

# openheart Medication-taking for secondary prevention of acute myocardial infarction: a thematic meta-synthesis of patient experiences

Hannah Piekarz , Catherine Langran , Amna Raza , Parastou Donyai 

► Additional supplemental material is published online only. To view, please visit the journal online (<http://dx.doi.org/10.1136/openhrt-2021-001939>).

**To cite:** Piekarz H, Langran C, Raza A, *et al.* Medication-taking for secondary prevention of acute myocardial infarction: a thematic meta-synthesis of patient experiences. *Open Heart* 2022;**9**:e001939. doi:10.1136/openhrt-2021-001939

Received 13 December 2021

Accepted 8 February 2022



© Author(s) (or their employer(s)) 2022. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

Department of Pharmacy, University of Reading School of Chemistry Food and Pharmacy, Reading, UK

## Correspondence to

Hannah Piekarz; [h.piekarz@pgr.reading.ac.uk](mailto:h.piekarz@pgr.reading.ac.uk)

## ABSTRACT

**Objective** To collate existing qualitative research examining patients' medication-taking experiences in secondary prevention of acute myocardial infarction (AMI) and produce new knowledge, a systematic review and meta-synthesis of patient qualitative studies was conducted.

**Method** A systematic review found nine reports suitable for inclusion. Themes found by the report authors and report characteristic data were extracted. Reports were assessed for quality. A meta-synthesis using thematic coding and constant comparison method produced higher order themes, and these were used to construct a statement organised by theme using specific examples from the included studies.

**Results** All patients discussed their medication-taking in thematic categories of beliefs about medication and illness, personal ability and interpersonal factors. Themes differed between classes of medication and between patients, suggesting tailored interventions to medications and individual patients would be appropriate. Some themes overlapped with those discussed by the broader group of cardiovascular patients, but some themes were unique to this myocardial infarction patient group, again indicating that a tailored approach is appropriate for this patient group.

**Conclusion** The themes of beliefs about medication and illness, personal ability and interpersonal support provide tangible starting points for addressing adherence issues. The concept of medication-taking had unique elements within the post-AMI group of patients, and between classes of medication. While these themes were grouped into more generalised higher-order constructs, there were differences between patients within the themed group, indicating that themes are useful as a guide, but individual-level patient support is appropriate.

## INTRODUCTION

Following an acute myocardial infarction (AMI), medical treatment includes a life-long regime of taking five medications, risk factor control and lifestyle changes in order to prevent secondary myocardial infarction or further cardiac events.<sup>1</sup> However, medication adherence has been measured to be around

## Key questions

### What is already known about this subject?

► Following an acute myocardial infarction, patients find it difficult to adhere to prescribed medication intended to improve their long-term health outcomes. An effective, practical adherence aid is yet to be developed, despite existing research into patients' experiences of medication-taking. These individual studies arguably lack external validity, which a meta-synthesis could help address.

### What does this study add?

► This study collates and synthesises qualitative research to elucidate similarities of themes across existing studies to give a rigorous, detailed understanding of medication-taking following an acute myocardial infarction.

### How might this impact on clinical practice?

► Improving understanding of medication-taking following an acute myocardial infarction allows researchers and practitioners to focus on developing more appropriate medication adherence interventions to assist patients' adherence and therefore improve their clinical outcomes.

60% in this patient group,<sup>2</sup> showing a similar pattern across drug classes and falling as treatment duration continues.<sup>3</sup> Poor adherence leads to increased risk of mortality and shortened patient survival,<sup>4</sup> re-hospitalisation,<sup>5</sup> and incurs increased healthcare costs.<sup>6</sup>

A Cochrane Review of medication adherence interventions concluded that they are often complex and of little effect.<sup>7</sup> Within the larger group of cardiovascular secondary prevention patients, the use of short message service (SMS) texts, a combined pill and healthcare professional support have been found to be beneficial to adherence.<sup>8</sup> In the post-AMI patient group, interventions have assisted adherence to cardiac rehabilitation course completion, but not medication adherence,<sup>9</sup> while telephone or web-based

prompts have a positive effect on adherence.<sup>10</sup> The patient perspective of this phenomena is under-researched, and validated theory does not exist, so current interventions to assist medication adherence are based on presumed principles. Qualitative methods are underused in cardiovascular research,<sup>11</sup> but could assist in creating a theoretical model and developing an appropriate intervention, the effectiveness of which could then be assessed using quantitative instruments.

This systematic review and meta-synthesis will provide a new account of this phenomena, by organising existing knowledge through comparison and thematic grouping. The aim is to investigate the existing qualitative research of medication-taking post-AMI and summarise themes across all studies, the differences and scope of our present knowledge. To date, this is the first systematic review of medication-taking in secondary prevention of AMI and makes an important contribution to understanding the issues faced by patients in order to develop appropriate interventions to assist their medication-taking.<sup>12</sup>

## METHODS

### Protocol

This review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses.<sup>13</sup> The PROSPERO, Cochrane Library and Joanna Briggs Institute registries were searched for existing work on 7 June 2021, and no systematic reviews of medication-taking post-AMI were found. The protocol for this study was not registered.

### Databases and search strategies

A search strategy was developed in collaboration with the academic department's subject librarian, using keywords within the fields of qualitative studies, medication-taking and AMI. Databases searched were PubMed, Scopus, PsycInfo, Web of Science and the Cochrane Library.

The PICOS tool defined the inclusion criteria for selecting items<sup>14</sup> (table 1). The titles and abstracts of the resulting papers were screened against the inclusion criteria for selection. The full text of the selected papers was read in detail before final selection.

Following final selection, a snowball search of each article's reference list and the 'cited by' function using PubMed was used to screen for other potentially relevant articles.

Table 1 Study inclusion criteria based on PICOS tool	
Criteria	
Population	Adults with diagnosis of myocardial infarction
Intervention	Taking medication to prevent further cardiac events
Comparison	Experience of taking medication
Outcome	(Not relevant here)
Study design	Qualitative data originating from patients, excluding survey or questionnaire studies
Other	Published in English, 2000–2021

### Study selection and data extraction

The search was conducted by HP and AR individually, and then compared and discussed. The search result data were recorded and organised using the EndNote web-based software.

### Reporting checklists of included studies

All included studies were critically considered against the consolidated criteria for reporting qualitative research (COREQ) 32-point reporting checklist<sup>15</sup> for qualitative studies. This checklist was used to examine how thoroughly the authors had reported the criteria of their studies. This assessment was carried out by HP and AR individually, then compared and discussed.

### Synthesis of results

The participant characteristic data and main themes reported by the original authors of each study were extracted and organised using Microsoft Word.

Thematic meta-synthesis was used to organise the findings of the search, chosen as the aim was to describe a specific concept.<sup>16</sup> According to this meta-synthesis method, the extracted themes were given line-by-line coding, compared with one another and grouped into common themes of a higher order and finally grouped under more encompassing super-ordinate categories<sup>17</sup> (table 2). Comparison tables of thematic groups were produced using Microsoft Word. The original papers were then used to add detail back into a prose statement organised according to the super-ordinate categories.

All data relevant to the study are included in this article or uploaded as online supplemental information 1.

### Patient and public involvement

Patients and the public were not directly involved in the design, analysis, or reporting of this research. This study is intended to be accessible to the public through Open Access publication and forms the foundation of future work by the authors to produce practical interventions that will be further researched through patient involvement and disseminated to wider patient communities.

## RESULTS

### Study selection

The database searches produced 368 citations, of which 43 duplicates were removed to leave 325 articles for title and abstract screening. This produced 23 eligible articles for full-text screening. Following this, eight articles were included in the review collection.

Snowball searching generated four further eligible articles, one proceeded into full-text review, and was subsequently added to the final review collection which now totalled nine (figure 1).

