values. *Patient exp j* 2017;4:29-37.

56 Paiva D, Abreu L, Azevedo A, et al. Patient-centered communication in type 2 diabetes: The facilitating and constraining factors in clinical encounters. *Health Serv Res* 2019;54:623-35 doi:10.1111/1475-6773.13126 [doi].

57 Schulman-Green D, Naik AD, Bradley EH, et al. Goal setting as a shared decision making strategy among clinicians and their older patients. *Patient Educ Couns* 2006;63:145-51.

58 Hart PL, Mareno N. Cultural challenges and barriers through the voices of nurses. *J Clin Nurs* 2014;23:2223-33 doi:10.1111/jocn.12500.

59 Hall JA. Clinicians' accuracy in perceiving patients: Its relevance for clinical practice and a narrative review of methods and correlates. *Patient Educ Couns* 2011;84:319-24 doi:http://dx.doi.org/10.1016/j.pec.2011.03.006.

60 Jefford M, Tattersall MHN. Informing and involving cancer patients in their own care. *The lancet oncology* 2002;3:629-37.

61 Lown BA, Hanson JL, Clark WD. Mutual influence in shared decision making: A collaborative study of patients and physicians. *Health Expect* 2009;12:160-74 doi:http://dx.doi.org/10.1111/j.1369-7625.2008.00525.x.

62 Iedema R, Carroll K, Collier A, et al. Video-reflexive ethnography in health research and healthcare improvement : theory and application. Boca Raton: CRC Press 2018.

63 Dyrbye LN, Varkey P, Boone SL, et al. Physician Satisfaction and Burnout at Different Career Stages. *Mayo Clin Proc* 2013;88:1358-67 doi:https://doi.org/10.1016/j.mayocp.2013.07.016.

64 Salloch S, Otte IC, Reinacher-Schick A, et al. Physician perspectives on the impact of patient preferences and the role of next-of-kin of patients in evidence-based decision-making: A qualitative interview study from oncology. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen* 2018;131:46-52.

65 Contreary K, Collins A, Rich EC. Barriers to evidence-based physician decision-making at the point of care: A narrative literature review. *Journal of Comparative Effectiveness Research* 2017;6:51-63 doi:10.2217/cer-2016-0043.

66 Covvey JR, Kamal KM, Gorse EE, et al. Barriers and facilitators to shared decision-making in oncology: a systematic review of the literature. *Supportive Care Cancer* 2019;27:1613-37 doi:http://dx.doi.org/10.1007/s00520-019-04675-7.

67 Dwamena F, Holmes-Rovner M, Gaulden CM, et al. Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev* 2012;2012:CD003267 doi:http://dx.doi.org/10.1002/14651858.CD003267.pub2.

68 Harrington J, Noble LM, Newman SP. Improving patients' communication with doctors: a systematic review of intervention studies. *Patient Educ Couns* 2004;52:7-16 doi:S073839910300017X [pii].

69 Lewin SA, Skea ZC, Entwistle V, et al. Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev* 2001:CD003267.

70 Stacey D, Legare F, Lewis K, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev* 2017;4:CD001431 doi:10.1002/14651858.CD001431.pub5 [doi].

71 Gravel K, Légaré F, Graham ID. Barriers and facilitators to implementing shared decision-making in clinical practice: a systematic review of health professionals' perceptions. *Implementation science : IS* 2006;1:16 doi:10.1186/1748-5908-1-16.

72 Harrison M, Milbers K, Hudson M, et al. Do patients and health care providers have discordant preferences about which aspects of treatments matter most? Evidence from

a systematic review of discrete choice experiments. *BMJ Open* 2017;7:e014719-014719 doi:10.1136/bmjopen-2016-014719 [doi].

73 Johnson RA, Huntley A, Hughes RA, et al. Interventions to support shared decision making for hypertension: A systematic review of controlled studies. *Health Expectations* 2018;21:1191-207 doi:http://ezproxy-prd.bodleian.ox.ac.uk:2094/10.1111/hex.12826.

74 Laidsaar-Powell RC, Butow PN, Bu S, et al. Physician-patient-companion communication and decision-making: A systematic review of triadic medical consultations. *Patient Educ Couns* 2013;91:3-13 doi:http://dx.doi.org/10.1016/j.pec.2012.11.007.

75 Légaré F, Ratté S, Gravel K, et al. Barriers and facilitators to implementing shared decision-making in clinical practice: Update of a systematic review of health professionals' perceptions. *Patient Educ Couns* 2008;73:526-35 doi:https://doi.org/10.1016/j.pec.2008.07.018.

76 Mangin D, Stephen G, Bismah V, et al. Making patient values visible in healthcare: a systematic review of tools to assess patient treatment priorities and preferences in the context of multimorbidity. *BMJ open* 2016;6:e010903.

77 Marsh K, Caro J, Hamed A, et al. Amplifying Each Patient's Voice: A Systematic Review of Multi-criteria Decision Analyses Involving Patients. *Appl Health Econ Health Policy* 2017;15:155-62 doi:10.1007/s40258-016-0299-1.

78 Truglio-Londrigan M, Slyer JT. Shared Decision-Making for Nursing Practice: An Integrative Review. *The open nursing journal* 2018;12:1 doi:10.2174/1874434601812010001.

79 Truglio-Londrigan M, Slyer JT, Singleton JK, et al. A qualitative systematic review of internal and external influences on shared decision-making in all health care settings. *JBI Libr Syst Rev* 2012;10:4633-46.

80 Zwolsman S, Te Pas E, Hooft L, et al. Barriers to GPs' use of evidence-based medicine: A systematic review. *Br J Gen Pract* 2012;62:e511-21 doi:http://dx.doi.org/10.3399/bjgp12X652382.

81 Waffenschmidt S, Knelangen M, Sieben W, et al. Single screening versus conventional double screening for study selection in systematic reviews: a methodological systematic review.(Report). *BMC Medical Research Methodology* 2019;19 doi:10.1186/s12874-019-0782-0.

82 Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open* 2013;3:e001570 doi:10.1136/bmjopen-2012-001570.

83 Lewis DK, Robinson J, Wilkinson E. Factors involved in deciding to start preventive treatment: qualitative study of clinicians' and lay people's attitudes. *BMJ* 2003;327:841 doi:10.1136/bmj.327.7419.841.

84 Henschen BL, Ryan ER, Evans DB, et al. Perceptions of Patient-Centered Care among First-Year Medical Students. *Teach Learn Med* 2019;31:26-33 doi:10.1080/10401334.2018.1468260 [doi].

85 Armstrong MJ, Mullins CD. Value Assessment at the Point of Care: Incorporating Patient Values throughout Care Delivery and a Draft Taxonomy of Patient Values. *Value in Health : The Journal of the International Society for Pharmacoeconomics and Outcomes Research* 2017;20:292.

86 Lee YK, Low WY, Ng CJ. Exploring patient values in medical decision making: a qualitative study. *PloS one* 2013;8.

87 Back AL, Fromme EK, Meier DE. Training Clinicians with Communication Skills Needed to Match Medical Treatments to Patient Values. *J Am Geriatr Soc* 2019;67:S435-41 doi:https://doi.org/10.1111/jgs.15709.

