Department of Veterans Affairs
Health Services Research & Development Service

Evidence-based Synthesis Program

QUERI

Scoping Brief: Care Coordination Theoretical Models and Frameworks

Supplemental Materials

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VA HEALTH CARE Defining EXCELLENCE in the 21st Century

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SEARCH STRATEGIES

1. Search for current literature (limited to 2010 forward) **Date Searched: 12/22/17**	
Sources:	**Evidence:**
AHRQ	Search: care coordination; integrated care
CADTH	Search: care coordination; integrated care
NICE: NHS Evidence	Search: care coordination; integrated care
ECRI Institute	Search: care coordination; integrated care
VA Products: VATAP, PBM, HSR&D publications, VA ART Database	A. http://www.hsrd.research.va.gov/research/default.cfm B. http://www.research.va.gov/research_topics/ C. http://art.puget-sound.med.va.gov/default.cfm Search: care coordination; integrated care
MEDLINE	Database: Ovid MEDLINE(R) <1946 to December Week 2 2017>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <December 21, 2017> Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (6131) 2 limit 1 to (english language and humans and yr="2010 -Current") (2683) 3 remove duplicates from 2 (2328) **********
CDSR: Cochrane Database of Systematic Reviews & Protocols	Database: EBM Reviews - Cochrane Database of Systematic Reviews <2005 to December 19, 2017> Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (8) 2 limit 1 to (english language and humans and yr="2010 -Current") [Limit not valid; records were retained] (6) 3 remove duplicates from 2 (6) **********
CCRCT: Cochrane Central Registrar of Controlled Trials	Database: EBM Reviews - Cochrane Central Register of Controlled Trials <November 2017> Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (519) 2 limit 1 to (english language and humans and yr="2010 -Current") [Limit not valid; records were retained] (320) 3 remove duplicates from 2 (306) **********
DARE: Database of	Database: EBM Reviews - Database of Abstracts of Reviews of Effects <1st Quarter 2016>

Abstracts of Reviews of Effects	Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (1) 2 limit 1 to (english language and humans and yr="2010 -Current") [Limit not valid; records were retained] (1) 3 remove duplicates from 2 (1) **********
PsycINFO	Database: PsycINFO <1806 to December Week 2 2017> Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (2400) 2 limit 1 to (english language and humans and yr="2010 -Current") [Limit not valid in PsycINFO; records were retained] (1508) 3 remove duplicates from 2 (1508) **********
American College of Physicians Journal Club	Database: EBM Reviews - ACP Journal Club <1991 to November 2017> Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (1) 2 limit 1 to (english language and humans and yr="2010 -Current") [Limit not valid; records were retained] (0) 3 remove duplicates from 2 (0) **********
CINAHL	Database: EBSCOhost – CINAHL Plus with Full Text Search Strategy: --- 1 TI ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) OR AB ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) (4871) 2 limit 1 to (yr="2010 -Current") (3350) 3 limit 2 to (english language and academic journals) (1961) **********
SocINDEX	Database: EBSCOhost – SocINDEX with Full Text Search Strategy: --- 1 TI ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) OR AB ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) (635) 2 limit 1 to (yr="2010 -Current") (306) 3 limit 2 to (english language and academic journals) (289) **********
International Journal of Care Coordination	Search: framework
International	Search: framework

Journal of Integrated Care	

2. Systematic reviews currently under development (forthcoming reviews & protocols) Date Searched: 12/22/17	
Sources:	**Evidence:**
PROSPERO (SR registry)	Search: care coordination; integrated care Relevant Results: Rod Sheaff, Mark Pearson, Richard Byng, Helen Lloyd, Simon Briscoe, Jose Valderas-Martinez. From programme theory to logic models for multi-specialty community providers: a realist evidence synthesis. PROSPERO 2016 CRD42016038900 Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016038900 Susan Baxter, Maxine Johnson, Duncan Chambers, Andrew Booth, Elizabeth Goyder, Anthea Sutton. Understanding new models of care in local contexts: a systematic review using frameworks to examine pathways of change, applicability, and generalisability of the international research evidence. PROSPERO 2016 CRD42016037725 Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016037725 Anna Thomson, Ros Kane, Paul Turner, Christopher Bridle. A systematic review of models and processes of integrated care services for older people. PROSPERO 2016 CRD42016043369 Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016043369
DoPHER (SR Protocols)	Search: care coordination; integrated care

3. Update SR Search Date Searched: 1/8/2018	
Sources:	**Evidence:**
MEDLINE	Database: Ovid MEDLINE(R) <1946 to December Week 4 2017>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <January 05, 2018> Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (6171) 2 limit 1 to (english language and humans and yr="2010 -Current") (2702) 3 remove duplicates from 2 (2347) 4 (systematic review.ti. or meta-analysis.pt. or meta-analysis.ti. or systematic literature review.ti. or this systematic review.tw. or pooling project.tw. or (systematic review.ti,ab. and review.pt.) or meta synthesis.ti. or meta-analy*.ti. or integrative review.tw. or integrative research review.tw. or rapid review.tw. or umbrella review.tw. or consensus development conference.pt. or practice guideline.pt. or drug class reviews.ti. or cochrane database syst rev.jn. or acp journal club.jn. or health technol assess.jn. or evid rep technol assess summ.jn. or jbi database system rev implement rep.jn. or (clinical guideline and management).tw. or ((evidence based.ti. or evidence-based medicine/ or best practice*.ti. or evidence synthesis.ti,ab.) and (((review.pt. or diseases category/ or behavior.mp.) and behavior mechanisms/) or therapeutics/ or evaluation studies.pt. or validation studies.pt. or guideline.pt. or