There were four super-ordinate thematic categories across the studies: medication beliefs, illness beliefs, personal and interpersonal factors.

**Table 2** Themes about medication-taking coded into higher order themes and super-ordinate categories

Super-ordinate categories	Higher order themes	Themes		
Beliefs about medication	Negative effects	Side effects <sup>21,24,23</sup> Beliefs about consequences (negative outcomes) <sup>19</sup> Medicine perceived as a barrier to recovery <sup>22</sup>		
	Positive effects	Beliefs about consequences (positive outcomes) <sup>19</sup>		
	Balancing pros and cons	Beliefs about consequences <sup>20,18</sup> Necessity versus concerns <sup>23</sup>		
	Preference for natural therapy	Use of 'natural' lifestyle measures in cholesterol lowering therapy discontinuers, not reported with clopidogrel <sup>24</sup>		
Beliefs about illness	Believe to be in good health	Considered as not serious <sup>21</sup> Believe health is good <sup>21</sup>		
	Neutral health	Personal health feelings and beliefs <sup>21</sup>		
	Believe to be in bad health	Worsening condition <sup>21</sup>		
	Poor perception	Failure to recognise signs and symptoms of disease <sup>21</sup>		
	Future threat	Reduced sense of threat of disease with cholesterol lowering therapy discontinuers, higher with clopidogrel <sup>24</sup> Recurrent event <sup>26</sup>		
Personal adherence factors	Memory, attention, decision processes	Memory/attention/decision processes <sup>19,20,18</sup> Lack of continuity <sup>21</sup> Reinforcement <sup>19</sup> Forgetfulness <sup>23</sup>		
		Self-regulation	Behavioural regulation <sup>19,20,18</sup> Self-medicating <sup>21</sup> Unhealthy lifestyle choices <sup>21</sup> Beliefs about capabilities <sup>19</sup> Social influences (pre-existing beliefs) <sup>19</sup> Identity <sup>19</sup> Willpower <sup>26</sup>	
			Poor perception	A sense of competency <sup>26</sup> Personal preferences <sup>26</sup> Missed general cues <sup>21</sup> Inaccurate perception <sup>21</sup> Prescription confusion <sup>24</sup>
				Determinism
	Emotion			
				Economic

Continued

Table 2 Continued

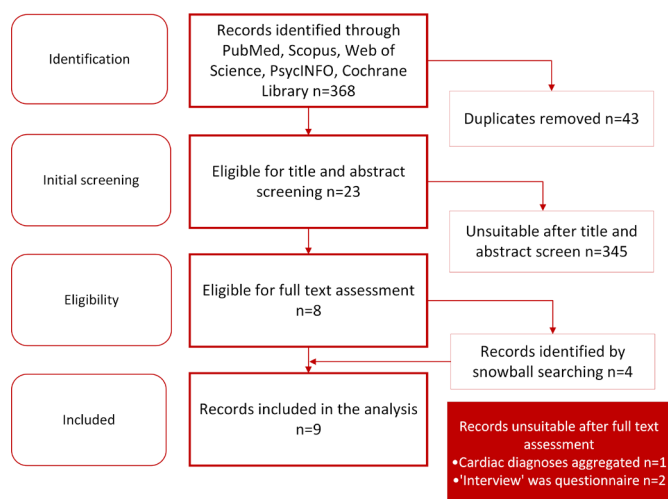
Super-ordinate categories	Higher order themes	Themes
Interpersonal adherence factors	General social	Social influence <sup>2018</sup>
		Social/professional role and identity <sup>2018</sup>
	Communication	Lack of/poor communication <sup>2125</sup>
		Lack of effective communication <sup>21</sup>
		Inadequate patient education <sup>21</sup>
	Education	Lack of knowledge <sup>2125</sup>
	Knowledge	Knowledge <sup>1923</sup>
		Social influence (having knowledge) <sup>19</sup>
		Cholesterol lowering therapy patient knowledgeable yet discontinued <sup>24</sup>
		Clopidogrel less knowledge <sup>24</sup>
	Family	Lack of prompts from family and friends <sup>21</sup>
		Family and relatives <sup>26</sup>
		Family support <sup>23</sup>
Healthcare professionals	Unaware of cardiac rehabilitation <sup>21</sup>	
	Healthcare providers <sup>26</sup>	
	Relying on health practitioner <sup>23</sup>	
	Cardiac rehabilitation <sup>23</sup>	

### Medication beliefs

In summary, patients described positive or negative effects of medication, and balancing the need with their concerns over taking it. They took medication to remain healthy,<sup>18</sup> to not foreshorten their life<sup>19</sup> and to feel safe.<sup>20</sup> The side-effects of medication were described by patients as a bodily effect that needed to be dealt with in itself<sup>20</sup> and were not considered to be related to their cardiac issue. The side-effects caused pain, intruded into their lives and were a barrier to their health.<sup>21</sup> Similarly, the benefit of medication was unclear along with how it linked to their diagnosis.<sup>22</sup> They mentioned conflicting feelings,

such as medication being an intrusion but also producing feelings of safety and were balancing the necessity versus their concerns over taking medication.<sup>23</sup> The concept of a future recurrence was a reason for medication-taking,<sup>23</sup> and medication was seen to be preventative.<sup>23</sup>

Patients conceptualised medication classes differently, giving dissimilar reasons for discontinuation between classes of medication, for example, those stopping clopidogrel were confused about the treatment duration, and those who discontinued cholesterol lowering medication talked about seeking more natural alternatives.<sup>24</sup> Also, patients pitched the side-effects of one medicine against another, as those who discontinued taking clopidogrel described the side-effects of their cholesterol-lowering medication as painful and interfering with life.<sup>24</sup>



**Figure 1** PRISMA flowchart of the study selection process. PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

### Illness beliefs

Patients' perception of their own cardiac illness varied; some felt they were in good health,<sup>21</sup> or not serious,<sup>21</sup> some had neutral feelings,<sup>24</sup> or felt their condition was worsening.<sup>21</sup> They had differing beliefs about their susceptibility to a further myocardial infarction and were balancing feeling healthy against feeling ill.<sup>23</sup> When patients considered their illness to be more severe, they used a friend or family member as reference for comparison to their own illness.<sup>24</sup> They considered the possibility of a recurrent event, which could be prevented by taking medication.<sup>23</sup> Some patients felt depression following their cardiac event affected their medicine-taking.<sup>19</sup>

Some believed that their health was out of their personal control, discussing that genetics made it inevitable,<sup>21</sup>



family history was outside their control,<sup>19</sup> or the will of God played a role.<sup>23</sup>

Several studies featured patients who discontinued one class of medication, finding similarities and differences in illness beliefs between patients. Similar across classes of drugs, patients discontinuing medication had an inaccurate self-perception, a worsening of their condition or denied their illness.<sup>21</sup> They showed a reluctance to engage in lifestyle changes, absolving that their previous positive health measures had not prevented their first AMI.<sup>19</sup> The severity of illness was perceived to be greater by patients who discontinued taking clopidogrel compared with those who discontinued cholesterol reducing medication.<sup>24</sup> Some patients who discontinued cholesterol-reducing medication believed they did not have a cholesterol issue, instead linking cholesterol-lowering medication to patients with high cholesterol, and not seeing the link to their own multi-faceted cardiac condition.<sup>24</sup>

#### Personal adherence factors

Personal factors that affected medication-taking were linked to cognition; remembering and understanding their medication dosages. Themes that were elicited included memory,<sup>19</sup> memory, attention and decision processes,<sup>18</sup> continuity, reinforcement and forgetfulness.<sup>23</sup> Linked to this was poor perception,<sup>21</sup> patients missing the cues given,<sup>21</sup> being confused or receiving information inaccurately.<sup>24</sup> The use of a pill-box was given as an example of an adherence aid.<sup>18</sup>