88 O'connor A. Using patient decision aids to promote evidence-based decision making. *Evid Based Med* 2001;6:100 doi:10.1136/ebm.6.4.100.

89 Brace C, Schmocker S, Huang H, et al. Physicians' Awareness and Attitudes Toward Decision Aids for Patients With Cancer. *JCO* 2010;28:2286-92 doi:10.1200/JCO.2009.25.2874.

90 Sackett DL, Straus S, Richardson W, et al. Evidence-based medicine : how to practice and teach EBM. Edinburgh: Churchill Livingstone 2000.

Figure 1 – The Evidence-Based Medicine (EBM) Triad

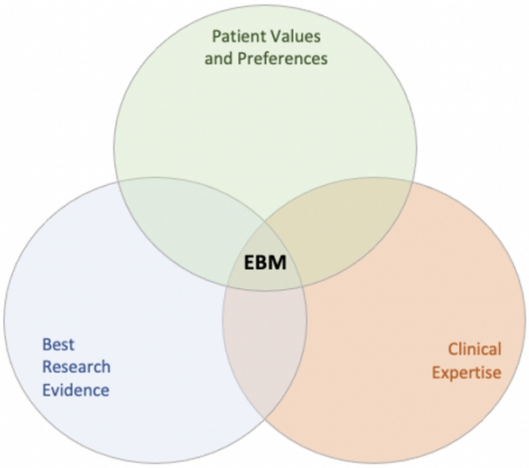

Figure 1 – The Evidence-Based Medicine (EBM) Triad

220x135mm (144 x 144 DPI)

Figure 2 – PRISMA Flow Diagram

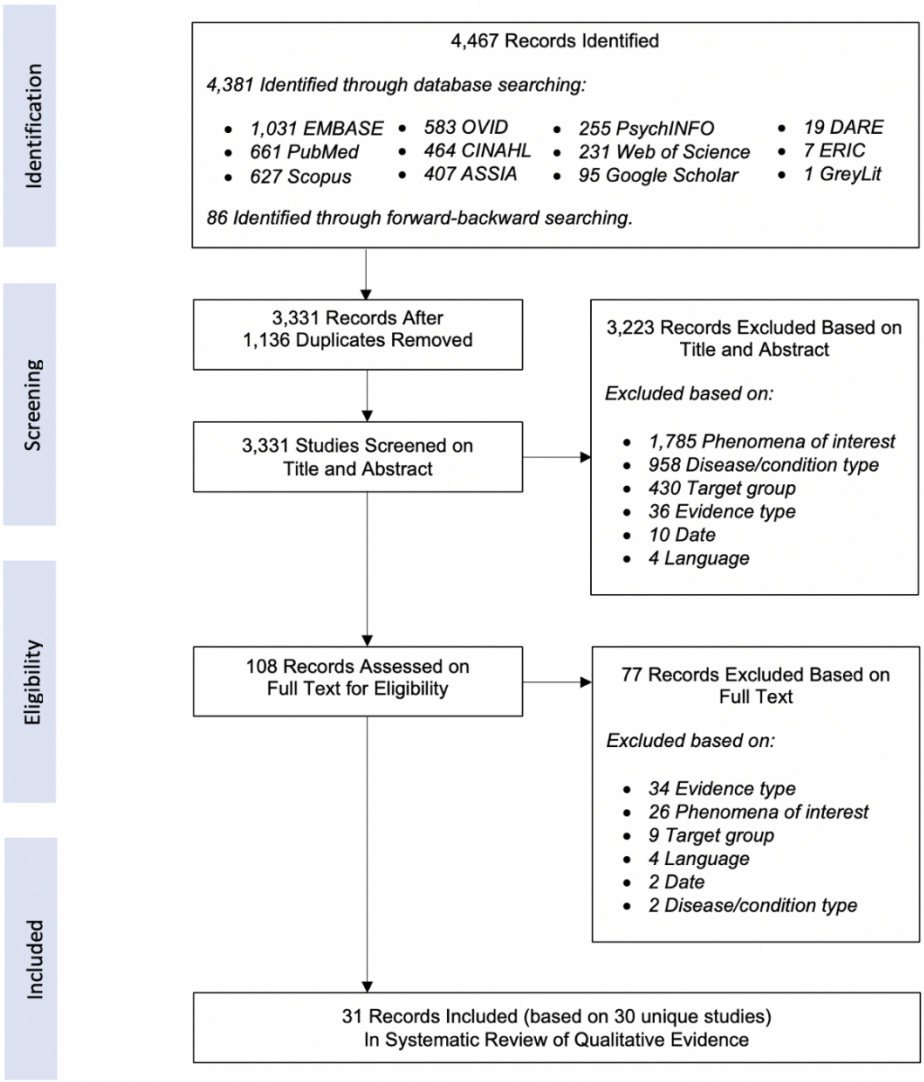

Figure 2 – PRISMA Flow Diagram

219x265mm (144 x 144 DPI)

Figure 3 – The EBM Triad and Primary Themes of Approaches to Values Integration

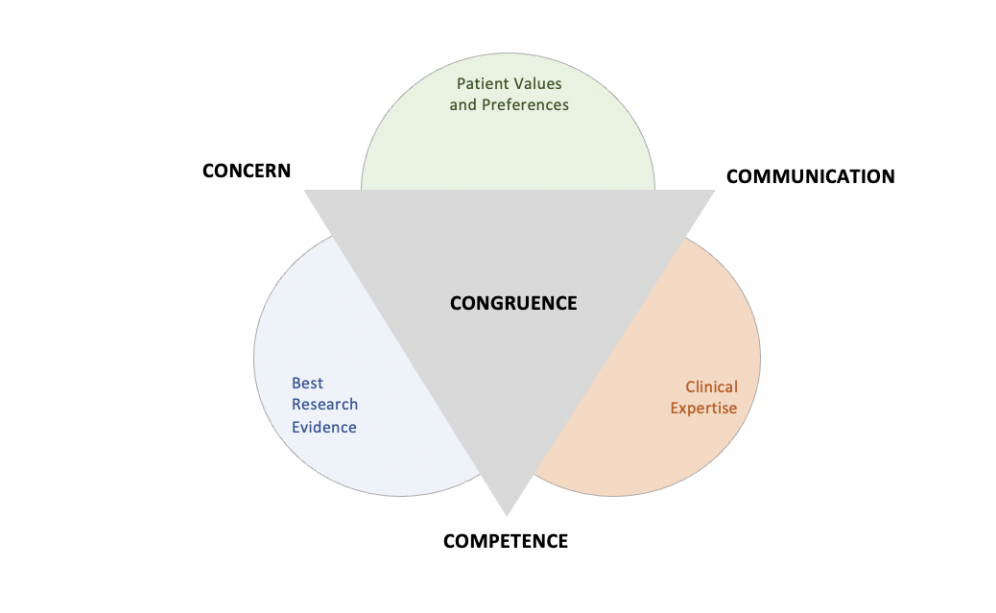

Figure 3 – The EBM Triad and Primary Themes of Approaches to Values Integration

183x127mm (144 x 144 DPI)

SUPPLEMENTAL MATERIALS

Appendix A – Protocol Registration, 11 May 2020

No. CRD42020166002 – https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=166002

NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

To enable PROSPERO to focus on COVID-19 submissions, this registration record has undergone basic automated checks for eligibility and is published exactly as submitted. PROSPERO has never provided peer review, and usual checking by the PROSPERO team does not endorse content. Therefore, automatically published records should be treated as any other PROSPERO registration. Further detail is provided here.