	pmcbook.mp.)) or (((systematic or systematically).tw. or critical.ti,ab. or study selection.tw. or ((predetermined or inclusion) and criteri*).tw. or exclusion criteri*.tw. or main outcome measures.tw. or standard of care.tw. or standards of care.tw.) and ((survey or surveys).ti,ab. or overview*.tw. or review.ti,ab. or reviews.ti,ab. or search*.tw. or handsearch.tw. or analysis.ti. or critique.ti,ab. or appraisal.tw. or (reduction.tw. and (risk/ or risk.tw.) and (death or recurrence).mp.)) and ((literature or articles or publications or publication or bibliography or bibliographies or published).ti,ab. or pooled data.tw. or unpublished.tw. or cijntion.tw. or cijntions.tw. or database.ti,ab. or internet.ti,ab. or textbooks.ti,ab. or references.tw. or scales.tw. or papers.tw. or datasets.tw. or trials.ti,ab. or meta-analy*.tw. or (clinical and studies).ti,ab. or treatment outcome/ or treatment outcome.tw. or pmcbook.mp.))) not (letter or newspaper article).pt. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (322481) 5 "Review"/ or "Review Literature as Topic"/ (2541999) 6 4 or 5 (2683820) 7 3 and 6 (433) **********
PsycINFO	Database: PsycINFO <1806 to January Week 1 2018> Search Strategy: ---------- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (2431) 2 limit 1 to (english language and humans and yr="2010 -Current") [Limit not valid in PsycINFO; records were retained] (1539) 3 remove duplicates from 2 (1539) 4 (systematic review.ti. or meta-analysis.pt. or meta-analysis.ti. or systematic literature review.ti. or this systematic review.tw. or pooling project.tw. or (systematic review.ti,ab. and review.pt.) or meta synthesis.ti. or meta-analy*.ti. or integrative review.tw. or integrative research review.tw. or rapid review.tw. or umbrella review.tw. or consensus development conference.pt. or practice guideline.pt. or drug class reviews.ti. or cochrane database syst rev.jn. or acp journal club.jn. or health technol assess.jn. or evid rep technol assess summ.jn. or jbi database system rev implement rep.jn. or (clinical guideline and management).tw. or ((evidence based.ti. or evidence-based medicine/ or best practice*.ti. or evidence synthesis.ti,ab.) and (((review.pt. or diseases category/ or behavior.mp.) and behavior mechanisms/) or therapeutics/ or evaluation studies.pt. or validation studies.pt. or guideline.pt. or pmcbook.mp.)) or (((systematic or systematically).tw. or critical.ti,ab. or study selection.tw. or ((predetermined or inclusion) and criteri*).tw. or exclusion criteri*.tw. or main outcome measures.tw. or standard of care.tw. or standards of care.tw.) and ((survey or surveys).ti,ab. or overview*.tw. or review.ti,ab. or reviews.ti,ab. or search*.tw. or handsearch.tw. or analysis.ti. or critique.ti,ab. or appraisal.tw. or (reduction.tw. and (risk/ or risk.tw.) and (death or recurrence).mp.)) and ((literature or articles or publications or publication or bibliography or bibliographies or published).ti,ab. or pooled data.tw. or unpublished.tw. or cijntion.tw. or cijntions.tw. or database.ti,ab. or internet.ti,ab. or textbooks.ti,ab. or references.tw. or scales.tw. or papers.tw. or datasets.tw. or trials.ti,ab. or meta-analy*.tw. or (clinical and studies).ti,ab. or treatment outcome/ or treatment outcome.tw. or pmcbook.mp.))) not (letter or newspaper article).pt. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (110010) 5 "Review"/ or "Review Literature as Topic"/ (22353) 6 4 or 5 (130123) 7 3 and 6 (110) **********

CINAHL	Database: EBSCOhost – CINAHL Plus with Full Text Search Strategy: --- 1 TI ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) OR AB ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) (4920) 2 limit 1 to (yr="2010 -Current") (3399) 3 limit 2 to (english language) (3326) 4 (TI (systematic* n3 review*)) or (AB (systematic* n3 review*)) or (TI (systematic* n3 bibliographic*)) or (AB (systematic* n3 bibliographic*)) or (TI (systematic* n3 literature)) or (AB (systematic* n3 literature)) or (TI (comprehensive* n3 literature)) or (AB (comprehensive* n3 literature)) or (TI (comprehensive* n3 bibliographic*)) or (AB (comprehensive* n3 bibliographic*)) or (TI (integrative n3 review)) or (AB (integrative n3 review)) or (JN "Cochrane Database of Systematic Reviews") or (TI (information n2 synthesis)) or (TI (data n2 synthesis)) or (AB (information n2 synthesis)) or (AB (data n2 synthesis)) or (TI (data n2 extract*)) or (AB (data n2 extract*)) or (TI (medline or pubmed or psyclit or cinahl or (psycinfo not "psycinfo database") or "web of science" or scopus or embase)) or (AB (medline or pubmed or psyclit or cinahl or (psycinfo not "psycinfo database") or "web of science" or scopus or embase)) or (MH "Systematic Review") or (MH "Meta Analysis") or (TI (meta-analy* or metaanaly*)) or (AB (meta-analy* or metaanaly*)) (96099) 5 3 AND 4 (278) 6 limit 5 to (academic journals) (151) **********
CDSR	Database: EBM Reviews - Cochrane Database of Systematic Reviews <2005 to January 4, 2018> Search Strategy: --- 1 (((coordinat* or co-ordinat* or integrat*) adj3 (healthcare or care)) and (theor* or model or framework or concept*)).ti,ab. (8) 2 limit 1 to (english language and humans and yr="2010 -Current") [Limit not valid; records were retained] (6) 3 remove duplicates from 2 (6) **********
SocINDEX	Database: EBSCOhost – SocINDEX with Full Text Search Strategy: --- 1 TI ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) OR AB ((((coordinat* OR co-ordinat* OR integrat*) N3 (healthcare OR care)) AND (theor* OR model OR framework OR concept*))) (636) 2 limit 1 to (yr="2010 -Current") (307) 3 limit 2 to (english language and academic journals) (290) 4 (TI (systematic* n3 review*)) or (AB (systematic* n3 review*)) or (TI (systematic* n3 bibliographic*)) or (AB (systematic* n3 bibliographic*)) or (TI (systematic* n3 literature)) or (AB (systematic* n3 literature)) or (TI (comprehensive* n3 literature)) or (AB (comprehensive* n3 literature)) or (TI (comprehensive* n3 bibliographic*)) or (AB (comprehensive* n3 bibliographic*)) or (TI (integrative n3 review)) or (AB (integrative n3 review)) or (JN "Cochrane Database of Systematic Reviews") or (TI (information n2 synthesis)) or (TI (data n2 synthesis)) or (AB (information n2 synthesis)) or (AB (data n2 synthesis)) or (TI (data n2 extract*)) or (AB (data n2 extract*)) or (TI (medline or pubmed or psyclit or cinahl or (psycinfo not "psycinfo database") or "web of science" or scopus or embase)) or (AB (medline or pubmed or psyclit or cinahl or

	(psycinfo not “psycinfo database”) or “web of science” or scopus or embase)) or (MH “Systematic Review”) or (MH “Meta Analysis”) or (TI (meta-analy* or metaanaly*)) or (AB (meta-analy* or metaanaly*)) (3982) 5 3 AND 4 (10) **********

4. Forward Citation Searching **Date: 2/6/18**	
Sources:	**Evidence:**
SCOPUS	Search: By title of each framework. Title: (rated OR rating OR indicator* OR measure* OR valid* OR reliab* OR outcome* OR model* OR scale* OR subscale* OR questionnaire* OR method*OR intervention OR survey* OR tool* OR measur* OR evaluat*) Excluded results from frameworks in which we had previously identified associated measures or tools: - Singer 2011 Excluded results from frameworks not developed specifically for care coordination: - Alter 1993 - Anderson 1995 - Bautista 2016 - Donabedian 1966 - McGrath 1991 - Nadler 1988 - Watzlawick 1976

LIST OF EXCLUDED STUDIES

Exclude reasons: E1=No framework presented, E2= Framework not general care coordination, E3= Previously captured framework(s), E4= Foreign language, E5= Measure not specific to included framework; E6=Full text not located

