An overview of determinants and outcomes of providing patients access to and control over their own medical data: Search strategy

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1. **Search**

1.1 **Ovid search query**

Query for “Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R)” database with Ovid search interface.

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1. "patient access to records"/ or "patient portals"/
2. (patient portal? or Personal health record? or Personal medical record? or Personal patient record? or Patient held record? or blue Button or BlueButton or Open notes or OpenNotes).ab,kf,ti.
3. or/1-2 [patient access to records: umbrella terms]
4. (information or informatics or record? or health plan? or ehr? or emr? or entry system? or decision support or data or imag* or ((lab* or test? or patholog* or radiol*) adj2 (result? or report?))).ab,kf,ti.
5. (consumer health informatics or consumer health tech*).ab,kf,ti. and 4
6. (patient? or person* or consumer? or client?).kf,ti. and (access* or control* or portal or held or facing or "use") adj3 (information or informatics or record? or health plan? or ehr? or emr? or entry system? or decision support or data or imag* or ((lab* or test? or patholog* or radiol*) adj2 (result? or report?))).ab,kf,ti.
7. or/5-6 [patient access to records: separate terms]
8. ((overview or review or meta analysis).kf,pt,ti. or (literature review or systematic review or scoping review or narrative review or meta analysis or (review adj5 literature)).ab,kf,ti.) not (letter or comment or editorial).pt.
9. (cost? or benefit? or challenge* or opportunity* or risk? or threat? or barrier? or facilitat? or advantage? or disadvantage? or utili* or reuse or usage or usable or reusable or useful* or usability or reusability or dissemination* or adoption or acceptance or satisfaction or mechanism? or factor? or determinant? or outcome? or cause* or effect* or efficacy or efficiency*).ab,kf,ti.
10. and/7-9 [separate terms with "determinants or outcomes" and review only]
11. 3 or 10 [patient access to records: complete query]
12. ("26066707" or "26851482" or "26917113" or "27477917" or "26104044" or "26123476" or "25707035" or "25669240" or "25733415" or "26335985" or "25927384" or "26755898" or "24999599" or "24477621" or "24514835" or "24503882" or "25160226" or "25214822" or "24675935" or "25059439" or "25290057" or "24096715" or "24247673" or "23974554" or "23388252" or "23183044" or "22917868" or "2293584" or "22783154" or "22910233" or "21783013" or "21672914" or "22087111" or "21557106" or "21791069" or "21159898").ui. [test set with includable reviews from 2011 to 2016]
13. 12 not 3
14. 12 not 10
15. 12 not 11
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Figure 1 Search query for the “Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R)” database from Ovid from line 1 to 11. Lines 12 to 15 were used to test the validation of the search query upon a test set of includable literature reviews; test results were from 13-12-2016.

1.2 **EMBASE query**

Query for Embase Classic+Embase database with Ovid search interface.

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1. "patient access to records"/ or "patient right? and "access to information" and electronic medical record?).ab,kw,sh,ti.
2. (patient portal? or personal health record? or personal medical record? or personal patient record? or personal client record? or patient held record? or blue button or bluebutton or open notes or opennotes).ab,kw,ti.
3. or/1-2 [patient access to records: umbrella terms]
4. (information or informatics or record? or health plan? or ehr? or emr? or entry system? or decision support or data or imag* or ((lab* or test? or patholog* or radiol*) adj2 (result? or report?))).ab,kf,ti.
5. (consumer health informatics or consumer health tech*).ab,kw,ti. and 4
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**Additional search strategy details:**