Citation

Michael Tringale, Genia Stephen, Carl Heneghan, Anne-Marie Boylan. Incorporating patient values and preferences in health care for adults with noncommunicable diseases: A systematic review of qualitative evidence.. PROSPERO 2020 CRD42020166002 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020166002

Review question

What are the approaches, barriers, and facilitators that practicing health care professionals (HCPs) experience regarding the integration of patient values and preferences in primary and secondary care for adults with noncommunicable diseases (NCDs)?

Searches

This review is concerned with identifying studies regarding HCPs and their experiences incorporating patient values and preferences into their evidence based care (Sackett 1996). Reviewers will use the Joanna Briggs Institute (JBI) search method (Aromataris and Munn 2017) with terms adapted from an initial scoping of electronic databases MEDLINE and CINAHL with an analysis of text from titles, abstracts, and index terms used to describe references. Then, full systematic literature searches will be tailored and conducted for 12 databases including ASSIA, CINAHL, DARE, EMBASE, ERIC, Google Scholar, GreyLit, GreyNet, MEDLINE (via Ovid and PubMed), PsycINFO, Scopus and Web of Science.

Types of study to be included

This review will consider studies and other evidence with full text available in English that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, action research, other interpretive studies, and methods such as interviews, focus groups, and surveys. Also considered will be mixed-methods studies reporting relevant qualitative data or analysis regarding the topic and population of interest. This review is concerned with current relevant practice so only studies from the year 2000 or later will be included.

Condition or domain being studied

This review will consider studies involving care for adults in the four major NCD groups: cancers, cardiovascular diseases, diabetes, and chronic respiratory diseases (WHO 2020).

Participants/population

The population of interest is practicing HCPs in primary and secondary care. To the extent that some studies of patient populations may also include relevant HCP data, these studies may be included but only the HCP perspectives will be extracted.

Intervention(s), exposure(s)

The population of interest is practicing HCPs in primary and secondary care. To the extent that some studies of patient populations may also include relevant HCP data, these studies may be included but only the HCP perspectives will be extracted.

Comparator(s)/control

None

Context

This review will consider evidence from non-emergency and non-inpatient settings where clinicians provide primary or secondary care for adults with NCDs.

Main outcome(s)

• Approaches to integrating patient values and preferences into clinical care.

• Barriers to integrating patient values and preferences into clinical care.

• Facilitators to integrating patient values and preferences into clinical care.

• Thematic analysis, interpretation, and insights.

Measures of effect

Main outcomes will be presented as qualitative data such as verbatims from, and interpretations of, included studies, as well as an author synthesis and interpretation of the qualitative evidence reviewed.

Additional outcome(s)

• Practice recommendations for integration of patient values and preferences into evidence based care.

• Further research recommendations.

Measures of effect

Additional outcomes will be presented as recommendations by the author.

Data extraction (selection and coding)

Prospective studies will be saved in RefWorks for cataloging and reference management, imported to EPPI Reviewer for screening, and uploaded to NVivo for data extraction and coding. The primary author will screen titles and abstracts for inclusion, with double-screening of a random sample by a secondary reviewer (Taylor-Phillips et al, 2017), with disagreement resolved by discussion or with a third reviewer/advisor. A full text screening will be performed to identify references for final inclusion.

Qualitative data will be extracted from included references using a modified version of the JBI Data Extraction Tool (Aromataris and Munn 2017) to include specific details about the population, context, study methods, the phenomena of interest relevant to the review question. Data will be synthesized using a meta-aggregation approach and a narrative synthesis. Where textual pooling is not possible, findings will be presented in narrative form.

Risk of bias (quality) assessment

In addition to double-screening references, quality appraisal will be performed by the primary author using the JBI Critical Appraisal Checklist for Qualitative Research (Aromataris and Munn 2017) with a random sample assed by the second reviewer with disagreement resolved by discussion or with a third reviewer/advisor. The CONQual approach (Munn et al, 2014) will also be used wherein an overall ranking will be assigned to rate the confidence of any synthesized qualitative findings which will be presented in a summary of findings table describing the dependability and credibility of each finding.

Strategy for data synthesis

The data will be analyzed using meta-aggregation and thematic synthesis. Qualitative research findings will be pooled using the coding and synthesis strategies and tools enabled by NVivo including further collection and synthesis of findings to generate a set of statements that represent the aggregation, organization, and categorization of the findings based on similarity in meaning. These categories will then be subjected to further synthesis to produce a single comprehensive set of findings that can be used as the basis for analysis, interpretation, reporting, and recommendations.

Analysis of subgroups or subsets

Data related to different contexts such as disease severities, prognoses, multimorbidities, and/or HCP types, to the extent that such data will be available in the included studies, may be analyzed as subgroups.

Contact details for further information

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Organisational affiliation of the review
University of Oxford
www.ox.ac.uk

Review team members and their organisational affiliations
Michael Tringale. University of Oxford
Genia Stephen. University of Oxford
Dr Carl Heneghan. University of Oxford
Dr Anne-Marie Boylan. University of Oxford

Type and method of review
Narrative synthesis, Synthesis of qualitative studies, Systematic review, Other

Anticipated or actual start date
01 February 2020

Anticipated completion date
01 December 2020

Funding sources/sponsors
Self-funded with a Research Support Grant from Kellogg College, University of Oxford

Conflicts of interest

Language
English

Country
United States of America

Stage of review [1 change]

Review Completed published

Details of final report/publication(s) or preprints if available [1 change]

Pre-reviewed, pre-graded, pre-published summary of results and conclusions includes:

Results: From 3331 potential records, 35 met inclusion criteria. Findings comprised: 146 approaches to incorporating patient values and preferences grouped into 18 main themes with 12 subthemes; 92 barriers grouped into 4 main themes with 13 subthemes; 46 facilitators grouped into 5 main themes with 8 subthemes; and, 52 epistemologies related to incorporating patient values and preferences. Four primary concepts summarize all of these findings: Concern, Competence, Communication, and Congruence.

Conclusions: HCPs incorporate patient values and preferences into health care through actions of Concern, Competence, Communication, and Congruence, and there are numerous philosophies that influence how HCPs regard and approach patient values and preferences. HCPs face a number of barriers to incorporating patient values and preferences but they are also facilitated by several factors.

Subject index terms status
Subject indexing assigned by CRD

Subject index terms
MeSH headings have not been applied to this record

Date of registration in PROSPERO
05 July 2020

Date of first submission

NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

11 May 2020

Stage of review at time of this submission [2 changes]

Stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.
The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.