The ability to self-regulate behaviour was discussed in several studies as a general theme,<sup>18–20</sup> and specifically described as patients talked of the discipline required to maintain their own medication,<sup>21</sup> their pre-existing beliefs as influences,<sup>19</sup> their belief in their own capability, as well as regulating their exercise and eating habits,<sup>19</sup> with reinforcement and consequences as an aid to adherence. Similarly, patients stated willpower, a sense of competency and personal preference as influencing their adherence.<sup>23</sup>

The emotional work required to take medication was described as a toll by patients,<sup>19</sup> some discussed the notion of denial of their condition,<sup>21</sup> as well as the negative feelings of mistrust<sup>21</sup> or distrust of the doctors providing their healthcare.<sup>24</sup>

Personal identity featured as patients mentioned the incongruity of seeing themselves as patients,<sup>18</sup> and comparison to other patients.<sup>19</sup> Some felt that medication was forced on them.<sup>20</sup> Economic poverty affected medication adherence, with the cost of medication a barrier,<sup>21 24</sup> as well as living in a deprived area.<sup>23</sup>

#### Interpersonal adherence factors

Medication-taking was helped by healthcare professionals, who provided support,<sup>23</sup> reassurance<sup>20</sup> and communication.<sup>18</sup> Patients blamed poor communication by professionals and poor inter-professional communication as a reason for discontinuing clopidogrel.<sup>25</sup> The transition

period following hospital discharge was a precarious time for their understanding<sup>20</sup> and receiving conflicting information added to confusion about treatment and illness severity. Also, clopidogrel non-adherent patients cited a lack of care continuity, lack of communication and inadequate education as factors.<sup>21</sup>

Patient's adherence was strengthened by having knowledge,<sup>23</sup> and lack of knowledge was stated as contributing to non-continuation of clopidogrel,<sup>21</sup> specifically knowledge about treatment duration and drug purpose.<sup>25</sup>

Support from family influenced medication-taking,<sup>23 26</sup> and a lack of prompt from family and friends featured for non-adherers.<sup>21</sup> Cardiac rehabilitation was stated as an influence on adherence,<sup>23</sup> and some non-adherers were unaware of the existence of cardiac rehabilitation programmes.<sup>21</sup>

#### DISCUSSION

The aim of this study was to define the patient experience of taking medication following an AMI using thematic meta-synthesis of qualitative studies. In relation to medication adherence, patients discussed their illness beliefs, medication beliefs, personal and interpersonal factors.

Using meta-synthesis to collate and interpret the results, the claim for applicability to settings outside of the context each individual study is tentatively strengthened. Similarly, this meta-synthesis makes no claim of generalisability, but is intended to provide a resource to focus further work into theory development for testing in clinical practice.

We have highlighted the themes that patients discussed, but within these themes, patients produced a breadth of specific details, sometimes opposing, suggesting that adherence work should be done at an individual level for personalised assistance, in line with patient-centred medication adherence support advocated by the National Health Service (NHS) clinical guidance.<sup>27</sup>

The factors extracted in this review relate to the WHO dimensions of medical adherence; namely social/economic-related, healthcare system-related, therapy-related, condition-related and patient-related factors that affect adherence.<sup>28</sup>

A notable finding is that taking medication reminds patients of their illness, and they attribute bodily effects to medication side-effects and not their original health issue. Patients' perception of illness varied, both in terms of severity compared with other patients and within themselves, and they balanced ideas of their healthiness with that of their illness.

Medication was seen as protective, and health-maintaining, with the concept of a future event a driver towards medication-taking. However, some patients balanced these beliefs with other more negative arguments that justified their choice to discontinue medication. This shows work is still needed to communicate positive health effects to patients, with dialogue needed to enable patients to voice their concerns. In other studies

of medication adherence in chronic illness, patients are more adherent if their perceived need to take medication is greater than their concern over taking them.<sup>26</sup> The ambiguity of medication effects could be an issue for post-AMI patients who are asymptomatic or attributing symptoms as side-effects of medication. Practitioners should be aware of this issue when addressing patients' concerns about their medication.

The themes of knowledge, memory and social support from both family and professionals are important because they are tangible psychosocial factors that can be addressed using behaviour change techniques to assist patients.<sup>29</sup>

Scientific rigour and quality of results of this paper were strengthened by sourcing from peer-reviewed journals, and the COREQ checklist used as a valid and reliable measure of quality. No studies were deemed ineligible due to their quality, with scoring used as a guide for comparison, rather than an arbitrary cut-off.<sup>30</sup>

To show the coverage of studies included, it is worthwhile to highlight their epistemological positions.<sup>29</sup> Four studies were closest in theoretical paradigm to the aim of this study.<sup>18 20 23 26</sup> Two studies assessed the experience following the interventions of support via phone discussion and booklet respectively.<sup>19 22</sup> In the trio of related studies,<sup>21 24 25</sup> the context was patients who received coronary stent insertion as a result of their AMI. They also appear to have used the same cohort of patients, showing similar numbers and age range, perhaps limiting the breadth of results. Two studies used the Theoretical Domains Framework to organise the themes of their results,<sup>18 19</sup> and so were already organised into a higher order domain than the primary interpretations presented in all other studies.

The studies reviewed were biased towards white male participants, with gender not reported, and from English-speaking developed nations with integral academic and healthcare systems. Only one study mentioned purposive sampling to balance ethnicity and socioeconomic status.<sup>19</sup>

There are two literature reviews that this research builds on. The first was a systematic review of all qualitative literature on medication adherence,<sup>31</sup> organised using Theoretical Domains Framework. This found three themes, medication-related burden, medication-related beliefs, which then fed into medication-related practices. There is a clear overlap with our study of medication-related beliefs and illness-related beliefs.

The second study of interest is a literature review of medication-taking behaviour for secondary prevention across patients of all types of coronary heart disease,<sup>32</sup> which concluded that medication-taking behaviour was a result of medication-related and disease-related beliefs, and related to clinician relationships, pre-existing health beliefs, socioeconomic and cultural environment, interaction with health systems and influence of partner and family. Again, there is overlap of the broad themes between this paper and ours. This second review included seven studies of AMI patients, four of which were selected

in our review. A further five studies that we included were published later.

The authors of the study above found a number of unique themes including chronicity of illness,<sup>32</sup> a greater emphasis on fatalism, and patient confusion that they had been cured. Our study adds to this as we found the specific threat of a future event influenced patients' behaviour, and our study picked up depression as a feature of decisions which was absent in this second review. Of interest is one study of a Gujarati Hindu cohort<sup>33</sup> who discussed a significant belief in fate and the will of God, similar to that included in our study.<sup>23</sup>

This difference in findings supports the argument for tailoring interventions to a specific AMI diagnosis to help guide thematic concepts and predict individual issues. Additionally, acknowledgement of similar experiences assists empathy and developing professional trust.

The authors of this review have a study in publication that is also relevant.<sup>34</sup> Our study found that patients discussed similar personal factors to those identified in this paper, for example, the assimilation of medication into their lifestyle, knowledge in general and disruption to routine. Under the theme of illness beliefs, we found that patients considered the future, compared themselves to others, and were keen to distinguish themselves from the notion of a 'typical' AMI patient.

## CONCLUSION

This systematic review and meta-synthesis of medication-taking to prevent further AMI has found that patients expressed varied beliefs relating to medication and their illness. Most importantly, patients differed in the concept of their own health and how it related to their cardiac illness, and the effect of taking medication on their bodies and how this influenced their health. They were supported by family and professional help, and their own knowledge, memory and capability assisted their medication-taking.