**Search strategy**

**Author(s):** Hugo van Mens, Remko Nienhuis, Joost Daams
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**Date:** 12-2-2018
6. (patient? or person* or consumer? or client?).kw,ti. and [(access* or control* or portal or held or facing or "use") adj3 (information or informatics or record? or health plan? or ehr? or emr? or entry system? or decision support or data or imag* or ((lab* or test? or patholog* or radiol*) adj2 (result? or report?))).ab,kw,ti.
7. or/5-6 [patient access to records: separate terms]
8. ((overview or review or meta analysis).kw,pt,sh,ti. or (literature review or systematic review or scoping review or narrative review or meta analysis) or (review adj5 literature).ab,kw,ti.) not (letter or comment or editorial).pt.
9. (cost? or benefit? or challenge* or opportunity? or risk? or threat? or barrier? or facilit? or advantage? or disadvantage? or util?* or reuse or usage or usable or reusable or useful* or usability or reusability or dissemin* or adoption or acceptance or satisfaction or mechanism? or factor? or determinant? or outcome? or caus* or effect? or efficacy or efficient*).ab,kw,ti.
10. and/7-9 [separate terms with "determinants or outcomes" and review only]
11. 3 or 10 [patient access to records: complete query]
12. ("Implementation of the Integrated Electronic Patient Portal in the Pediatric Population: A Systematic Review." or "Patient-centered communication in the era of electronic health records: What does the evidence say?." or "Patients' online access to their electronic health records and linked online services: a systematic review in primary care." or "Patient Portals in Child and Adolescent Psychiatry." or "Personal Health Records: Beneficial or Burdensome for Patients and Healthcare Providers?" or "Personal health records for people living with HIV: a review." or "Technology-assisted patient access to clinical information: an evaluation framework for blue button." or "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review."
13. "What do we know about developing patient portals? a systematic literature review."
14. "Patients' views on the effectiveness of patient-held records: a systematic review and thematic synthesis of qualitative studies."
15. "Realist review to inform development of the electronic advance care plan for the personally controlled electronic health record in Australia."
19. "Conditions potentially sensitive to a personal health record (PHR) intervention, a systematic review."
22. "Patient and provider attitudes toward the use of patient portals for the management of chronic disease: a systematic review."
25. "和个人 health records: is rapid adoption hindering interoperability?." or "Patients' online access to their electronic health records and linked online services: a systematic review."
27. "How outcomes are achieved through patient portals: a realist review."
28. "Patient access to medical records and healthcare outcomes: a systematic review."
29. "Personal health records as portal to the electronic medical record."
31. "User-held personalised information for routine care of people with severe mental illness."
34. "Examining the evidence of the impact of health information technology in primary care: an argument for participatory research with health professionals and patients."
36. "Motivating, influencing, and persuading patients through personal health records: a scoping review."
37. "A review of the personal health records in selected countries and Iran."
38. "The challenges in making electronic health records accessible to patients."
39. "User-held personalised information for routine care of people with severe mental illness."
40. "A review of the empirical evidence of the healthcare benefits of personal health records."
41. "What do we know about developing patient portals? a systematic literature review."
42. "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review."
43. "Examining the evidence of the impact of health information technology in primary care: an argument for participatory research with health professionals and patients."
44. "Are personal health records safe? A review of free web-accessible personal health record privacy policies."
45. "Motivating, influencing, and persuading patients through personal health records: a scoping review."
46. "A review of the personal health records in selected countries and Iran."
47. "The challenges in making electronic health records accessible to patients."
48. "User-held personalised information for routine care of people with severe mental illness."
49. "A review of the empirical evidence of the healthcare benefits of personal health records."
50. "What do we know about developing patient portals? a systematic literature review."
51. "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review."
52. "Examining the evidence of the impact of health information technology in primary care: an argument for participatory research with health professionals and patients."
54. "Motivating, influencing, and persuading patients through personal health records: a scoping review."
55. "A review of the personal health records in selected countries and Iran."
56. "The challenges in making electronic health records accessible to patients."
57. "User-held personalised information for routine care of people with severe mental illness."
59. "What do we know about developing patient portals? a systematic literature review."
60. "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review."
61. "Examining the evidence of the impact of health information technology in primary care: an argument for participatory research with health professionals and patients."
63. "Motivating, influencing, and persuading patients through personal health records: a scoping review."
64. "A review of the personal health records in selected countries and Iran."
65. "The challenges in making electronic health records accessible to patients."
66. "User-held personalised information for routine care of people with severe mental illness."
68. "What do we know about developing patient portals? a systematic literature review."
69. "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review."
70. "Examining the evidence of the impact of health information technology in primary care: an argument for participatory research with health professionals and patients."
72. "Motivating, influencing, and persuading patients through personal health records: a scoping review."
73. "A review of the personal health records in selected countries and Iran."
74. "The challenges in making electronic health records accessible to patients."
75. "User-held personalised information for routine care of people with severe mental illness."
76. "A review of the empirical evidence of the healthcare benefits of personal health records."
77. "What do we know about developing patient portals? a systematic literature review."
78. "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review."
79. "Examining the evidence of the impact of health information technology in primary care: an argument for participatory research with health professionals and patients."
81. "Motivating, influencing, and persuading patients through personal health records: a scoping review."
82. "A review of the personal health records in selected countries and Iran."
83. "The challenges in making electronic health records accessible to patients."
84. "User-held personalised information for routine care of people with severe mental illness."

Figure 2 Query for Ovid search interface EMBASE database

1.3 PsycINFO query

Query for PsycINFO database with Ovid search interface.