Versions
05 July 2020
18 November 2020
29 November 2020

Appendix B – Search Strategy Details

NOTE: Unless otherwise stated, all searches were limited to publication dates 2000 to 2020, English language only. Standard "MeSH" terms (Medial Subject Headings) established by the National Library of Medicine for use with Medline and other databases were of some use for this review's search. Main MeSH headings of interest included:

- Communication
- Communication Barrier/s
- Communication Method/s
- Consumer Preference/s
- Decision-Making, Shared
- Evidence-Based Medicine
- Evidence-Based Nursing
- Evidence-Based Practice
- Health Communication
- Implementation Science
- Patient Advocacy
- Patient-Centered Care
- Patient Preference/s
- Patient Participation
- Physician-Patient Relation/s (Relationship/s)
- Professional-Patient Relations

EMBASE – Excerpta Medica DataBASE
https://www.elsevier.com/solutions/embase-biomedical-research
(January 2000 to May 2020) 1031 studies identified

Primary keywords and search string in "advanced search" tool; preselect English only, titles, abstracts and indexed terms:

1. ((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") ADJ10 (perspective* OR attitude* OR opinion* OR behavior* OR behaviour* OR practices))
2. (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) ADJ5 (values OR preferences))
3. (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")
4. (patient NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))
5. 1 and 2 and 3 and 4

PubMed-Medline
http://www.pubmed.com/
(January 2000 to May 2020) 661 studies identified

Primary keywords and search string in "advanced" search tool; preselect English only, titles, abstracts and indexed terms:

((((((((((("physician*"[Title] OR "health professional*"[Title]) OR "healthcare professional*"[Title]) OR "health care professional*"[Title]) OR "practitioner*"[Title]) OR "specialist*"[Title]) OR "doctor*"[Title]) OR "nurse*"[Title]) OR "provider*"[Title]) OR "clinician*"[Title]) OR ("clinic*"[All Fields] AND (("staff"[All Fields] OR "staff s"[All Fields]) OR "staffs"[All Fields]))) AND (((((("perspective*"[Title] OR "attitude*"[Title]) OR "opinion*"[Title]) OR "behavior*"[Title]) OR "behaviour*"[Title]) OR ((((((((((("practicability"[All Fields] OR "practicable"[All Fields]) OR "practical"[All Fields]) OR "practicalities"[All Fields]) OR "practicality"[All Fields]) OR "practically"[All Fields]) OR "practicals"[All Fields]) OR "practice"[All Fields]) OR "practice s"[All Fields]) OR "practiced"[All Fields]) OR "practices"[All Fields]) OR "practicing"[All Fields]))) AND ((((((((("qualitative"[Title] OR "review"[Title]) OR "synthesis"[Title]) OR "analysis"[Title]) OR "narrative"[Title]) OR "interview*"[Title]) OR "observation*"[Title]) OR "survey*"[Title]) OR "focus group*"[All Fields])) AND ((((("patient*"[Title] OR "client*"[Title]) OR "individual*"[Title]) OR "consumer*"[All Fields]) AND ("values"[Title] OR (((((((("prefer"[All Fields] OR "preferable"[All Fields]) OR "preferably"[All Fields]) OR "preferred"[All Fields]) OR "preference"[All Fields]) OR "preferences"[All Fields]) OR "preferred"[All Fields]) OR "preferring"[All Fields]) OR "prefers"[All Fields])))

Scopus

https://www.elsevier.com/solutions/scopus

(January 2000 to July 2020) 627 studies identified

Primary keywords and search string: (NOTE: 147,000 results originally from this string; Scopus provides pre-set search inclusion/exclusion options to choose. To narrow this search I selected publication year range 2000-2020; included only Med, Nursing, Health Professions; only USA, UK, CAN, and the 4 primary NCDs of interested to this study, Oncology, CV, Respiratory, Diabetes.)

("primary care" OR "specialist care" OR "secondary care") AND (diabetes OR asthma OR cardiovascular OR cancer OR COPD) AND (((((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") W/10 (perspective* OR attitude* OR opinion* OR behavior* OR behaviour* OR practices)) AND ((integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) W/5 (values OR preferences)))) AND (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")) AND NOT ("patient-reported" OR "advance planning" OR palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR children OR pediatric OR teen* OR adolescent* OR surge* OR emergenc* OR resuscitat* OR terminal*)) AND NOT (patient W/3 (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR understanding OR awareness OR education OR satisfaction))

OVID-Medline

https://www.ovid.com/product-details.901.html

(January 2000 to May 2020) 583 studies identified

Primary keywords and search string in "advanced search" tool; preselect English only, titles, abstracts and indexed terms:

1. ((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") ADJ10 (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR practices))

2. (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) ADJ5 (values OR preferences))
3. (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")
4. (patient NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))
5. 1 and 2 and 3 and 4

CINAHL – Cumulative Index to Nursing and Allied Health Literature
https://www.ebscohost.com/nursing/products/cinahl-databases/the-cinahl-database
(January 2000 to July 2020) 464 studies identified after duplicates removed)

Primary keywords and search string; titles and abstracts:

(((qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*") AND (physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") AND (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR practices*) AND (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ("patient* values" OR "patient* preferences" OR "client* values" OR "client* preferences" OR "individual* values" OR "individual* preferences" OR "consumer* values" OR "consumer* preferences")) NOT (palliative OR "end of life" OR "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))

ASSIA – Applied Social Science Index and Abstracts
https://search.proquest.com/assia?_ga=2.36367776.1827441237.1546299943-1531284045.1543164998
(January 2000 to July 2020) 407 studies identified

Primary keywords and search string:

(ab(((patient NEAR/2 (values OR preferences))) AND ((physician OR doctor OR provider) NEAR/5 (practices OR perspectives OR attitudes OR opinions))) AND qualitative) OR ti((patient AND (values OR preferences)) AND (physician OR doctor OR provider)) OR ti(patient values) OR ((((((physician OR "health professional" OR "healthcare professional" OR "health care professional" OR practitioner OR specialist OR doctor OR nurse OR provider OR "clinician" OR staff) NEAR/10 (perspectives OR attitudes OR opinions OR behavior OR behaviour OR practices)) AND ((integrate OR implement OR incorporate OR consider OR promote OR approaches OR barriers OR facilitate OR facilitators) NEAR/5 ((patient OR client OR individual OR consumer) NEAR/3 (values OR preferences)))) AND (qualitative OR review OR synthesis OR analysis OR narrative OR interviews OR observations OR survey OR "focus groups")) NOT (palliative OR "end of life" "end-of-life" OR "advanced directives" OR child OR surgery OR emergency OR resuscitation OR terminal)) AND pd(20000101-20200630))

PsychINFO
https://www.apa.org/pubs/databases/psycinfo/index.aspx
(January 2000 to July 2020) 255 studies identified

Primary keywords and search string using "advanced search" tool; limited to abstracts:

1. ((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") ADJ10 (perspective* OR attitude* OR opinion* OR behavior* OR behaviour* OR practices))
2. (integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) AND ((patient* OR client* OR individual* OR consumer*) ADJ5 (values OR preferences))
3. (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")
4. (patient NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*))
5. 1 and 2 and 3 and 4