#	Citation	Exclude reason
1	Ahmed OI. Disease management, case management, care management, and care coordination: A framework and a brief manual for care programs and staff. *Professional Case Management.* 2016;21(3):137-146.	E1
2	Aller MB, Vargas I, Coderch J, et al. Development and testing of indicators to measure coordination of clinical information and management across levels of care. *BMC Health Services Research.* 2015;15(1).	E1
3	Atun R, de Jongh T, Secci F, Ohiri K, Adeyi O. A systematic review of the evidence on integration of targeted health interventions into health systems. *Health Policy Plan.* 2010;25(1):1-14.	E3
4	Atun R, de Jongh T, Secci F, Ohiri K, Adeyi O. Integration of targeted health interventions into health systems: A conceptual framework for analysis. *Health Policy Plan.* 2010;25(2):104-111.	E3
5	Axelsson R, Axelsson SB, Gustafsson J, Seemann J. Organizing integrated care in a university hospital: Application of a conceptual framework. *International Journal of Integrated Care (IJIC).* 2014;14:e019-e019.	E3
6	Cano I, Alonso A, Hernandez C, et al. An adaptive case management system to support integrated care services: Lessons learned from the NEXES project. *Journal of Biomedical Informatics.* 2015;55:11-22.	E1
7	Chamberlain C, MacLean S, Bawden G, et al. An 'equity' domain could strengthen the utility of a framework for assessing care coordination for Australian aboriginal families. *International Journal of Care Coordination.* 2016;19(1-2):42-46.	E3
8	Chapman E, Chung H, Pincus HA. Using a continuum-based framework for behavioral health integration into primary care in new york state. *Psychiatric Services.* 2017;68(8):756-758.	E1
9	CIHS updates integrated care framework. *Psychiatric Services.* 2013;64(5):499-499.	E3
10	Collins S, Klinkenberg-Ramirez S, Tsivkin K, et al. Next generation terminology infrastructure to support interprofessional care planning. *Journal of Biomedical Informatics.* 2017;75:22-34.	E1
11	Dobmeyer AC. *Overview of integrated primary care.*http://dx.doi.org/10.1037/0000051-002. Washington, DC: American Psychological Association; US; 2018.	E1
12	Epping-Jordan J, Pruitt S, Bengoa R, Wagner E. Improving the quality of health care for chronic conditions. *Quality and safety in health care.* 2004;13(4):299-305.	E3
13	Evans JM, Baker GR, Berta W, Barnsley J. A cognitive perspective on health systems integration: Results of a Canadian delphi study. *BMC Health Services Research.* 2014;14:222.	E3
14	Evans JM, Baker GR. Shared mental models of integrated care: Aligning multiple stakeholder perspectives. *Journal of Health Organization & Management.* 2012;26(6):713-736.	E1
15	Evans JM, Baker GR, Berta W, Barnsley J. The evolution of integrated health care strategies. *Advances in Health Care Management.* 2013;15:125-161.	E1

16	Gagliardi AR, Dobrow MJ, Wright FC. How can we improve cancer care? A review of interprofessional collaboration models and their use in clinical management. *Surgical Oncology.* 2011;20(3):146-154.	E1
17	Garcia-Subirats I, Aller MB, Vargas Lorenzo I, Vázquez Navarrete ML. Adaptation and validation of the CCAENA© scale for the measurement of continuity of care between healthcare levels in colombia and brazil. *Gaceta Sanitaria.* 2015;29(2):88-96.	E6
18	Giese AA, Waugh M. Conceptual framework for integrated care: Multiple models to achieve integrated aims. In: *Integrating behavioral health and primary care.* New York, NY: Oxford University Press; US; 2017:3-16.	B
19	Gittell JH, Logan C. Relational coordination theory: A systematic review of the evidence. In, 2018.	E3
20	Gofin J, Gofin R, Stimpson JP. Community-oriented primary care (COPC) and the affordable care act: An opportunity to meet the demands of an evolving health care system. *Journal of Primary Care & Community Health.* 2015;6(2):128-133.	E3
21	Grone O, Garcia-Barbero M. Integrated care: A position paper of the WHO European office for integrated health care services. *Int J Integr Care.* 2001;1:e21.	E2
22	Heath B, Romero PW, Reynolds K. A standard framework for levels of integrated healthcare. SAMHSA-HRSA center for integrated health solutions. *Substance Abuse and Mental Health Services Administration–Health Resources and Services Administration, Washington, DC.* 2013.	E2
23	Heaton J, Corden A, Parker G. 'Continuity of care': A critical interpretive synthesis of how the concept was elaborated by a national research programme. *Int J Integr Care.* 2012;12:e12.	E3
24	Hui D, Bruera E. Models of integration of oncology and palliative care. *Annals of Palliative Medicine.* 2015;4(3):89-98.	E2
25	Kreisberg D, Thomas DS, Valley M, Newell S, Janes E, Little C. Vulnerable populations in hospital and health care emergency preparedness planning: A comprehensive framework for inclusion. *Prehospital & Disaster Medicine.* 2016;31(2):211-219.	E2
26	Linnenkamp R, Drenkard K. Coordinating care: Shifts in perspective. *Nursing Administration Quarterly.* 2016;40(2):122-129.	E2
27	Lüdecke D. Patient centredness in integrated care: Results of a qualitative study based on a systems theoretical framework. *International Journal of Integrated Care (IJIC).* 2014;14:e031-e031.	E1
28	Marlowe D. Integrated care: Applying theory to practice. *Journal of Family Psychotherapy.* 2012;23(4):339-342.	E1
29	McDonald KM, Sundaram V, Bravata DM, et al. Closing the quality gap: A critical analysis of quality improvement strategies (vol. 7: Care coordination). AHRQ technical reviews. Rockville (MD): Agency for Healthcare Research and Quality (US); 2007.	E1
30	Mensah EO, Aikins MK, Gyapong M, Anto F, Bockarie MJ, Gyapong JO. Extent of integration of priority interventions into general health systems: A case study of neglected tropical diseases programme in the western region of ghana. PLoS Neglected Tropical Diseases. 2016;10(5).	E5
31	Minkman MM, Vermeulen RP, Ahaus KT, Huijsman R. The implementation of integrated care: The empirical validation of the development model for integrated care. *BMC Health Services Research.* 2011;11:177	E1
32	Navickas R, Onder G, Jureviciene E, Gargalskaite U. Multimorbidity care model applicability assessment across different healthcare settings: JA-	E1