These findings indicate that intervention work should be done at an individual level, due to personal variation in beliefs, and also at drug class level, as patients conceptualised drug classes differently.

Healthcare professionals can use beliefs about medication and illness as starting points for intervention work, and be observant during everyday practice that patient knowledge, communication and continuity of care are important to help patients with medication-taking following an AMI.

**Twitter** Hannah Piekarz @HannahPiekarz and Parastou Donyai @ProfDonyai

**Acknowledgements** With thanks to Jackie Skinner for assistance with the search strategy.

**Contributors** HP responsible for overall content and guarantor of the work; study design, systematic search, data extraction, meta-synthesis, manuscript writing. AR contributed to systematic search and data extraction. CL contributed to study design and manuscript review. PD contributed to study design, manuscript writing and manuscript review.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not applicable.

**Ethics approval** No ethical approval was required as data was collected and analysed from previously published studies in which informed consent was obtained from study participants by the study primary investigators.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** All data relevant to the study are included in the article or uploaded as supplementary information.

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

#### ORCID iDs

Hannah Piekarczyk <http://orcid.org/0000-0002-2706-1677>

Catherine Langran <http://orcid.org/0000-0001-5186-4528>

Amna Raza <http://orcid.org/0000-0001-5186-4528>

Parastou Donyai <http://orcid.org/0000-0001-5403-6170>

#### REFERENCES

- Kotseva K, De Backer G, De Bacquer D, et al. Lifestyle and impact on cardiovascular risk factor control in coronary patients across 27 countries: results from the European Society of cardiology ESC-EORP EUROASPIRE V registry. *Eur J Prev Cardiol* 2019;26:824–35.
- Naderi SH, Bestwick JP, Wald DS. Adherence to drugs that prevent cardiovascular disease: meta-analysis on 376,162 patients. *Am J Med* 2012;125:882–7.
- Michalski P, Kosobucka A. Medication adherence and its determinants in patients after myocardial infarction. *Sci Reports* 2020;10.
- Rasmussen JN, Chong A, Alter DA. Relationship between adherence to evidence-based pharmacotherapy and long-term mortality after acute myocardial infarction. *JAMA* 2007;297:177.
- Ho PM, Magid DJ, Shetterly SM, et al. Medication nonadherence is associated with a broad range of adverse outcomes in patients with coronary artery disease. *Am Heart J* 2008;155:772–9.
- Bitton A, Choudhry NK, Matlin OS, et al. The impact of medication adherence on coronary artery disease costs and outcomes: a systematic review. *Am J Med* 2013;126:357.e7–357.e27.
- Nieuwlaat R, Wilczynski N, Navarro T, et al. Interventions for enhancing medication adherence. *Cochrane Database Syst Rev* 2014;2014:CD000011.
- Fuller RH, Perel P, Navarro-Ruan T, et al. Improving medication adherence in patients with cardiovascular disease: a systematic review. *Heart* 2018;104:1238–43.
- Ivers NM, Schwalm J-D, Bouck Z, et al. Interventions supporting long term adherence and decreasing cardiovascular events after myocardial infarction (island): pragmatic randomised controlled trial. *BMJ* 2020;369:m1731.
- Kebapci A, Ozkaynak M, Lareau SC. Effects of eHealth-Based interventions on adherence to components of cardiac rehabilitation: a systematic review. *J Cardiovasc Nurs* 2020;35:74–85.
- McIlvennan CK, Morris MA, Guetterman TC, et al. Qualitative methodology in cardiovascular outcomes research. *Circulation* 2019;120:5828.
- Ye S, Krupka DJ, Davidson KW. Diagnosing medication non-adherence in a patient with myocardial infarction. *Front Psychol* 2012;3:267.
- Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *J Clin Epidemiol* 2021;134:178–89.
- Higgins JPT, López-López JA, Becker BJ, et al. Synthesising quantitative evidence in systematic reviews of complex health interventions. *BMJ Glob Health* 2019;4:e000858.
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349–57.
- Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol* 2008;8:1–10.
- et al Britten N, Campbell R, Pope C. Using meta ethnography to synthesise qualitative research: a worked example, 2002. Available: <https://journals.sagepub.com/doi/pdf/10.1258/135581902320432732> [Accessed 24 Jan 2019].
- Presseau J, Schwalm JD, Grimshaw JM, et al. Identifying determinants of medication adherence following myocardial infarction using the theoretical domains framework and the health action process approach. *Psychol Health* 2017;32:1176–94.
- Desveaux L, Saragosa M, Russell K, et al. How and why a multifaceted intervention to improve adherence post-MI worked for some (and could work better for others): an outcome-driven qualitative process evaluation. *BMJ Open* 2020;10:36750.
- Attebring MF, Herlitz J, Ekman I. Intrusion and confusion—the impact of medication and health professionals after acute myocardial infarction. *Eur J Cardiovasc Nurs* 2005;4:153–9.
- Decker C, Garavalia L, Garavalia B, et al. Clopidogrel-taking behavior by drug-eluting stent patients: Discontinuers versus continuers. *Patient Prefer Adherence* 2008;2:167–75.
- Hilt AD, Mamaqi Kapllani K, Hierck BP, et al. Perspectives of patients and professionals on information and education after myocardial infarction with insight for mixed reality implementation: cross-sectional interview study. *JMIR Hum Factors* 2020;7:e17147.
- Jalal Z, Antoniou S, Taylor D, et al. South Asians living in the UK and adherence to coronary heart disease medication: a mixed-method study. *Int J Clin Pharm* 2019;41:122–30.
- Garavalia L, Garavalia B, Spertus JA, et al. Exploring patients' reasons for discontinuance of heart medications. *J Cardiovasc Nurs* 2009;24:371–9.
- Garavalia L, Ho PM, Garavalia B, et al. Clinician-patient discord: exploring differences in perspectives for discontinuing clopidogrel. *Eur J Cardiovasc Nurs* 2011;10:50–5.
- Hanna A, Yael E-M, Hadassa L, et al. Its up to me with a little support - Adherence after myocardial infarction: a qualitative study. *Int J Nurs Stud* 2020;101:103416.
- Nunes V. *Medicines Adherence : involving patients in decisions about prescribed medicines and supporting adherence Full Guideline January 2009 National Collaborating Centre for Primary*. London: Royal College of General Practitioners (UK), 2009: 1–364.
- Sabaté E. Evidence for action, 2003. Available: <https://apps.who.int/iris/bitstream/handle/10665/42682/9241545992.pdf;jsessionid=DDD025F3C1574A023059B24C0F18506F?sequence=1> [Accessed 28 Jan 2019].
- Horne R, Cooper V, Wileman V, et al. Supporting adherence to medicines for long-term conditions. *Eur Psychol* 2019;24:82–96.
- Noyes J, Booth A, Flemming K, et al. Cochrane Qualitative and Implementation Methods Group guidance series-paper 3: methods for assessing methodological limitations, data extraction and synthesis, and confidence in synthesized qualitative findings. *J Clin Epidemiol* 2018;97:49–58.
- Mohammed MA, Moles RJ, Chen TF. Medication-related burden and patients' lived experience with medicine: a systematic review and metasynthesis of qualitative studies. *BMJ Open* 2016;6:e010035.
- Rashid MA, Edwards D, Walter FM, et al. Medication taking in coronary artery disease: a systematic review and qualitative synthesis. *Ann Fam Med* 2014;12:224–32.
- Webster RA, Thompson DR, Mayou RA. The experiences and needs of Gujarati Hindu patients and partners in the first month after a myocardial infarction. *Eur J Cardiovasc Nurs* 2002;1:69–76.
- Piekarczyk H, Langran C, Donyai P. A phenomenological analysis of the experience of taking medication to prevent a further heart attack. *Sci Rep* 2021;11:1–12.