Web of Science
http://apps.webofknowledge.com/
(January 2000 to July 2020) 231 studies identified

Primary keywords and search string:

(((physician* OR "health professional*" OR "healthcare professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") NEAR/10 (perspective* OR attitude* OR opinion* OR behavior* OR behavior* OR practices)) AND ((integrat* OR implement* OR incorporat* OR consider* OR promote* OR use* OR using OR approach* OR barrier* OR facilitate* OR regard*) NEAR/5 ((patient* OR client* OR individual* OR consumer*) NEAR/3 (values OR preferences))) AND (qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*")) NOT (palliative OR "end of life" "end-of-life" OR "advanced directive*" OR child OR surge* OR emergenc* OR resuscitat* OR terminal*)

Google Scholar
https://scholar.google.com/
(January 2000 to April 2020) 95 studies identified

Primary keywords and search strategy:

- Screened for “qualitative” and/or “review”
- Exact phrases "patient values" and/or "patient preferences"
- Must include “physician” "health professional" “doctor” “nurse” or variants
- Also included anything re. various types of cancers or "patient/physician communication & relationship" or "joint/shared decision-making" etc.
- Excluded "end of life" "terminal" "end stage" "directives" "advanced care planning" arthritis, fibromyalgia (non-top NCDs) or resuscitation

DARE – Database of Abstracts of Reviews for Effectiveness
https://www.crd.york.ac.uk/CRDWeb/
(January 2000 to July 2020) 19 studies identified

Primary keywords and search string; select DARE database only; publication year 2000 to 2020; search titles only:

((qualitative OR review OR synthesis OR analysis OR narrative OR interview* OR observation* OR survey* OR "focus group*") AND (physician* OR "health professional*" OR "healthcare

professional*" OR "health care professional*" OR practitioner* OR specialist* OR doctor* OR nurse* OR provider* OR "clinician*" OR "clinic* staff") AND (perspective* OR attitude* OR opinion* OR behavior* OR behavior*))

ERIC – Education Resources Information Center
https://eric.ed.gov/
(January 2000 to July 2020) 7 studies identified

Primary keywords and search string; full text available only:

("patients values" OR "patients preferences")

GreyLit
http://greylit.org/
(2000 to 2020) 1 study identified

Primary keywords and search string (note this database was discontinued in 2017, but remains searchable up to that date):

"patients preferences" (6 results) narrowed with additional keyword “values”

Forward-Backward Searches
(January 2000 to August 2020) 86 studies identified

Appendix C – Appraisal Checklist & Quality Assessment of Included Records

JBI Critical Appraisal Checklist for Qualitative Research

Reviewer_____Date_____

Author _____Year_____Record Number_____.

		Yes	No	Unclear	Not applicable
1.	Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2.	Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3.	Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4.	Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5.	Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6.	Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7.	Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8.	Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Quality Assessment of Included Records

Key to JBI Critical Appraisal Checklist for Qualitative Research	
JBI-Q1	Is there congruity between stated philosophical perspective and research methodology?
JBI-Q2	Is there congruity between research methodology and research question or objective?
JBI-Q3	Is there congruity between the research methodology and the data collection methods?
JBI-Q4	Is there congruity between the research methodology and the representation and analysis of data?
JBI-Q5	Congruity between the research methodology and the interpretation of results.
JBI-Q6	Is there a statement locating the researcher culturally or theoretically?
JBI-Q7	Is the influence of the researcher on the research, and vice-versa, addressed?
JBI-Q8	Are participants voices adequately represented?
JBI-Q9	Is the research ethical according to current criteria, or evidence of ethical approval by an appropriate body?
JBI-Q10	Do the conclusions flow from the analysis, or interpretation, of the data?

Author (Year)	Ref.	JBI-Q1	JBI-Q2	JBI-Q3	JBI-Q4	JBI-Q5	JBI-Q6	JBI-Q7	JBI-Q8	JBI-Q9	JBI-Q10
Aita V et al. (2005)	36	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Chhabra KR et al. (2012)	37	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Davis K et al. (2017)	38	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Elwyn G et al. (2000)	39	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Feiring E et al. (2020)	40	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Ford S et al. (2002)	32	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Ford S et al. (2003)	31	Yes	Yes	Yes	Yes	Yes	No	No	Yes	yes	Yes
Ford S et al. (2006)	41	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Friedberg MW et al. (2013)	42	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Golden SE et al. (2017)	43	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gruß I et al. (2019)	44	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Hall J et al. (2011)	45	Yes	Yes	Yes	Yes	Yes	No	No	No	N/A	Yes
Hart PL et al. (2014)	46	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hisham R et al. (2016)	47	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Jefford M et al. (2002)	48	Yes	Yes	Yes	Yes	Yes	No	No	No	N/A	Yes
Kennedy BM et al. (2017)	49	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Landmark AM et al. (2016)	50	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Lown B et al. (2009)	51	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
McLeod H et al. (2017)	33	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Murdoch J et al. (2020)	52	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Paiva D et al. (2019)	53	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Pieterse AH et al. (2011)	54	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes

Author (Year)	Ref.	JBI-Q1	JBI-Q2	JBI-Q3	JBI-Q4	JBI-Q5	JBI-Q6	JBI-Q7	JBI-Q8	JBI-Q9	JBI-Q10
Salter C et al. (2019)	55	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Schulman-Green DJ et al. (2006)	56	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Shepherd HL et al. (2011)	57	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Shortus T et al. (2011)	58	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tracy CS et al. (2003)	59	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Van Humbeeck et al. (2020)	60	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Vermunt N et al. (2019)	61	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Visser LNC et al. (2018)	62	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Zulman DM et al. (2020)	63	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Appendix D – Data Extraction Tool

Modified version of the JBI Data Extraction Tool

Item to be Extracted	Data
Study ID	
Publication Year	
Title	
Publication	
Study Reference in Full	
Study Aim/Objective/Phenomena of Interest	
Qual Methodology	
Qual Method(s)	
Analytical Approach	
HCP Participant Type	
No. HCP Participants	
Level of HCP Experience	
Setting (Clinical Context)	
Location (Geography)	
No. Practices/Sites/Clinics	
No. Clinical Consultations, Encounters, Interactions	
NCD Category	
Qual Findings	
Author Conclusions	
Reviewer Comments	
Extraction Completed Date	