	CHRODIS task 32016.	
33	Oni T, McGrath N, BeLue R, et al. Chronic diseases and multi-morbidity--a conceptual modification to the WHO ICCC model for countries in health transition. *BMC Public Health.* 2014;14:575.	E3
34	Parekh AK, Goodman RA, Gordon C, Koh HK, Conditions HHSIWoMC. Managing multiple chronic conditions: A strategic framework for improving health outcomes and quality of life. *Public Health Reports.* 2011;126(4):460-471.	E2
35	Peek C. National integration academy council. Lexicon for behavioral health and primary care integration: Concepts and definitions developed by expert consensus. 2013.	E1
36	Peek CJ. Integrated behavioral health and primary care: A common language. In: *Integrated behavioral health in primary care: Evaluating the evidence, identifying the essentials.*http://dx.doi.org/10.1007/978-1-4614-6889-9_2 New York, NY: Springer Science + Business Media; US; 2013:9-31.	E1
37	Prætorius T, Becker MC. How to achieve care coordination inside health care organizations: Insights from organization theory on coordination in theory and in action. *International Journal of Care Coordination.* 2016;18(4):85-92.	E2
38	Radwin LE, Cabral HJ, Woodworth TS. Effects of race and language on patient-centered cancer nursing care and patient outcomes. *J Health Care Poor Underserved.* 2013;24(2):619-632.	E5
39	Radwin LE, Cabral HJ, Wilkes G. Relationships between patient-centered cancer nursing interventions and desired health outcomes in the context of the health care system. *Res Nurs Health.* 2009;32(1):4-17.	E3
40	Scholz J, Minaudo J. Registered nurse care coordination: Creating a preferred future for older adults with multimorbidity. *Online Journal of Issues in Nursing.* 2015;20(3):4.	E1
41	Schultz EM, McDonald KM. What is care coordination? *International Journal of Care Coordination.* 2014;17(1-2):5-24.	E1
42	Schultz EM, Pineda N, Lonhart J, Davies SM, McDonald KM. A systematic review of the care coordination measurement landscape. *BMC Health Serv Res.* 2013;13:119.	E1
43	Sengers M, Bongers IMB, Roeg DPK. Investigation into coordinating dependencies between care pathways within mental healthcare: A qualitative case study and pilot testing of a new theoretical framework. *International Journal of Care Coordination.* 2014;17(3/4):99-104.	E1
44	Sheridan N, Kenealy T, Kuluski K, McKillop A, Parsons J, Wong-Cornall C. Are patient and carer experiences mirrored in the practice reviews of self-management support (PRISMS) provider taxonomy? *Int J Integr Care.* 2017;17(2):8.	E1
45	Siouta N, Van Beek K, Payne S, et al. Is the content of guidelines/pathways a barrier for the integration of palliative care in chronic heart failure (CHF) and chronic pulmonary obstructive disease (COPD)? A comparison with the case of cancer in Europe. *BMC Palliative Care.* 2017;16(1).	E5
46	Srinivas P. Modeling clinical workflow in daily ICU rounds to support task-based patient monitoring and care. 2015.	E6
47	Stein VK, Barbazza ES, Tello J, Kluge H. Towards people-centred health services delivery: A framework for action for the World Health Organisation (who) european region. *Int J Integr Care.* 2013;13:e058.	E1
48	Strandberg-Larsen M. Measuring integrated care. *Danish Medical Bulletin.* 2011;58(2):B4245.	E3
49	Struckmann V, Leijten FRM, van Ginneken E, et al. Relevant models and	E3

	elements of integrated care for multi-morbidity: Results of a scoping review. *Health Policy.* 2018;122(1):23-35.	
50	Suter E, Oelke N, Adair C, Waddell C, Armitage G, Huebner L. Health systems integration. Definitions, processes and impact: A research synthesis. *Calgary, AB: Calgary Health Region.* 2007.	E3
51	Suter E, Oelke ND, da Silva Lima MAD, et al. Indicators and measurement tools for health systems integration: A knowledge synthesis. *International Journal of Integrated Care.* 2017;17(6).	E1
52	Trouve H, Couturier Y, Etheridge F, Saint-Jean O, Somme D. The path dependency theory: Analytical framework to study institutional integration. The case of france. *Int J Integr Care.* 2010;10:e049.	E1
53	Valentijn PP, Boesveld IC, van der Klauw DM, et al. Towards a taxonomy for integrated care: A mixed-methods study. *Int J Integr Care.* 2015;15:e003.	E3
54	Valentijn PP, Vrijhoef HJ, Ruwaard D, Boesveld I, Arends RY, Bruijnzeels MA. Towards an international taxonomy of integrated primary care: A Delphi consensus approach. *BMC Family Practice.* 2015;16:64.	E3
55	Valentijn PP, Biermann C, Bruijnzeels MA. Value-based integrated (renal) care: Setting a development agenda for research and implementation strategies. *BMC Health Services Research.* 2016;16:330.	E3
56	Valentine MA, Nembhard IM, Edmondson AC. Measuring teamwork in health care settings: A review of survey instruments. *Med Care.* 2015;53(4):e16-30.	E5
57	van der Klauw D, Molema H, Grooten L, Vrijhoef H. Identification of mechanisms enabling integrated care for patients with chronic diseases: A literature review. *Int J Integr Care.* 2014;14:e024.	E1
58	Van Houdt S, Sermeus W, Vanhaecht K, De Lepeleire J. Focus groups to explore healthcare professionals' experiences of care coordination: Towards a theoretical framework for the study of care coordination. *BMC Family Practice.* 2014;15:177.	E3
59	Van Houdt S, Heyrman J, Vanhaecht K, Sermeus W, De Lepeleire J. Care pathways across the primary-hospital care continuum: Using the multi-level framework in explaining care coordination. *BMC Health Services Research.* 2013;13:296.	E3
60	Vrijhoef HJM. Care coordination and its evaluation: From big data to big picture. *International Journal of Care Coordination.* 2016;18(4):65-66.	E3
61	Weinberg DB, Lusenhop RW, Gittell JH, Kautz CM. Coordination between formal providers and informal caregivers. *Health Care Manage Rev.* 2007;32(2):140-149.	E1
62	Weston CM, Yune S, Bass EB, et al. A concise tool for measuring care coordination from the provider's perspective in the hospital setting. *Journal of Hospital Medicine.* 2017;12(10):811-817.	E5
63	Young GJ, Charns MP, Desai K, et al. Patterns of coordination and clinical outcomes: A study of surgical services. *Health Serv Res.* 1998;33(5 Pt 1):1211-1236.	E1

APPENDIX A: TABLE 1

Table 1 provides more details about the purpose, central features, and structure of all the individual frameworks (see additional Excel file for full data abstraction).

Table 1. Key Features of Overall Included Models and Frameworks

Framework	Purpose	Central feature	Framework structure
Alter, 1993*[2,36] US (Inter-organizational Network Theory)	As reported in Van Houdt 2013: "Develop inter-organizational networks"	Unknown	As reported in Van Houdt 2013: External factors, Structure, Task characteristics, Administrative operational processes, Goals, Organizational or inter-organizational outcome
Andersen, 1995[1,2,33] US (Andersen Behavior Framework)	Originally intended to predict and explain use of health care services by individuals	Behaviors of health care delivery participants.	Coordination of health services relates to 3 concepts: predisposing characteristics, enabling resources, need for coordination.
Bainbridge, 2010[6] Canada	Uses a systems approach to describe the overarching structure for examining palliative care networks (PCNs)	The nature and extent of inter-professional collaboration	Integration = System structure (3 components) + Process of Care (4 components) + Patient Outcomes (3 components)
Bautista, 2016[5] Singapore	To operationalize the concept and measurement of integrated care and enable systematic evaluation of instruments	Struct and process constructs used to describe degree of integration	IOM continuum of care model (health promotion to long-term care) and continuum of integration (linkage to full) layered on Rainbow Model (6 dimensions)
Benzer, 2015[7] US	Characterize relationships between organizational process antecedents and outcomes for primary care-mental health integration in the VA based on key informant interviews	Standardized and personal coordination (*ie*, interpersonal communication processes)	Defines and describes potential impact on integrated care for 7 organizational concepts related to personal (4 concepts) and standardized (3 concepts) coordination
Billings, 2014[8] EU (INTERLINKS Framework for LTC)	Develop a concept and methodology to describe and analyze long-term care (LTC) and its links with the health and social care system	Underpinned by Ideal pathways of the individual client, reflecting a human functioning perspective applicable to older frail and dependent people.	Six main interlinked (nonhierarchical) themes (Identity of LTC, Policy & Governance, Pathways & Processes, Management & Leadership, Organizational Structures, Means & Resources) corresponding to the most important features of a LTC system that are all centered around People as the central feature.