## Supplementary Materials

### **Supplement A: Collated Systematic Search Results and Title/ Abstract Screened Selections** **6/7/21**

<u>Inclusion Criteria</u>
Myocardial infarction patient.
Published between 2000 and 2021.
Examines patient experience, perspective, requirements of medication taking.
Original qualitative data.
Available in English.

#### 1) PubMed Search

All fields, no restrictions

<u>Search</u>	<u>Search Terms</u>	<u>No. of Results</u>		
		<u>HP</u> <u>22/3/21</u>	<u>AR</u> <u>21/6/21</u>	<u>HP</u> <u>6/7/21</u>
1	"Qualitative research"[MeSH] OR "qualitative research" OR qualitative OR "phenomeno*" OR "experience" OR "content analysis" OR "thematic analysis" OR "grounded theory" OR "ethnography" OR "interview" OR "discourse analysis" OR "conversation analysis"	1,352,167	1,376,309	1,383,551
2	"myocardial infarction"[MeSH] OR "myocardial infarction" OR "heart attack" OR "AMI"	265,309	267,960	268,812
3	"medication adherence"[MeSH] OR "medication adherence" OR "medication compliance" OR "medication concordance" OR "medicine adherence" OR "medicine compliance"	29,513	30,163	30,367
4	#1 AND #2 AND #3	52	53	53

[South Asians living in the UK and adherence to coronary heart disease medication: a mixed- method study.](#)

Jalal Z, Antoniou S, Taylor D, Paudyal V, Finlay K, Smith F. Int J Clin Pharm. 2019 Feb;41(1):122-130. doi: 10.1007/s11096-018-0760-3. Epub 2018 Dec 18.



[Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study.](#)

Hilt AD, Mamaqi Kapllani K, Hierck BP, Kemp AC, Albayrak A, Melles M, Schaliij MJ, Scherptong RWC. *JMIR Hum Factors*. 2020 Jun 23;7(2):e17147. doi: 10.2196/17147.

[Drug compliance after stroke and myocardial infarction: a comparative study.](#)

Arif H, Aijaz B, Islam M, Aftab U, Kumar S, Shafqat S. *Neurol India*. 2007 Apr-Jun;55(2):130-5. doi: 10.4103/0028-3886.32783.

[Clinician-patient discord: exploring differences in perspectives for discontinuing clopidogrel.](#)

Garavalia L, Ho PM, Garavalia B, Foody JM, Kruse H, Spertus JA, Decker C. *Eur J Cardiovasc Nurs*. 2011 Mar;10(1):50-5. doi: 10.1016/j.ejcnurse.2010.04.002. Epub 2010 May 21.

[Exploring patients' reasons for discontinuance of heart medications.](#)

Garavalia L, Garavalia B, Spertus JA, Decker C. *J Cardiovasc Nurs*. 2009 Sep-Oct;24(5):371-9. doi: 10.1097/JCN.0b013e3181ae7b2a.

## 2) SCOPUS Search

TITLE-ABS-KEY, no restrictions

Search	Search Terms	No. of Results		
		HP 24/3/21	AR 21/6/21	HP 6/7/21
5	"qualitative research" OR qualitative OR "phenomeno*" OR "experience" OR "content analysis" OR "thematic analysis" OR "grounded theory" OR "ethnography" OR "interview" OR "discourse analysis" OR "conversation analysis"	4,796,317	4,884,827	4,913,231
6	"myocardial infarction" OR "heart attack" OR "AMI"	302,173	305,752	306,578
Z	"medication adherence" OR "medication compliance" OR "medication concordance" OR "medicine adherence" OR "medicine compliance"	43,929	45,123	45,422
8	#5 AND #6 AND #7	101	105	106

Perspectives of patients and professionals on information and education after myocardial infarction with insight for mixed reality implementation: Cross-sectional interview study

Hilt, A.D., Kapllani, K.M., Hierck, B.P., (...), Schalijs, M.J., Scherptong, R.W.C. 2020 JMIR Human Factors 7(2),e17147

South Asians living in the UK and adherence to coronary heart disease medication: a mixed-method study

Jalal, Z., Antoniou, S., Taylor, D., (...), Finlay, K., Smith, F. 2019 International Journal of Clinical Pharmacy 41(1), pp. 122-130

Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action Process Approach

Presseau, J., Schwalm, J.D., Grimshaw, J.M., (...), Sullivan, K., Ivers, N.M. 2017 Psychology and Health 32(10), pp. 1176-1194

Clinician-patient discord: Exploring differences in perspectives for discontinuing clopidogrel

Garavalia, L., Ho, P.M., Garavalia, B., (...), Spertus, J.A., Decker, C. 2011 European Journal of Cardiovascular Nursing 10(1), pp. 50-55

Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence

Gujral, G., Winckel, K., Nissen, L.M., Cottrell, W.N. 2014 International Journal of Clinical Pharmacy 36(5), pp. 1048-1058

Exploring patients' reasons for discontinuance of heart medications

Garavalia, L., Garavalia, B., Spertus, J.A., Decker, C. 2009 Journal of Cardiovascular Nursing 24(5), pp. 371-379

Drug compliance after stroke and myocardial infarction: A comparative study

Arif, H., Aijaz, B., Islam, M., (...), Kumar, S., Shafqat, S. 2007 Neurology India 55(2), pp. 130-135

### 3) PsycInfo

Keywords, no restrictions

<u>Search</u>	<u>Search Terms</u>	<u>No. of Results</u>		
		<u>HP</u> <u>24/3/21</u>	<u>AR</u> <u>21/6/21</u>	<u>HP</u> <u>6/7/21</u>
<u>9</u>	"qualitative research" OR qualitative OR "phenomeno*" OR "experience" OR "content analysis" OR "thematic analysis" OR "grounded theory" OR "ethnography" OR "interview" OR "discourse analysis" OR "conversation analysis"	839,782	853,278	856,671
<u>10</u>	"myocardial infarction" OR "heart attack" OR "AMI"	6,161	6,209	6,221
<u>11</u>	"medication adherence" OR "medication compliance" OR "medication concordance" OR "medicine adherence" OR "medicine compliance"	7,678	7,803	7,829
<u>12</u>	#9 AND #10 AND #11	12	12	13

Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence

G Gujral, K Winckel, LM Nissen, WN Cottrell

International journal of clinical pharmacy, 2014, 36(5), 1048-1058 | added to CENTRAL: 31 December 2014 | 2014 Issue 12

South Asians living in the UK and adherence to coronary heart disease medication: a mixed-method study

Z Jalal, S Antoniou, D Taylor, V Paudyal, K Finlay, F Smith

International journal of clinical pharmacy, 2019, 41(1), 122-130 | added to CENTRAL: 31 March 2019 | 2019 Issue 3

**4) Cochrane Library**

TITLE-ABS-KEY, no restrictions

<u>Search</u>	<u>Search Terms</u>	<u>No. of Results</u>		
		<u>HP</u> <u>24/3/21</u>	<u>AR</u> <u>21/6/21</u>	<u>HP</u> <u>6/7/21</u>

13	"qualitative research" OR qualitative OR "phenomeno*" OR "experience" OR "content analysis" OR "thematic analysis" OR "grounded theory" OR "ethnography" OR "interview" OR "discourse analysis" OR "conversation analysis"	151,717	156,830	88,995
14	<u>"myocardial infarction" OR "heart attack" OR "AMI"</u>	33,047	33,208	33,706
15	"medication adherence" OR "medication compliance" OR "medication concordance" OR "medicine adherence" OR "medicine compliance"	8,471	8,649	8,767
16	#13 AND #14 AND #15	49	50	59

Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence

G Gujral, K Winckel, LM Nissen, WN Cottrell

International journal of clinical pharmacy, 2014, 36(5), 1048-1058 | added to CENTRAL: 31 December 2014 | 2014 Issue 12

South Asians living in the UK and adherence to coronary heart disease medication: a mixed-method study

Z Jalal, S Antoniou, D Taylor, V Paudyal, K Finlay, F Smith

International journal of clinical pharmacy, 2019, 41(1), 122-130 | added to CENTRAL: 31 March 2019 | 2019 Issue 3

## **5) Web Of Science**

All databases, keywords, no restrictions

<u>Search</u>	<u>Search Terms</u>	<u>No. of Results</u>			
		<u>HP</u> <u>24/3/21</u>	<u>AR</u> <u>21/6/21</u>	<u>HP</u> <u>6/7/21</u>	<u>HP</u> <u>5/8/21</u>
17	"qualitative research" OR qualitative OR "phenomeno*" OR "experience" OR "content analysis" OR "thematic analysis" OR "grounded theory" OR "ethnography" OR "interview" OR "discourse analysis" OR "conversation analysis"	4,401,035	206,505	4,541,098	4,586,701



<u>18</u>	"myocardial infarction" OR "heart attack" OR "AMI"	521,851	55,436	528,393	530,271
<u>19</u>	"medication adherence" OR "medication compliance" OR "medication concordance" OR "medicine adherence" OR "medicine compliance"	38,780	5,177	39,932	40,275
<u>20</u>	#17 AND #18 AND #19	135	1	137	138

### Core collection

<u>Sea</u> <u>rch</u>	<u>Search Terms</u>	<u>HP 5/8/21</u>
<u>17</u>	"qualitative research" OR qualitative OR "phenomeno*" OR "experience" OR "content analysis" OR "thematic analysis" OR "grounded theory" OR "ethnography" OR "interview" OR "discourse analysis" OR "conversation analysis"	2,683,000
<u>18</u>	"myocardial infarction" OR "heart attack" OR "AMI"	325,065
<u>19</u>	"medication adherence" OR "medication compliance" OR "medication concordance" OR "medicine adherence" OR "medicine compliance"	21,353
<u>20</u>	#17 AND #18 AND #19	85

### (All databases) HP's results:

Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study.

By: Hilt, Alexander D; Mamaqi Kapllani, Kevin; Hierck, Beerend P; et al.

JMIR human factors Volume: 7 Issue: 2 Pages: e17147 Published: 2020 Jun 23

"It's up to me with a little support" - Adherence after myocardial infarction: A qualitative study

By: Hanna, Admi; Yael, Eilon-Moshe; Hadassa, Levy; et al.

INTERNATIONAL JOURNAL OF NURSING STUDIES Volume: 101 Article Number: 103416  
Published: JAN 2020

South Asians living in the UK and adherence to coronary heart disease medication: a mixed-method study

By: Jalal, Zahraa; Antoniou, Sotiris; Taylor, David; et al.

INTERNATIONAL JOURNAL OF CLINICAL PHARMACY Volume: 41 Issue: 1 Pages: 122-130 Published: FEB 2019

Clinician-patient discord: Exploring differences in perspectives for discontinuing clopidogrel

By: Garavalia, Linda; Ho, P. Michael; Garavalia, Brian; et al.

EUROPEAN JOURNAL OF CARDIOVASCULAR NURSING Volume: 10 Issue: 1 Pages: 50-55 Published: MAR 2011

Exploring Patients' Reasons for Discontinuance of Heart Medications

By: Garavalia, Linda; Garavalia, Brian; Spertus, John A.; et al.

JOURNAL OF CARDIOVASCULAR NURSING Volume: 24 Issue: 5 Pages: 371-379  
Published: SEP-OCT 2009

Drug compliance after stroke and myocardial infarction: A comparative study

By: Arif, Hiba; Aijaz, Bilal; Islam, Muhammad; et al.

NEUROLOGY INDIA Volume: 55 Issue: 2 Pages: 130-135 Published: APR-JUN 2007

**Full-Read Selected Results Summary**

(Duplicates removed)

A) Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study.

By: Hilt, Alexander D; Mamaqi Kapllani, Kevin; Hierck, Beerend P; et al.

JMIR human factors Volume: 7 Issue: 2 Pages: e17147 Published: 2020 Jun 23

<https://doi.org/10.2196/17147>

B) "It's up to me with a little support" - Adherence after myocardial infarction: A qualitative study

By: Hanna, Admi; Yael, Eilon-Moshe; Hadassa, Levy; et al.

INTERNATIONAL JOURNAL OF NURSING STUDIES Volume: 101 Article Number: 103416  
Published: JAN 2020

<https://doi.org/10.1016/j.ijnurstu.2019.103416>

C) South Asians living in the UK and adherence to coronary heart disease medication: a mixed-method study

By: Jalal, Zahraa; Antoniou, Sotiris; Taylor, David; et al.

INTERNATIONAL JOURNAL OF CLINICAL PHARMACY Volume: 41 Issue: 1 Pages: 122-130  
Published: FEB 2019

<https://doi.org/10.1007/s11096-018-0760-3>

D) Clinician-patient discord: Exploring differences in perspectives for discontinuing clopidogrel

By: Garavalia, Linda; Ho, P. Michael; Garavalia, Brian; et al.

EUROPEAN JOURNAL OF CARDIOVASCULAR NURSING Volume: 10 Issue: 1 Pages: 50-55  
Published: MAR 2011

<https://doi.org/10.1016%2Fj.ejcnurse.2010.04.002>

E) Exploring Patients' Reasons for Discontinuance of Heart Medications

By: Garavalia, Linda; Garavalia, Brian; Spertus, John A.; et al.

JOURNAL OF CARDIOVASCULAR NURSING Volume: 24 Issue: 5 Pages: 371-379  
Published: SEP-OCT 2009

<https://dx.doi.org/10.1097%2FJCN.0bo13e3181ae7b2a>

F) Drug compliance after stroke and myocardial infarction: A comparative study

By: Arif, Hiba; Aijaz, Bilal; Islam, Muhammad; et al.

NEUROLOGY INDIA Volume: 55 Issue: 2 Pages: 130-135 Published: APR-JUN 2007

<https://doi.org/10.4103/0028-3886.32783>

G) Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence

G Gujral, K Winckel, LM Nissen, WN Cottrell

International journal of clinical pharmacy, 2014, 36(5), 1048-1058 | added to CENTRAL: 31  
December 2014 | 2014 Issue 12

<https://doi.org/10.1007/s11096-014-9993-y>

H) Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action Process Approach. [References].

Presseau, Justin; Schwalm, J. D; Grimshaw, Jeremy M; Witteman, Holly O; Natarajan, Madhu K; Linklater, Stefanie; Sullivan, Katrina; Ivers, Noah M.

Psychology & Health. Vol.32(10), 2017, pp. 1176-1194.

<https://doi.org/10.1080/08870446.2016.1260724>



## **Part 2) Snowball Search**

### **Systematic Searching Using 'Cited By' in PubMed**

**25/3/21**

#### **A) Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study.**

By: Hilt, Alexander D; Mamaqi Kapllani, Kevin; Hierck, Beerend P; et al.

Cited by:

Shi, W., Ghisi, G.L., Hyun, K., Zhang, L. and Gallagher, R., 2021. Patient education interventions for health behaviour change in adults diagnosed with coronary heart disease: A protocol for a systematic review and meta-analysis. *Journal of Advanced Nursing*, 77(2), pp.1043-1050.

#### **B) "It's up to me with a little support" - Adherence after myocardial infarction: A qualitative study**

By: Hanna, Admi; Yael, Eilon-Moshe; Hadassa, Levy; et al.