Appendix E – Findings & Citations: Table of Approaches to Values Integration

Primary Themes	*Subthemes*	*Healthcare Professional Approaches/Behaviors*	*Citation(s)*
Approaches of CONCERN	Advocating	Advocating for the Patient	*Aita, Davis, Elwyn, Ford'02, Ford'03, Lown, Paiva, Tracy*
		Making Referrals, Seeking Second Opinions	*Aita, Chhabra, Ford'06, Friedberg, McLeod, Murdoch, Tracy, Visser*
	Caring & Connecting	Acting in a Relational Way	*Aita, Lown, Paiva, Zulman*
		Being Genuine/Sincere	*Aita, McLeod, Salter, Shortus, Van Humbeeck, Zulman*
		Comforting/Reassuring/Supporting the Patient	*Aita, Feiring, Ford'02, Ford'03, Friedberg, Grub, Hart, Jefford, Kennedy, Landmark, Lown, McLeod, Murdoch, Paiva, Pieterse, Salter, Schulman-Green, Shepherd, Tracy, Van Humbeeck, Visser, Zulman*
		Creating a Safe Space to Talk/Question/Disagree	*Chhabra, Elwyn, Feiring, Ford'02, Ford'03, Golden, Grub, Hisham, Jefford, Landmark, Lown, McLeod, Paiva, Pieterse, Salter, Shepherd, Tracy, Van Humbeeck*
		Expressive Touch	*Hall, McLeod, Zulman*
		Focus on Prevention	*Aita, Murdoch*
		Making the Patient Feel Comfortable	*Ford'02, Lown, McLeod, Visser*
		Mindfulness	*Grub, Lown, McLeod, Zulman*
		Seeing Patient Perspective/Having (vs. "showing/exhibiting/displaying") Empathy	*Aita, Davis, Elwyn, Ford'03, Friedberg, Golden, Grub, Hall, Kennedy, Landmark, Lown, McLeod, Murdoch, Paiva, Pieterse, Schulman-Green, Van Humbeeck, Vermunt, Visser, Zulman*
		Sharing Doctor's Own Personal Experiences, Making the Doctor Approachable	*Kennedy, McLeod*
		Sharing Personal Interests, Feelings, Experiences	*Lown, McLeod*
		Showing/Exhibiting/Displaying (vs. "having") Compassion, Empathy, Caring	*Ford'03, Golden, Grub, Kennedy, Lown, McLeod, Murdoch, Paiva, Van Humbeeck, Visser, Zulman*
		Showing Curiosity About the Patient/Condition	*Hall, Zulman*
		Treating Patient as a Unique Person/Individual	*McLeod, Van Humbeeck*
		Valuing Feeling Comfortable	*McLeod, Pieterse, Visser*
	Empowering	Enabling Patient Self-Management, Patient Agency	*Chhabra, Feiring, Landmark, McCleod, Murdoch, Paiva, Salter*
		Establishing Equality	*Elwyn, Ford'03, Lown, McLeod, Murdoch, Van Humbeeck*
		Giving Patient Control, Final Say, Patient Empowerment	*Ford'02 Ford'03, Grub, Kennedy, Lown, McLeod, Murdoch, Salter, Shepherd, Van Humbeeck, Visser, Zulman*
		Having Patience, Letting the Patient Set the Pace	*Ford'03, McLeod, Visser*
		Invites Patient to Lead	*McLeod, Salter*
		Opportunities to Reconsider	*Elwyn, Ford'03, Pieterse*

Primary Themes	Subthemes		Healthcare Professional Approaches/Behaviors	Citation(s)
			Recognizing, Confirming, Validating Patient Autonomy	Chhabra, Elwyn, Ford'02, Ford'03, Ford'06, Jeffords, Lown, McLeod, Shortus, Van Humbeeck
			Respectful Environments/Clinics/Waiting Rooms	Aita, Ford'03, McLeod
			Respecting Privacy	Ford'03, McLeod, Van Humbeeck
			Sharing Control Overall	Lown, McLeod
			Trusting/Respecting the Patient	Elwyn, Ford'03, Ford'06, Golden, Hart, Kennedy, Lown, McLeod, Paiva, Shortus, Vermunt, Zulman
			Valuing the Individual Patient	Hart, McLeod
	Inviting		Invite/Involve Carers/Caregivers	Ford'03, Paiva
			Invite/Involve Family/Loved Ones	Chhabra, Davis, Elwyn, Friedberg, Golden, Hart, Lown, Paiva, Salter, Van Humbeeck, Visser, Zulman
			Invite/Involve Others	Elwyn
			Seeks Input from Colleagues and Other Experts	Elwyn, Hisham
	Partnering		Develop Partnership with the Patient	Aita, Elwyn, Kennedy, McLeod, Zulman
			Forms Therapeutic Alliance/Relationship with Patient	McLeod, Paiva
			Mutual Respect Between Patient and HCP	Elwyn, Ford'03, McLeod, Paiva, Vermunt
			Personalizing Approach/Decisions/Care	Chhabra, Feiring, Friedberg, Jefford, McLeod, Murdoch, Paiva, Salter, Shortus, Van Humbeeck, Zulman
			Takes the Long-Term View	Davis, Golden, Murdoch, Schulman-Green, Shortus
			Understanding the Patient	Davis, Elwyn, Feiring, Ford'03, Ford'06, McLeod, Friedberg, Golden, Kennedy, Landmark, Lown, Salter, Van Humbeeck, Visser, Zulman
	Sensing		Cultural Sensitivity	Aita, Hart, Kennedy, Lown, McLeod, Shepherd,
			Interpersonal Sensitivity, Overall Concern	Ford'03, Hall, McLeod, Paiva, Pieterse, Zulman
			Non-Judgmental	Lown
			Respect/Include Religion	McLeod, Van Humbeeck
			Using Intuition	Tracy
Approaches of COMPETENCE	Decision Making	Decision Support	Patient Decision Aids/Tools	Davis, Ford'03, Friedberg, Grub, Jefford, Lown, McLeod, Shortus, Vermunt
			Stories, Vivid Descriptions	Aita, Ford'03, Landmark, Lown, McLeod, Paiva
		Directing	Giving an Opinion to the Patient	Ford'03, Fored'06, Landmark, Lown, McLeod, Tracy
			Listing	Elwyn, Salter
			Making Recommendations	Aita, Chhabra, Davis, Feiring, Ford'03, Friedberg, Golden, Kennedy, Landmark, McLeod, Murdoch, Paiva, Pieterse, Schulman-Green, Shepherd, Shortus, Tracy, Vermunt
		Sharing Decisions	Competence with Research Evidence	Elwyn, Ford'02, Ford'06, McLeod