Framework	Purpose	Central feature	Framework structure
Bradbury, 2014[9] UK (AQuA Integrated Care)	Identify and define system enablers	Health care value	Identified 8 system enablers that comprise integration and contribute to health care value: Leadership, Service and Care Model Design, Workforce Role design/skills/capacity, Information and IT, Financial and contractual mechanisms, Culture, Governance, Patient and Caregiver Engagement
Calciolari, 2016[10] Italy	Analysis of the conditions or antecedents of integration, including context and culture	Contextual, cultural and organizational features	Influential factors grouped into 4 categories: (1) Contextual traits, (2) organizational arrangements, (3) transition management culture, and (4) operating means
Donabedian, 1966[1,2,34] US (Donabedian's Quality Framework)	To identify key linkages between factors within the care delivery system that are within the control of the medical professionals to facility evaluation of quality of care.	The level of the physician-patient interaction	Identifies 3 domains: (1) Structures of care provide resources and mechanisms for (2) Processes of Care to be carried out, in order to improve (3) Health Outcomes.
Evans, 2016[11] Canada (Context and Capabilities for Integrating Care – CCIC)	To identify key organizational context and capabilities for integration and their mechanisms.	Leadership Approach, Clinician Engagement and Leadership and Readiness for Change.	18 organizational factors in 3 categories: = Basic Structures (6 organizational factors) + People and Values (7 organizational factors) + Key Processes (4 organizational factors)
Gittell, 2002[1,2,12] US (Relational Coordination Framework)	Describe the dynamics present in teamwork or collaboration and how they may mediate coordinating mechanisms and performance outcomes.	Relationships between participants – 'Relational coordination'	Identifies 3 relational coordination mechanisms (communication, shared goals and knowledge and mutual respect and helpfulness) and conditions of uncertainty as key factors and described how they impact 3 organizational coordinating mechanisms (routines, boundary spanners, and team meetings
Gittell, 2004[1,2,13] US (Multi-level Framework)	Describe organizational design and network perspectives for coordination within and across organizations	The dynamic and interrelated phenomena of intra- and inter-organizational coordination	Depicts the impact of organizational design factors on organization coordination networks and in turn on quality and efficiency for 3 levels: (1) within an organization, (2) between organizations, and (3) considering if same mechanisms are used both within and between organizations.
Hepworth, 2010[14] Australia (Team Focused and Clinical	Practical framework for building integrated teams	Care team	Team integration is a reiterative process involving planning, team monitoring meetings, clinical content meetings, followed by

Framework	Purpose	Central feature	Framework structure
Content Framework)			review, monitoring, and evaluation.
Kates, 2012[15] Canada (Quality Improvement and Innovation Partnership Improvement Framework)	To describe the key elements of high-performing, well-integrated primary care and the supports required to attain it.	Major constituencies that primary care serves; the desired outcomes of primary care; and enabling organizational attributes	3 components: (1) Core = patients, their families and the communities in which they live; (2) Surrounding that core is a ring representing the 6 key characteristics of a transformed model of primary care; (3) The lower part of the framework depicts the desired outcomes: the 3 domains of IHI's Triple Aim.
Klein, 2001*[2,16] US (Five Phases of Team Coordination)	As reported in Van Houdt 2013: "Define the characteristics of team interactions/describe the features of team coordination"	Unknown	As reported in Van Houdt 2013: Exchange of information, Goals, Team outcome
Leijten, 2018[17] The Netherlands (SELFIE)	Identify and structure relevant concepts for integrated care for multi-morbidity based on literature review and expert discussion	Holistic understanding of the person in their environment	The individual is the core of the framework, around which integrated care concepts are grouped by 6 adapted WHO health system components and, within which, by micro, meso, and macro levels.
Lemieux-Charles, 2006[18] Canada (ITEM)	To conceptualize relationships between multiple dimensions of team context, structure, processes and outcomes.	Health care team effectiveness	Depicts interactions between task design (task type, task features, team composition), team processes, and team psycho-social traits that lead to team effectiveness and the contribution of organizational context and social and policy change to task design
Malhotra, 2007[2,19] US (Cognitive Workflow Model)	To delineate workflow, role players, devices, protocols and communications in the critical care environment	Cognitive principles	A continuous cycle, with no start or finish, for 7 critical zones: (1) re-orientation and pre-planning, (2) goal formulation, (3) goal execution, (4) transfers, (5) admission, (6) reassessment, (7) evening sign-out
McDonald, 2014[4] Shultz 2013{Schultz, 2013 #13} US	To organize measures of care coordination	Identification of key domains important for measurement	Specifies that measurement must consider: (1) Goals; (2) Mechanisms of coordination: activities and broad approaches (specified 14 domains); (3) Coordination effects/experiences which can perceived differently depending on perspective (including patient/family, health care professionals, and system); (4) coordination measures; and

Framework	Purpose	Central feature	Framework structure
			(5) Context
McGrath, 1991[2,37] US (Time, Interaction, and Performance Theory)	Conceptualization of groups and group activity at a level of molarity and complexity that reflects the nature of groups in everyday life.	Time	Describes 4 modes (inception, problem solving, conflict resolution, execution) for each of 3 key functions (production, well-being, member support) and direct and indirect paths across modes
Minkman, 2012[20] The Netherlands (Development Model for Integrated Care - DMIC)	Identify high-priority elements and clusters of a quality management model for integrated care	General approach towards multiple patient categories and its broad definition of integrated care.	89 unique elements grouped into 9 clusters and development characterized by 4 developmental phases
Nadler, 1988*[1,2,35] US/UK (Organizational Design Framework)	To characterize how the flow of information among participants is a function of the demands of the situation and the capabilities of the organization to move information	Organizations as information processing systems	3 concepts that underpin choices about organizational design: information requirements, information-processing capacity and match or fit between them and the key influencing settings and patients' factors and coordinating mechanisms.
Oliver, 2010[2,21] US/UK (Integrative Model)	Integrating patient and family participation into interdisciplinary collaborative hospice practice	Patient/family	Non-linear model that identifies 4 key components (context, structure, process and outcomes), all with feedback loops between them and all of which may encourage or discourage family involvement in teams.
Palmer, 2018[23] EU (Multimorbidity Care Model JA-CHRODIS)	Identify key components of integrated and multidimensional care pathways for multimorbid patients	Focus on service delivery	16 components across 5 domains = Delivery of care (4 components) + Decision Support (3 components) + Self-Management (3 components) + information systems and technology (4 components) + access to social and community resources (2 components)
Radwin, 2016[24] US	Expands existing frameworks on coordination across transitions	Delineates important distinctions between patient-centered care and coordination	Temporal portrayal of how pretransition patient-centered care and outcomes affect continuity and clinician activities, which in turn affect patient-centered care and outcomes in the setting after the transition.
Reader, 2009[2,25] UK (Framework of Team Performance)	To describe the relationship among teamwork structures, behaviors and performance in the ICU.	Team performance	Depicts a continuous cycle of 3 types of inputs (team, task, leader) leading to 4 categories of team processes (communication, leadership, coordination and decision making), which lead to 2