Cited by:

Rashid, A., 2020. Yonder: Medication adherence, Twitter, head and neck cancer, and knitting. *British Journal of General Practice*, 70(690), pp.28-28.

#### **C) South Asians living in the UK and adherence to coronary heart disease medication: a mixed- method study**

By: Jalal, Zahraa; Antoniou, Sotiris; Taylor, David; et al.

Cited by (2):

Mahmood, S., Jalal, Z., Hadi, M.A., Orooj, H. and Shah, K.U., 2020. Non-Adherence to prescribed antihypertensives in primary, secondary and tertiary healthcare settings in Islamabad, Pakistan: a cross-sectional study. *Patient preference and adherence*, 14, p.73. Association between attendance at outpatient follow-up appointments and blood pressure control among patients with hypertension

Mahmood, S., Jalal, Z., Hadi, M.A. and Shah, K.U., 2020. Association between attendance at outpatient follow-up appointments and blood pressure control among patients with hypertension. *BMC Cardiovascular Disorders*, 20(1), pp.1-11.

#### **D) Clinician-patient discord: Exploring differences in perspectives for discontinuing clopidogrel**

By: Garavalia, Linda; Ho, P. Michael; Garavalia, Brian; et al.

Cited by (14):

THIS IS: Garavalia L, Ho PM, Garavalia B, Foody JM, Kruse H, Spertus JA, Decker C. Clinician-patient discord: exploring differences in perspectives for discontinuing clopidogrel. *Eur J Cardiovasc Nurs*. 2011 Mar;10(1):50-5. doi: 10.1016/j.ejcnurse.2010.04.002. Epub 2010 May 21. PMID: 20483665; PMCID: PMC2932847.

Boyd AD, Ndukwe CI, Dileep A, Everin OF, Yao Y, Welland B, Field J, Baumann M, Flores JD Jr, Shroff A, Groo V, Dickens C, Doukky R, Francis R, Peacock G, Wilkie DJ. Elderly Medication Adherence Intervention Using the My Interventional Drug-Eluting Stent Educational App: Multisite Randomized Feasibility Trial. *JMIR Mhealth Uhealth*. 2020 Jun 24;8(6):e15900. doi: 10.2196/15900. PMID: 32579120; PMCID: PMC7381043.

Freier C, Heintze C, Herrmann WJ. Prescribing and medical non-adherence after myocardial infarction: qualitative interviews with general practitioners in Germany. *BMC Fam Pract*. 2020 May 8;21(1):81. doi: 10.1186/s12875-020-01145-6. PMID: 32384915; PMCID: PMC7210678.

El-Toukhy H, Omar A, Abou Samra M. Effect of acute coronary syndrome patients' education on adherence to dual antiplatelet therapy. *J Saudi Heart Assoc*. 2017 Oct;29(4):252-258. doi: 10.1016/j.jsha.2017.02.003. Epub 2017 Mar 8. PMID: 28983168; PMCID: PMC5623036.

Biscaglia S, Tonet E, Pavasini R, Serenelli M, Bugani G, Cimaglia P, Gallo F, Spitaleri G, Del Franco A, Aquila G, Vieceli Dalla Sega F, Tebaldi M, Tumscitz C, Ferrari R, Campo G. A counseling program on nuisance bleeding improves quality of life in patients on dual antiplatelet therapy: A randomized controlled trial. *PLoS One*. 2017 Aug 23;12(8):e0182124. doi: 10.1371/journal.pone.0182124. PMID: 28832589; PMCID: PMC5568410.

Shah V, Dileep A, Dickens C, Groo V, Welland B, Field J, Baumann M, Flores JD, Shroff A, Zhao Z, Yao Y, Wilkie DJ, Boyd AD. Patient-Centered Tablet Application for Improving Medication Adherence after a Drug-Eluting Stent. *Front Public Health*. 2016 Dec 12;4:272. doi: 10.3389/fpubh.2016.00272. PMID: 28018897; PMCID: PMC5149519.

Reeve E, Low LF, Shakib S, Hilmer SN. Development and Validation of the Revised Patients' Attitudes Towards Deprescribing (rPATD) Questionnaire: Versions for Older Adults and Caregivers. *Drugs Aging*. 2016 Dec;33(12):913-928. doi: 10.1007/s40266-016-0410-1. PMID: 27785734.

Lambert-Kerzner A, Havranek EP, Plomondon ME, Fagan KM, McCreight MS, Fehling KB, Williams DJ, Hamilton AB, Albright K, Blatchford PJ, Mihalko-Corbitt R, Bryson CL, Bosworth HB, Kirshner MA, Giacco EJ, Ho PM. Perspectives of patients on factors relating to adherence to post-acute coronary syndrome medical regimens. *Patient Prefer Adherence*. 2015 Jul 24;9:1053-9. doi: 10.2147/PPA.S84546. PMID: 26244013; PMCID: PMC4521673.

Boyd AD, Moores K, Shah V, Sadhu E, Shroff A, Groo V, Dickens C, Field J, Baumann M, Welland B, Gutowski G, Flores JD Jr, Zhao Z, Bahroos N, Hynes DM, Wilkie DJ. My Interventional Drug-Eluting Stent Educational App (MyIDEA): Patient-Centered Design

Methodology. *JMIR Mhealth Uhealth*. 2015 Jul 2;3(3):e74. doi: 10.2196/mhealth.4021. PMID: 26139587; PMCID: PMC4526975.

Mathews R, Peterson ED, Honeycutt E, Chin CT, Effron MB, Zettler M, Fonarow GC, Henry TD, Wang TY. Early Medication Nonadherence After Acute Myocardial Infarction: Insights into Actionable Opportunities From the Treatment with ADP receptor inhibitorS: Longitudinal Assessment of Treatment Patterns and Events after Acute Coronary Syndrome (TRANSLATE-ACS) Study. *Circ Cardiovasc Qual Outcomes*. 2015 Jul;8(4):347-56. doi: 10.1161/CIRCOUTCOMES.114.001223. Epub 2015 Jun 2. PMID: 26038524; PMCID: PMC4512913.

Rashid MA, Edwards D, Walter FM, Mant J. Medication taking in coronary artery disease: a systematic review and qualitative synthesis. *Ann Fam Med*. 2014 May-Jun;12(3):224-32. doi: 10.1370/afm.1620. PMID: 24821893; PMCID: PMC4018370.

Czarny MJ, Nathan AS, Yeh RW, Mauri L. Adherence to dual antiplatelet therapy after coronary stenting: a systematic review. *Clin Cardiol*. 2014 Aug;37(8):505-13. doi: 10.1002/clc.22289. Epub 2014 May 2. PMID: 24797884; PMCID: PMC4140973.

Amin AP, Bachuwar A, Reid KJ, Chhatriwalla AK, Salisbury AC, Yeh RW, Kosiborod M, Wang TY, Alexander KP, Gosch K, Cohen DJ, Spertus JA, Bach RG. Nuisance bleeding with prolonged dual antiplatelet therapy after acute myocardial infarction and its impact on health status. *J Am Coll Cardiol*. 2013 May 28;61(21):2130-8. doi: 10.1016/j.jacc.2013.02.044. Epub 2013 Mar 26. PMID: 23541975; PMCID: PMC4332538.

Decker C, Garavalia L, Garavalia B, Simon T, Loeb M, Spertus JA, Daniel WC. Exploring barriers to optimal anticoagulation for atrial fibrillation: interviews with clinicians. *J Multidiscip Healthc*. 2012;5:129-35. doi: 10.2147/JMDH.S33045. Epub 2012 Jun 13. PMID: 22936848; PMCID: PMC3426274.

### **E) Exploring Patients' Reasons for Discontinuance of Heart Medications**

By: Garavalia, Linda; Garavalia, Brian; Spertus, John A.; et al.