1. "patient access to record?".ab,id.ti. or [(Medical records or Client Records) and (Self-Management or Client Participation or Client Satisfaction or Patient Participation)].sh.
2. (patient portal? or personal health record? or personal medical record? or personal patient record? or personal client record? or patient held record? or blue button or bluebutton or open notes or opennotes).ab,id.ti.
3. or/1-2 [patient access to records: umbrella terms]
4. (information or informatics or record? or health plan? or ehr? or emr? or entry system? or decision support or data or imag* or ((lab* or test? or patholog* or radiol*) adj2 (result? or report?))).ab,id.ti. and 4
5. (cost? or benefit? or challenge* or opportunit? or risk? or threat? or barrier? or facilit? or advantage? or disadvantage? or util?* or reuse or usage or usable or reusable or useful* or usability or reusability or dissemin* or adoption or acceptance or satisfaction or mechanism? or factor? or determinant? or outcome? or caus* or effect? or efficacy or efficient*).ab,kw,ti.
6. (patient? or person* or consumer? or client?).id.ti. and (jaccess* or control* or portal or held or facing or "use") adj3 (information or informatics or record? or health plan? or ehr? or emr? or entry system? or decision support or data or imag* or ((lab* or test? or patholog* or radiol*) adj2 (result? or report?))).ab,kw,ti.
7. or/5-6 [patient access to records: separate terms]
8. ((overview or review or meta analysis).md,pt.ti. or (literature review or systematic review or scoping review or narrative review or meta analysis) or (review adj5 literature).ab,id,md.ti.) not (letter or comment or editorial).pt.
9. (cost? or benefit? or challenge* or opportunity* or risk? or threat? or barrier? or facilitat* or advantage? or disadvantage? or utili* or reuse or usage or usable or reusable or useful* or usability or reusability or dissemin* or adoption or acceptance or satisfaction or mechanism? or factor? or determinant? or outcome? or caus* or effect* or efficacy or efficien*).ab,id,ti.
10. and/7-9 [separate terms with "determinants or outcomes" and review only]
11. 3 or 10 [patient access to records: complete query]
12. ("Implementation of the Integrated Electronic Patient Portal in the Pediatric Population: A Systematic Review." or "Patient-centered communication in the era of electronic health records: What does the evidence say?" or "Patients' online access to their electronic health records and linked online services: a systematic review in primary care." or "Patient Portals in Child and Adolescent Psychiatry." or "Personal Health Records: Beneficial or Burdensome for Patients and Healthcare Providers?" or "Personal health records for people living with HIV: a review." or "Technology-assisted patient access to clinical information: an evaluation framework for blue button." or "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review." or "What do we know about developing patient portals? a systematic literature review." or "Patients' views on the effectiveness of patient-held records: a systematic review and thematic synthesis of qualitative studies." or "Realist review to inform development of the electronic advance care plan for the personally controlled electronic health record in Australia." or "The Blue Button Project: Engaging Patients in Healthcare by a Click of a Button." or "Patient Portals: An Underused Resource for Improving Patient Engagement." or "A review of the empirical evidence of the healthcare benefits of personal health records." or "Conditions potentially sensitive to a personal health record (PHR) intervention, a systematic review." or "An Interpretative Review of Patient Accessible Electronic Health Records." or "Patient Portals and Patient Engagement: A State of the Science Review." or "Patient and provider attitudes toward the use of patient portals for the management of chronic disease: a systematic review." or "The effect of patient portals on quality outcomes and its implications to meaningful use: a systematic review." or "A systematic review of electronic portal usage among patients with diabetes." or "Personal health records: is rapid adoption hindering interoperability?." or "Patients' online access to their electronic health records and linked online services: a systematic interpretative review." or "The evolution of personal health records and their role for self-management: a literature review." or "How outcomes are achieved through patient portals: a realist review." or "Patient access to medical records and healthcare outcomes: a systematic review." or "Personal health records as portal to the electronic medical record." or "Electronic patient portals: evidence on health outcomes, satisfaction, efficiency, and attitudes: a systematic review." or "User-held personalised information for routine care of people with severe mental illness." or "A scoping review on health records for child-in-care." or "The impact of electronic patient portals on patient care: a systematic review of controlled trials." or "Examining the evidence of the impact of health information technology in primary care: an argument for participatory research with health professionals and patients." or "Are personal health records safe? A review of free web-accessible personal health record privacy policies." or "Motivating, influencing, and persuading patients through personal health records: a scoping review." or "A review of the personal health records in selected countries and Iran." or "The challenges in making electronic health records accessible to patients." or "User-held personalised information for routine care of people with severe mental illness." or "A review of the empirical evidence of the healthcare benefits of personal health records." or "What do we know about developing patient portals? a systematic literature review." or "Work system barriers to patient, provider, and caregiver use of personal health records: A systematic review." or "The Blue Button Project: Engaging Patients in Healthcare by a Click of a Button." or "Personal health records: is rapid adoption hindering interoperability?." or "Motivating, influencing, and persuading patients through personal health records: a scoping review." or "Patients' online access to their electronic health records and linked online services: a systematic interpretative review." or "Personal health records: a scoping review." or "Improving diabetes management with electronic health records and patients' health records." or "Rapid progress or lengthy process? Electronic personal health records in mental health." or "Electronic health records and personal health records." or "Personal health records: a scoping review." or "The value of personal health records for chronic disease management: what do we know?" or "Potential for electronic health records and online social networking to redefine medical research.").ti.