Framework	Purpose	Central feature	Framework structure
			types of outputs (patient outcomes and team outcomes), which in turn lead back to the inputs.
Shigayeva, 2010[26] UK	To help explore the *influence of* integration on the *sustainability* of communicable disease control programs within a health system.	Program drivers (*eg*, funders, policy makers, managers, community leaders, advocates, *etc*)	Organized interactions into 4 levels along a continuum (none, linkage, coordination, integration) and illustrates the influences of and interactions between 4 key health systems and program components (governance, financing, service delivery, information systems), each including structural and functional elements, and the drivers' problem definition on 4 outputs
Singer, 2011[27] US (Integrated Patient Care)	To further clarify the object of integration and its essential components	Patients' central role as active participants; patient centeredness	Integrated care = coordination (5 dimensions) + patient centeredness (2 dimensions).
Strandberg-Larsen, 2009[39] Denmark	Enable analysis of care coordination measurement methods	Criteria for sound measures	Measurement criteria: theoretical model, concept defined, defined level of analysis, structural-, cultural-, and process aspects, relative measure, quantitative measure, internal validity, test of validity across settings
Siouta, 2016[28] Belgium (Part of InSup-C)	Generically demonstrate how to integrate palliative care (PC) both in cancer and chronic disease	The importance of employing a PC-trained multidisciplinary team with a threefold focus of treatment, consulting and training.	Identifies 5 aspects of integration
Valentijn, 2013[29] The Netherlands (Rainbow Model of Integrated Care -RMIC)	Describe inter-relationships among the dimensions of integrated care from a primary care perspective.	The guiding principle was the core value of primary care as the integration of the biomedical, psychological and social dimensions of health and well-being, expressed as person-focused and population-based care in the model.	Delivery of integrated person-focused and population-based care involves 4 dimensions of integration that play complementary roles on the micro, meso, and macro levels and are linked through normative and functional integration
Van Houdt, 2013[2] Belgium	Update existing theoretical frameworks for the study of care coordination	Summarizes common and key concepts of care coordination that emerged from existing frameworks	Key concepts: external factors, structure, task characteristics, cultural factors, knowledge and technology, need for coordination, administrative operational processes, exchange of information/communication, goals, roles, quality of relationship, patient outcome, team outcome, organizational or

Framework	Purpose	Central feature	Framework structure
			inter-organizational outcome
Watzlawick, 1967/2000[2,38,48] Germany (Interaction Model)	As reported in Van Houdt 2013: "Identify five axioms of interactional communication"	Communication / interactional patterns	As reported in Van Houdt 2013: Exchange of information, Quality of relationships, Patient outcome
Weaver, 2018[30] US	To unpack the complex relationships between care coordination mechanisms, processes, integrating conditions and patient outcomes.	Teamwork-oriented behaviors	Care coordination = How 'context and setting' (moderators/inputs) + 'coordination mechanisms' (inputs) + 'emergent integrating conditions' (mediators) impact 'coordinating actions' (proximal, behavioral processes) and 'outcomes' (proximal and distal outcomes) in both intrateam and inter-team groups.
Zlateva, 2015[31] US (PCMH CC Conceptual Model)	To describe the structures (inputs) and processes (activities) involved in essential domains and subdomains of care coordination in the primary-care safety-net setting	Systems	Identifies 5 cyclic system domains.

*Unable to locate full text

Abbreviations: LTC= Long-term Care; AQuA= Advancing Quality Alliance; CCIC= Context and Capabilities for Integrating Care; SELFIE= Sustainable intEgrated chronic care modeLs formulti-morbidity: delivery, FInancing, and performance; ITEM= Integrated Team Effectiveness Model; DMIC= Development Model for Integrated Care; JA-CHRODIS= Joint Action on Chronic Diseases and Promoting Healthy Ageing across the Life Cycle; InSup-C= Integrated Palliative Care: Am EU Framework 7 Programme; RMIC= Rainbow Model of Integrated Care; PCMH CC= Patient Centered Medical Home Care Coordination

PEER REVIEW DISPOSITION

Comment Number	Reviewer Number	Comment	Author Response
Are the objectives, scope, and methods for this review clearly described?			
1.	1	Yes	None
2.	2	No - the objective and scope are so large it is unclear where the boundaries for the information - what is the question or problem at hand - the problem to be solved was - what do we know about how organizations systematically approach care coordination and what approaches seem to have the most evidence - do they focus on alignment and organizational structure or on team building or communication - what do we know about how they define the work of care coordination and who does the work - what training or skills are required	Added the following to the Purpose section to clarify the boundaries of the information: "Evidence Compendium on care coordination theoretical models and conceptual frameworks that (1) identifies new models/frameworks published since the most recent systematic review in 2010, (2) provides structured data abstraction on key components of each model/framework in a sortable format, (3) a very brief descriptive summary of key components across models/frameworks, and (4) an annotated bibliography. Findings from this Evidence Compendium will be used by the VHA's State of the Art (SOTA) Care Coordination Conference's Measures, Models and Definitions work group as a foundation for discussion and further identification of and organization by major concepts."
3.	3	Yes	None
Is there any indication of bias in our synthesis of the evidence?			
4.	1	No	None
5.	2	Yes - the Naylor and Wagner models where absent from the review the Case Management Society of America's model was not included nor was the medicare coordinated care demonstration (MCCD)	Thank you for these suggestions. We identified the Naylor and Wagner models in our search, but both were excluded, either at the abstract or full-text level, as they were descriptions of implementation models or interventions but did not describe theoretical or conceptual frameworks based on our understanding. We have reviewed the Medicare Coordinated Care Demonstration project, but did not include it as it is a randomized trial of care coordination interventions, but does not describe a theoretical or conceptual framework. We were unable to locate a model for the Case Management Society of America. We have reached out to the reviewer and requested assistance with the location of this framework. At the time of finalization of this report, we had not yet received this publication and, thus, were not able to consider its relevance for inclusion.
6.	3	No	None
Are there any published or unpublished studies that we may have overlooked?			