Primary Themes	Subthemes		Healthcare Professional Approaches/Behaviors	Citation(s)
			Formulating the Patient's Stance/Priorities	Grub, Landmark, Murdoch
			Negotiate Decisions	Aita, Elwyn, Ford'03, Hall, Landmark, Lown, McLeod, Murdoch, Paiva, Salter, Shepherd, Shortus, Tracy, Vermunt
			Shared Decision-Making (SDM)	Chhabra, Davis, Elwyn, Ford'02, Ford'03, Ford'06, Friedberg, Golden, Grub, Hall, Jefford, Landmark, Lown, McLeod, Murdoch, Paiva, Pieterse, Salter, Schulman-Green, Shepherd, Shortus, Van Humbeeck, Vermunt, Visser, Zulman
			Understanding Diseases/Treatments	Ford'03, Davis, Elwyn, Feiring, Golden, Grub, Kennedy, McLeod
	Managing	Agenda Setting	Mutual Agenda Setting	Ford'06, McLeod, Murdoch, Salter, Shortus, Zulman
			Mutually Set Priorities	Aita, Lown, McLeod, Murdoch, Salter, Shortus, Vermunt, Zulman
		Emotions	Anxiety (Prevent, Recognize or Reduce)	Chhabra, Davis, Elwyn, Feiring, Ford'03, Golden, Hall, Jefford, Landmark, Salter, Shepherd, Tracy, Visser, Zulman
			Distress Management	Chhabra, Golden, Hall, Jefford, Kennedy, McLeod, Paiva, Visser, Zulman
			Processing Emotions	Hall, Landmark, Lown, McLeod, Paiva, Visser, Zulman
		Negotiating	Assess, Evaluate Treatment Options	Davis, Friedberg, Golden, Grub, McLeod, Murdoch, Pieterse, Salter, Shepherd, Vermunt
			Deliberate, Weigh, Negotiate Options	Davis, Elwyn, Ford'03, Friedberg, Golden, Grub, Landmark, McLeod, Pieterse, Shepherd
			Contesting Patient Understanding/Responses	Murdoch, Pieterse, Salter
			Discuss Pros/Cons of Options	Chhabra, McLeod, Shepherd, Van Humbeeck, Vermunt
			Giving, Outlining, Providing Options	Davis, Chhabra, Elwyn, Ford'02, Ford'03, Friedberg, Golden, Grub, Jefford, McLeod, Pieterse, Shortus, Tracy, Van Humbeeck
			Handling Agreement & Disagreement	Chhabra, Landmark, Lown, McLeod, Pieterse, Schulman-Green, Shortus
			Mutual Agreement	Pieterse
			Negotiate Roles/Responsibilities of Patient and HCP	Elwyn, Lown, Murdoch, Salter, Shepherd
		Planning & Preparing	Action Plans	Elwyn, Feiring, Murdoch, Salter, Vermunt
			Agreeing on Priorities	Aita, McLeod, Ford'06, Lown, Murdoch, Salter, Shortus, Van Humbeeck, Vermunt, Zulman
			Arranging Follow-Up	Elwyn, Ford'03, Ford'06, Golden, Landmark, Lown, McLeod, Salter, Shepherd, Vermunt
			Mutual Planning	McLeod, Paiva, Salter, Schulman-Green, Shortus
			Collaborative Goal Setting	Murdoch, Paiva, Salter, Vermunt
			Prepare for the Consultation	Ford'03, Salter, Shortus Zulman
			Preparing for Personalization	Shortus, Zulman
		Processing	Actively Manage the Patient's Involvement	Shortus
			Allowing/Investing Time	Friedberg, Lown, McLeod, Salter
			Coordination/Continuity of Care	Aita, Davis, Feiring, Ford'03, Friedberg, Landmark, McLeod, Salter

Primary Themes	*Subthemes*	*Healthcare Professional Approaches/Behaviors*	*Citation(s)*
		Don't Rush, Take Time	*Ford'03, Lown, McLeod, Schulman-Green*
		EHR, Recording, Record-Keeping Documenting	*For'02, Friedberg, Hisham, Jefford, McLeod, Zulman*
		Following-Up	*Davis, Elwyn, Feiring, Ford'03, Ford'06, Golden, Landmark, McLeod, Pieterse, Vermunt*
		Keeps a Long-Term Focus	*David, Murdoch, Schulman-Green, Shortus*
		Leaving Time for Questions	*Golden*
		Systematic Process, Stages, Approaches to the Consultation and Care	*Vermunt*
	Professionalism	Being Consistent with Information/Care/Decisions	*Paiva, Vermunt*
		Honesty and Transparency	*Feiring, Ford'03, Golden, Jefford, Lown, McLeod, Shortus, Van Humbeeck*
		Responsiveness	*Aita, Jefford, McLeod, Pieterse, Shepherd, Shortus, Van Humbeeck, Vermunt*
		Realistic Approach the Patient, Care	*Aita, Jefford, Murdoch, Pieterse, Salter, Shortus, Tracy*
Approaches of COMMUNICATION	Acknowledging	Acknowledging Patient's Role, Effort	*Ford'03, Grub, Hart, Lown, McLeod, Murdoch, Visser, Zulman*
		Celebrating Successes	*McLeod, Zulman*
		Legitimizing Personal Preferences, Validating the Patient	*Landmark, Lown, McLeod, Murdoch, Pieterse, Salter, Tracy, Zulman*
		Reassurances	*Ford'03, Kennedy, Landmark, McLeod, Pieterse, Salter, Tracy, Van Humbeeck, Visser, Zulman*
		Showing Own Emotions	*Hall, Landmark, Lown, McLeod, Visser, Zulman*
		Showing Understanding	*Chhabra, Davis, Elwyn, Fore'03, Grub, Jefford, Kennedy, Landmark, Lown, McLeod, Murdoch*
		Valuing, Acknowledging, Validating, Responding to Patient Emotions	*Aita, Chhabra, Feiring, Ford'02, Ford'03, Grub, Hall, Jefford, Landmark, Lown, McLeod, Paiva, Visser, Zulman*
	Clarifying	Checking, Rechecking	*Elwyn, Ford'03, Ford'06, Landmark, Murdoch, Paiva, Pieterse*
		Clarifying Values, Preferences, Views	*Elwyn, Ford'03, Friedberg, Landmark, Lown, Murdoch, Pieterse, Vermunt*
		Framing & Reframing	*Elwyn, Golden, Landmark, McLeod, Murdoch, Vermunt, Zulman*
		Repeating	*Paiva, Pieterse*
		Revisiting (Decisions Over Time)	*McLeod, Shortus*
	Encouraging	Approving/Amplifying Patient Appraisals/Choices	*Pieterse*
		Encouraging/Inviting Patient Comments/Questions	*Chhabra, Fored'03, Jefford, Hisham, Landmark, McLeod, Murdoch, Pieterse, Salter*
		Encouraging Patient to Prepare	*Murdoch, Salter*
		Encouraging Storytelling	*McLeod*
		Inviting Patient Participation	*Chhabra, McLeod, Pieterse, Salter*
		Motivational Interviewing	*McLeod, Paiva, Zulman*