7.	1	The Care Coordination Measures Atlas includes a framework, so it could be categorized as providing a framework. The Schultz et al BMC HSR 2013 article on Care Coordination Measures Landscape could be used as the index article for the Atlas framework (since the framework description is more detailed in the original Atlas as opposed to the updated one included in the ESP report). This article was not included in the ESP report but was provided as applicable at the outset of the project since it conveys a conceptual framework. In addition, AHRQ commissioned development of a care coordination survey aligned with this framework. Therefore, this framework now has a measure connected directly with it, which could be noted in the column about whether a framework has a measure connected with it: https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/prevention-chronic-care/improve/coordination/ccqmpc/ccqmp-pc-development.pdf	Agreed. The ESP report already includes the Care Coordination Measures Atlas as a framework for organizing measures. It is listed in Tables 2, 5 and 11 and in the Excel data abstraction table and uses the McDonald 2014 AHRQ publication as the source. We also cited Shultz 2013 as one of the article in which we searched the reference list and ran a forward citation search. We've linked Schultz 2013 to McDonald 2014 and added the aligned AHRQ measure, Care Coordination Quality Measure for Primary Care (CCQM-PC), to Table 10 and updated the numbers in Table 1.
8.	2	Yes - see above	None
9.	3	Yes - New publication: Singer, S. J., Kerrissey, M., Friedberg, M., & Phillips, R. (2018). A Comprehensive Theory of Integration. Medical Care Research and Review, 1–23. Online ahead of print. http://doi.org/10.1177/1077558718767000	Thank you for notifying of this new article. As this was published past our search date of December 2017, in order to add it, we would also need to do an update search to systematically seek out all other potentially eligible new frameworks and add them as well. We consider this new work that could be done as part of a sequel with an expanded scope that is being discussed for broader VA use beyond the SOTA.
Additional suggestions or comments can be provided below. If applicable, please indicate the page and line numbers from the draft report.			
10.	1	I reviewed an updated version of the report that responded to mine and others initial comments on the draft in the ESP Review system. Per Kim Peterson, the updated version incorporated "the addition of 4 frameworks, a new Executive Summary with bullet points highlighting where approaches and mechanisms overlap, unique features of interest and gaps, and an additional 7 new summary tables and text from pages 13 to 21 supporting and providing more detail on the bulleted summary points." The additional material was quite useful for discussions among the SOTA workgroup on models, measures and definition (MMD Workgroup), and led to a major recommendation from the group to either 1) expand the scope for the current report, or 2) anticipate a subsequent ESP project to enhance the evidence available on models and measures for use by the VA. The current report met the needs of the SOTA workgroup and discussions, but has gaps with respect to the current VA context.	We are glad to hear that this report met the needs of the SOTA workgroup in terms of serving as a foundation for discussion and identification of major concepts. We look forward to discussing the potential for a sequel with an expanded scope for broader VA use beyond the SOTA.

		This comment by no means implies that the report fell short of the specified goals and scope. I am quite impressed by the ESP's ability to identify and review the current state of evidence on models applicable to care coordination. The SOTA workgroup members were not aware of all the models included, so that alone is a fantastic contribution.	
11.	1	The report gathers together a large number of conceptual models and includes structured information about them. The accompanying Excel file is particularly useful as a sortable resource. The information contained appears accurate, and the level of detail appropriate.	Thank you for this feedback.
12.	1	The synthesis across frameworks (via Tables and bullet points) is helpful and an important part of the report. However, it needs additional attention to categorizing (possibly more categories, some frameworks seem misclassified or not included in an applicable category) and drawing useful take home messages. The first pass was very reasonable but could benefit from more domain expertise and engagement (e.g., the SOTA MMD Workgroup) to address these two needs (categorization and take homes).	We were glad to hear that the structured information we provided in this review led to SOTA work group domain experts' identification of the following five major dimensions that are more meaningful to domain experts and could be used to better distinguish the focus of care coordination frameworks and facilitate their adoption by clinicians/managers and researchers: 1) contextual factors, 2) coordination domains, 3) levels of coordination, 4) types of coordination, and 5) coordination mechanisms. We recommend consideration of a complete reorganization of the frameworks by these 5 domains that could be undertaken as part of the potential sequel project. Another consideration for a sequel could be classification of the main components of each framework based on the 14 identified in the Van Houdt 2013 review.
13.	1	The Annotated Bibliography might be incorporated in the main report, so that referencing aligns between the tables and the narrative description of each model.	The reference list was replaced with an annotated bibliography.
14.	1	It could also use some enhancements. Specifically, for each model answer the following questions: 1. How might this model inform the VA care coordination context? a. What research uses of the model are applicable to the VA context? b. What practice uses of the model are applicable to the VA context? c. What VA policy needs might this model address? 2. Has the model been developed or applied to the VA? In what way(s)?	Yes, we agree that these suggested details about VA relevance could also enhance broader VA use and should be considered as part of the potential sequel project.
15.	1	Because the review was not set up to identify all applicable measures (e.g., the focus/scope was conceptual models and	Agreed. The review was set up to identify theoretical frameworks, key characteristics, and their influence, based on number of

		frameworks), conclusions about measures should note this issue. The review does have relevant measures information, so more could be highlighted related to measures.	annualized forward citations and whether or not the framework had led to development of a measure and/or an intervention. It was not set up to identify all available measures – only those associated with included frameworks. There may be many more measures available. We have completely revised the KQ3 section on framework influence and incorporated your additional suggested changes in comment #16 and #16 and also added this statement: "As this review was not designed to identify all available measures – only those associated with frameworks – other measures may exist in general and that provide system representation perspectives."
16.	1	Measure reviews with frameworks (3 of 5 in Table 5, plus Lemieux; Weaver and Van Houdt are not relevant to measures). This is an example of how categorization could be improved. Split Table 5 into two categories – measure reviews (Table 5A) and other reviews (Table 5B, Weaver, Van Houdt only), and then include Lemieux in Table 5A.	We have completely revised the KQ3 section on framework influence and moved a table of just measure reviews to this section.
17.	1	Frameworks that have measures (Table 7). The gap here is some integration in take home points about what we know based on Tables 5 and 7, and where knowledge is lacking because the review is not a systematic retrieval of all measures related to care coordination. In other words, what do we know about measures and what might be missing?	We have completely revised the KQ3 section on framework influence and believe integration and take-homes are now much clearer. We now specifically call out 3 frameworks as potentially most influential based on assessment of number of annualized forward citations and whether or not a measure and/or an intervention was derived from the framework: The Integrated Team Effectiveness Model (Lemieux-Charles 2006), the Development Model for Integrated Care (DMIC)(Minkman 2012) and the Rainbow Model of Integrated Care (RMIC)(Valentijn 2013). We describe the collective findings of the previous measures reviews and their identified gaps, which measures we identified that have not been previously identified, how they address the previously identified gaps, and what are the remaining gaps (system perspectives).
18.	1	Shigayeva 2010 – not clear whether measure exists	We agree that although this framework was measurement-focused and suggests the possibility for measurement development, we were unable to identify a measures and an email to the author did not result in a response.
19.	1	Make sure that all frameworks that have associated measures are in Table 7. The index article for a framework may not have information about measures developed subsequently.	In Table 8 (Measurement Focused Approaches), we included frameworks that were self-described as measurement-focused. Frameworks with associated measures are in Table 9 (Measures Associated with Included Models and Frameworks). The difference between the tables is that a framework could be self-described as measurement-focused without having an associated

			measure, and a framework could have an associated measure without being self-described as measurement-focused. We realized that a framework's index article may not have information on subsequently developed measures, which is why we contacted authors of all included frameworks and ran a forward citation search, in SCOPUS, on frameworks not previously identified as having an associated measure. A more detailed explanation of methods can be found in the section on Methods: Data sources and searches, and in our supplemental materials.
20.	1	The flow sheet should include the # of measures included in the Care Coordination Atlas. The same comment applies to other reviews of measures.	We have added a sentence in KQ3 that identifies and cites all measures that we identified that were unidentified by previous reviews.
21.	1	Consider adding a category for frameworks with explicit potential for measure development or field use: o Qualitative assessments of a framework concept (~possible measure building blocks) – Evans 2016; Gittell 2004; Hepworth 2010; Minkmann 2012 o Future measures hinted at? – Leijten 2018; Palmer 2018; Radwin 2016; Weaver 2018; plus others on Table (sort on measures column)	We added a sentence to KQ3 identifying these as you've suggested.
22.	1	Consider a table about Measure Relevant Studies and the components available from them, e.g., based on the reviews:	Added information about Measures and Components as suggested – see new columns in Table 10.
23.	1	Because of interest in the components/domains/mechanisms ("main components" in Excel file) identified in the models, I am wondering about ways to create a comprehensive list with all of the distinct (or semi-distinct) of these model components. A table could be created: 1. First column would have the authors' own language, and 2. Second column could provide a short lay description 3. Third column would maintain referencing to underlying source and model name whenever applicable 4. Forth column might categorize the component according to its applicability to different levels of organizational action and intervention (i.e., micro, meso, macro and macro-macro (organization of organizations) Consultation with domain experts could be helpful for this summary. In addition, if the categories for clumping models are refined further with domain expert involvement, it may be useful to have a column that shows what type of model (e.g., which Table a model is organized under) the component comes from.	We agree that a new table that categories the main components listed in column I of the Excel file would be very useful to in further understanding and sorting the frameworks. The table format proposed by this reviewer is a good start. Another idea might be classification of the main components of each framework based on the 14 identified in the Van Houdt 2013 review. Although this exceeds the scope of this compendium, we can discuss how the ESP could possibly undertake this as part of a sequel project.

24.	1	"Donabedian's standard/process/outcomes" – should always be "structure" instead of "standard"	Changed
25.	1	Executive Summary bullets that note "several frameworks" should note which ones with referencing.	We have revised the executive summary from bullets to text and have further described and cited the frameworks discussed in the report, but we typically do not include formal citations in the ESP executive summaries.
26.	1	Summary of Findings section should explain the relationship to the Key Questions for the first paragraph sentence that starts with "Additionally, we identified 9 publications…"	Added references to the key questions.
27.	1	ESP Product Enhancement: Expand the review of models to assess their utility to support VA practice/policy tool development and to inform VA researchers' uses (RFA's, proposal reviews).	These are great suggestions and we can discuss how the ESP could potentially undertake them as part of a sequel project.
28.	1	Ideally, the ESP product could also support the following recommendation: o Communicate models via cyberseminars, other convening opportunities for researchers and operational personnel	These are great suggestions and we can discuss how the ESP could potentially undertake them as part of a sequel project.
29.	1	Based on discussions at the SOTA, I learned about ESP products from Devan Kansagara that use a multi-pronged approach (expert consultation; identification of current VA research; and usual literature review) to gathering useful evidence for pressing VA needs, where literature base isn't sufficient. For a fuller ESP product on care coordination models (and possibly measures), it would be helpful to: 1. interview key informants (perhaps the SOTA MMD Workgroup), 2. add to current ESP research team SOTA MMD co-chairs and ESP operational liaison (Singer, McDonald, Hynes) to provide more domain and VA use case expertise 3. give more attention to metrics 4. frame the report around how models and measures could support VA decision-making in the following contexts for care coordination: practice within VA, practice/policy for community care (VA and out of VA coordination challenges), and priorities for research community (including evaluations of interventions to improve coordination). It could make sense to review the SOTA MMD Workgroup questions to augment the scope and assure alignment with current VA needs.	These are great suggestions and we can discuss how the ESP could potentially undertake them as part of a sequel project.
30.	2	Page 8 paragraph 2. The document states that there were 8	All of the frameworks reflected integrating and coordinating

		frameworks most broadly focused on the general phenomena of care coordination and integration - this would be an excellent area to focus more upon in the review – comparing and contrasting the evidence for deployment of these eight models in health care systems – particularly focusing on what we know about the evidence for larger systems that cross geographic areas and ideally interact with multiple systems. Even looking at coordination and integration in other federal systems like Medicare and Medicaid would have been helpful especially as we begin to look at the VHA as both a providers of and payer of health care - while there was a breakdown to help understand the 10 models with measures – which was helpful – having a similar chart for those with integrating and coordinating mechanisms would have been helpful	mechanisms and were broken down like in Table 10 in both Table 11 (now appendix A) and the supplemental Excel data abstraction table. Evaluating the evidence on deployment of the models in health care systems is a great suggestion and could be considered for the scope of a potential sequel project that is under discussion.
31.	2	Secondly an attempt to provide definitions for the major concepts such as coordination and integration would provide profound guidance to operations	These are great suggestions and we can discuss how the ESP could potentially undertake them as part of a sequel project.
32.	2	I spent several days trying to pull information to help make some decisions on how to use. if the authors thought that the characteristics of 1. made in USA 2. used in the vha, 3 have mechanisms and actions conceptualized, 4. are patient centered , 5 look narrowly or broadly at health 6 have measures 7 have led to tested interventions then a chart that helped view which models had each of these would have been helpful - because in the VHA - there is a high value on team work I might have added a category about if the model addressed team work - but i can not tell how the characteristic groups where decided upon	The characteristics this reviewer listed are from Table 1 of the report where we summarize the number and percentage of frameworks with each and noted and cited each one. In terms of an accompanying chart that further helped view which models had each of these, we agree and already do have such a chart which we provided to the SOTA workgroup in the form of an Excel sortable evidence table with each characteristic in a column and each study in a row. As for the team work variable, we agree this could be useful information and we could consider adding it as an additional variable for collection as part of a potential sequel to this project.
33.	3	Under Part 1 of her review, Kathy noted, “The synthesis across frameworks (via Tables and bullet points) is helpful and an important part of the report. However, it needs additional attention to categorizing (possibly more categories, some frameworks seem misclassified or not included in an applicable category) and drawing useful take home messages.” In reviewing the models included in the draft report, I had an insight about distinctions among them and suggest that you consider categorizing them as follows: --Models focused on mechanisms of coordination, e.g., personal/relational v technical/feedback --Models focused on levels of coordination, e.g., within teams v units v organizations v systems --Models focused on types of coordination, e.g., structural v functional v normative v interpersonal v clinical	We are happy to hear that the structured information provided in this review led to your identification of these five major dimensions that could be used to distinguish the focus of care coordination frameworks and facilitate their adoption by clinicians/managers and researchers: 1) contextual factors, 2) coordination domains, 3) levels of coordination, 4) types of coordination, and 5) coordination mechanisms. Reorganization by these domains is a great suggestion and we can discuss how the ESP could potentially undertake this process as part of a sequel project.

		--Models focused on domains of coordination, e.g., among care team members v between primary and specialty care v between mental/behavioral and physical care --General models or models focused on contextual factors that may impact coordination, e.g., Andersen, Donabedian. These categories or ones like it strike me as potentially quite useful for research and operational purposes, i.e., by simplifying the task of choosing among models. We may decide that we do not need to include the same level of detail in the report for the general and contextual models as for the other categories. These categories could constitute one of the columns Kathy described when she wrote: "Because of interest in the components/domains/mechanisms ("main components" in Excel file) identified in the models, I am wondering about ways to create a comprehensive list with all of the distinct (or semi-distinct) of these model components. A table could be created:"	
34.	3	I'd like to offer up a new model for inclusion in the compendium that was finally published yesterday. The paper describes a conceptual model that would be categorized as focusing on types of coordination using the nomenclature above. There is a measure that accompanies the model, but it has yet to be published.	Thank you for notifying of this new Singer 2018 (see above comment #9). As this was published past our search date of December 2017, in order to add it, we would also need to do an update search to systematically seek out all other potentially eligible new frameworks and add them as well. We consider this new work that could be done as part of a sequel with an expanded scope that is being discussed for broader VA use beyond the SOTA.