Primary Themes	Subthemes		Healthcare Professional Approaches/Behaviors	Citation(s)
	Exchanging Information	Defining	Explain, Define, Describe the Problem for Patient	*Elwyn, Ford'03, Kennedy, Vermunt*
			Inform Patient of Condition/Diagnosis/Biomedical	*Aita, Ford'03, Grub, McLeod, Murdoch, Salter, Schulman-Green, Shortus*
		Educating	Coaching	*Jeffords, Zulman*
			Information Giving	*Golden, Grub, Jefford, McLeod, Paiva, Van Humbeeck, Visser*
			Information/Education Aids, Materials, Tools	*Davis, Golden, Jefford, McLeod, Zulman*
			Patient Education	*Chhabra, Davis, Feiring, Friedberg, Vermunt*
			Sharing Knowledge with the Patient	*Ford'03, Golden, McLeod, Paiva*
		Interviewing & Eliciting	Eliciting Goals	*Aita, Chhabra, Grub, Lown, McLeod, Murdoch, Salter, Schulman-Green, Shortus, Vermunt, Zulman*
			Eliciting Patient Appraisals (Strengths of Preferences)	*Pieterse*
			Eliciting Preferences	*Chhabra, Davis, Elwyn, Ford'02, Ford'03, Ford'06, Friedberg, Golden Grub, Hart, Hisham, Jefford, Kennedy, Landmark, Lown, McLeod, Murdoch, Pieterse, Salter, Schulman-Green, Shepherd, Shortus, Tracy, Van Humbeeck, Vermunt, Visser, Zulman*
			Eliciting Values	*Aita, Chhabra, Davis, Elwyn, Ford'02, Ford'03, Friedberg, Golden, Grub, Hart, Hall, Hisham, Kennedy, Landmark, Lown, McLeod, Murdoch, Schulman-Green, Tracy, Van Humbeeck, Vermunt*
			Eliciting Circumstances	*Aita, Salter, Schulman-Green, Tracy, Zulman*
			Eliciting Patient Feelings	*Feiring, Golden, Hall, Landmark, Lown, McLeod, Pieterse, Visser*
			Patient-Centered Interviewing	*Aita, Paiva, Vermunt, Zulman*
		Presenting Evidence	Discussing Risks/Benefits/Side-Effects/Trade-Offs	*Chhabra, Elwyn, Ford'02, Ford'03, Friedberg, Golden, Jefford, Lown, McLeod, Paiva, Pieterse, Shepherd, Vermunt*
			Presenting, Sharing, Explaining Evidence	*Ford'03, Friedberg, Grub, McLeod, Pieterse, Tracy, Vermunt*
			Willingness to See More Information, Encourages Patient to Look for More Information	*Ford'03, Jefford, Lown, Visser*
	Exploring		Asking Questions	*Chhabra, Ford'02, Ford'03, Jefford, McLeod*
			Assessing Values, Preferences, Expectations	*Ford'03, Grub, Landmark, Shepherd*
			Explore Ideas, Perspective, Alternatives	*Elwyn, Landmark, Shepherd, Visser*
			Explore Cues and Clues (Verbal and Non-Verbal)	*Chhabra, Elwyn, Ford'03, Hall, Kennedy, McLeod, Salter, Visser, Zulman*
			Explore Fears, Concerns, Distresses, Emotions	*Elwyn, Ford'02, Ford'03, Ford'06, Golden, Lown, Salter, Visser, Zulman*
			Signaling (Pausing, Thinking Out Loud, Non-Verbal Cues)	*Chhabra, Elwyn, Jefford, Hall, McLeod, Murdoch, Pieterse, Visser, Zulman*
	Language		Deferential Language	*Chhabra*
			Directive Language	*Ford'02*

Primary Themes	*Subthemes*	*Healthcare Professional Approaches/Behaviors*	*Citation(s)*
		Emotion-Oriented Speech	*Visser*
		Use Common Language, No Jargon	*Lown, Paiva, Pieterse*
		Using Inviting Language	*Chhabra*
		Variations in Tone of Voice	*Hall, McLeod, Visser, Zulman*
	Listening	Active Listening, Without Interruption	*Elwyn, Ford'03, Ford'06, Hall, Landmark, Lown, McLeod, Paiva, Salter, Zulman*
		Silence, Attentive or As a Response to Emotion	*Visser, Zulman*
	Summarizing	Highlight/Repeat Patient's Appraisal/Choice	*Pieterse*
		Providing Summaries to the Patient (Written or Audio)	*Hart, Jefford*
		Summarizing in the Encounter	*Landmark*
Approaches of CONGRUENCE	Adjusting & Tailoring	Adjust Approach Based on Patient's Needs, Values, Preferences	*Ford'03, Hall, Jefford, Lown, Paiva, Visser, Zulman*
		Tailor Options for the Patient	*Elwyn, Feiring, Ford'03, Friedberg, Golden, Hart, McLeod, Paiva, Pieterse, Shepherd, Shortus, Van Humbeeck, Zulman*
	Balancing & Flexibility	Flexibility In Overall Approach to Care	*Aita, Elwyn, Ford'02, Ford'03, Ford'06, McLeod, Shortus, Tracy, Van Humbeeck, Vermunt, Visser*
		Balancing Information, Issues, Needs, Power, and Responsibilities	*Ford'03, Friedberg, Golden, Grub, Hisham, Jefford, Lown, McLeod, Paiva, Pieterse, Salter, Shortus*

ENTRQ Reporting Checklist for *Tringale, Michael et al, bmjopen-2002-067268*

https://www.equator-network.org/reporting-guidelines/entreq/

No	Item	Guide and description	Reported on Page
1	Aim	State the research question the synthesis addresses.	p. 8
2	Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology *(e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).*	P. 8
3	Approach to searching	Indicate whether the search was pre-planned (*comprehensive search strategies to seek all available studies)* or iterative (*to seek all available concepts until they theoretical saturation is achieved).*	p. 9
4	Inclusion criteria	Specify the inclusion/exclusion criteria *(e.g. in terms of population, language, year limits, type of publication, study type).*	pp. 9-10
5	Data sources	Describe the information sources used (e.g. *electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists)* and when the searches conducted; provide the rationale for using the data sources.	P. 9
6	Electronic Search strategy	Describe the literature search *(e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits).*	P. 9 and Appendix B
7	Study screening methods	Describe the process of study screening and sifting *(e.g. title, abstract and full text review, number of independent reviewers who screened studies).*	p. 9
8	Study characteristics	Present the characteristics of the included studies *(e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions).*	p. 12
9	Study selection results	Identify the number of studies screened and provide reasons for study exclusion *(e,g, for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications t the research question and/or contribution to theory development).*	pp. 12-13 and Table 1
10	Rationale for appraisal	Describe the rationale and approach used to appraise the included studies or selected findings *(e.g. assessment of conduct (validity and robustness), assessment of reporting (transparency), assessment of content and utility of the findings).*	pp. 9-10
11	Appraisal items	State the tools, frameworks and criteria used to appraise the studies or selected findings *(e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope* [25]*; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting).*	pp. 9-10
12	Appraisal process	Indicate whether the appraisal was conducted independently by more than one reviewer and if consensus was required.	p. 30
13	Appraisal results	Present results of the quality assessment and indicate which articles, if any, were weighted/excluded based on the assessment and give the rationale.	Appendix C
14	Data extraction	Indicate which sections of the primary studies were analysed and how were the data extracted from the primary studies? *(e.g. all text under the headings "results /conclusions" were extracted electronically and entered into a computer software).*	pp. 10-12
15	Software	State the computer software used, if any.	pp. 9-10
16	Number of reviewers	Identify who was involved in coding and analysis.	p. 11
17	Coding	Describe the process for coding of data *(e.g. line by line coding to search for concepts).*	p. 10
18	Study comparison	Describe how were comparisons made within and across studies *(e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).*	p. 11
19	Derivation of themes	Explain whether the process of deriving the themes or constructs was inductive or deductive.	p. 11
20	Quotations	Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations of the author's interpretation.	pp. 17-27
21	Synthesis output	Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g. *new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).*	pp. 17-33