Cited by (26):

THIS IS : Garavalia L, Garavalia B, Spertus JA, Decker C. Exploring patients' reasons for discontinuance of heart medications. *J Cardiovasc Nurs*. 2009 Sep-Oct;24(5):371-9. doi: 10.1097/JCN.0b013e3181ae7b2a. PMID: 19707097; PMCID: PMC3351271.

Herrett E, Williamson E, Brack K, Beaumont D, Perkins A, Thayne A, Shakur-Still H, Roberts I, Prowse D, Goldacre B, van Staa T, MacDonald TM, Armitage J, Wimborne J, Melrose P, Singh J, Brooks L, Moore M, Hoffman M, Smeeth L; StatinWISE Trial Group. Statin treatment and muscle symptoms: series of randomised, placebo controlled n-of-1 trials. *BMJ*. 2021 Feb 24;372:n135. doi: 10.1136/bmj.n135. PMID: 33627334; PMCID: PMC7903384.

Mahmood S, Jalal Z, Hadi MA, Khan TM, Haque MS, Shah KU. Prevalence of non-adherence to antihypertensive medication in Asia: a systematic review and meta-analysis. *Int J Clin Pharm*. 2021 Jan 29. doi: 10.1007/s11096-021-01236-z. Epub ahead of print. PMID: 33515135.

Boyd AD, Ndukwe CI, Dileep A, Everin OF, Yao Y, Welland B, Field J, Baumann M, Flores JD Jr, Shroff A, Groo V, Dickens C, Doukky R, Francis R, Peacock G, Wilkie DJ. Elderly Medication Adherence Intervention Using the My Interventional Drug-Eluting Stent Educational App: Multisite Randomized Feasibility Trial. *JMIR Mhealth Uhealth*. 2020 Jun 24;8(6):e15900. doi: 10.2196/15900. PMID: 32579120; PMCID: PMC7381043.

Lam SKK, Kwong EWY, Hung MSY, Chien WT. Emergency nurses' perceptions regarding the risks appraisal of the threat of the emerging infectious disease situation in emergency departments. *Int J Qual Stud Health Well-being*. 2020 Dec;15(1):e1718468. doi: 10.1080/17482631.2020.1718468. PMID: 31975652; PMCID: PMC7034460.

Wang Y, Nichol MB, Yan BP, Wu J, Tomlinson B, Lee VW. Descriptive analysis of real-world medication use pattern of statins and antiplatelet agents among patients with acute coronary syndrome in Hong Kong and the USA. *BMJ Open*. 2019 Jul 16;9(7):e024937. doi: 10.1136/bmjopen-2018-024937. PMID: 31315855; PMCID: PMC6661883.

M A Jalal ZS, Smith F, Taylor D, Finlay K, Patel H, Antoniou S. Impact of pharmacy care upon adherence to cardiovascular medicines: a feasibility pilot controlled trial. *Eur J Hosp Pharm*. 2016 Sep;23(5):250-256. doi: 10.1136/ejhpharm-2015-000790. Epub 2016 Feb 2. PMID: 31156861; PMCID: PMC6451569.

Chhatriwalla AK, Decker C, Gialde E, Catley D, Goggin K, Jaschke K, Jones P, deBronkart D, Sun T, Spertus JA. Developing and Testing a Personalized, Evidence-Based, Shared Decision-Making Tool for Stent Selection in Percutaneous Coronary Intervention Using a Pre-Post Study Design. *Circ Cardiovasc Qual Outcomes*. 2019 Feb;12(2):e005139. doi: 10.1161/CIRCOUTCOMES.118.005139. PMID: 30764654; PMCID: PMC6383794.

Jalal Z, Antoniou S, Taylor D, Paudyal V, Finlay K, Smith F. South Asians living in the UK and adherence to coronary heart disease medication: a mixed- method study. *Int J Clin Pharm*. 2019 Feb;41(1):122-130. doi: 10.1007/s11096-018-0760-3. Epub 2018 Dec 18. PMID: 30564971; PMCID: PMC6394505.

Koh JJK, Cheng RX, Yap Y, Haldane V, Tan YG, Teo KWQ, Srivastava A, Ong PS, Perel P, Legido-Quigley H. Access and adherence to medications for the primary and secondary prevention of atherosclerotic cardiovascular disease in Singapore: a qualitative study. *Patient Prefer Adherence*. 2018 Nov 22;12:2481-2498. doi: 10.2147/PPA.S176256. PMID: 30538432; PMCID: PMC6255116.

Krack G, Holle R, Kirchberger I, Kuch B, Amann U, Seidl H. Determinants of adherence and effects on health-related quality of life after myocardial infarction: a prospective cohort study. *BMC Geriatr*. 2018 Jun 7;18(1):136. doi: 10.1186/s12877-018-0827-y. PMID: 29898677; PMCID: PMC6001009.

Ju A, Hanson CS, Banks E, Korda R, Craig JC, Usherwood T, MacDonald P, Tong A. Patient beliefs and attitudes to taking statins: systematic review of qualitative studies. *Br J Gen Pract*. 2018 Jun;68(671):e408-e419. doi: 10.3399/bjgp18X696365. PMID: 29784867; PMCID: PMC6002012.

Herrett E, Williamson E, Beaumont D, Prowse D, Youssouf N, Brack K, Armitage J, Goldacre B, MacDonald T, Staa TV, Roberts I, Shakur-Still H, Smeeth L. Study protocol for statin web-based investigation of side effects (StatinWISE): a series of randomised controlled N-of-1 trials



- comparing atorvastatin and placebo in UK primary care. *BMJ Open*. 2017 Dec 1;7(12):e016604. doi: 10.1136/bmjopen-2017-016604. PMID: 29197834; PMCID: PMC5719321.
- Shah V, Dileep A, Dickens C, Groo V, Welland B, Field J, Baumann M, Flores JD, Shroff A, Zhao Z, Yao Y, Wilkie DJ, Boyd AD. Patient-Centered Tablet Application for Improving Medication Adherence after a Drug-Eluting Stent. *Front Public Health*. 2016 Dec 12;4:272. doi: 10.3389/fpubh.2016.00272. PMID: 28018897; PMCID: PMC5149519.
- Halava H, Huupponen R, Pentti J, Kivimäki M, Vahtera J. Predictors of first-year statin medication discontinuation: A cohort study. *J Clin Lipidol*. 2016 Jul-Aug;10(4):987-995. doi: 10.1016/j.jacl.2016.04.010. Epub 2016 May 6. PMID: 27578131; PMCID: PMC5012887.
- Lambert-Kerzner A, Havranek EP, Plomondon ME, Fagan KM, McCreight MS, Fehling KB, Williams DJ, Hamilton AB, Albright K, Blatchford PJ, Mihalko-Corbitt R, Bryson CL, Bosworth HB, Kirshner MA, Giacco EJ, Ho PM. Perspectives of patients on factors relating to adherence to post-acute coronary syndrome medical regimens. *Patient Prefer Adherence*. 2015 Jul 24;9:1053-9. doi: 10.2147/PPA.S84546. PMID: 26244013; PMCID: PMC4521673.
- Granger BB, Ekman I, Hernandez AF, Sawyer T, Bowers MT, DeWald TA, Zhao Y, Levy J, Bosworth HB. Results of the Chronic Heart Failure Intervention to Improve MEDication Adherence study: A randomized intervention in high-risk patients. *Am Heart J*. 2015 Apr;169(4):539-48. doi: 10.1016/j.ahj.2015.01.006. Epub 2015 Jan 14. PMID: 25819861; PMCID: PMC5058442.
- Li JH, Joy SV, Haga SB, Orlando LA, Kraus WE, Ginsburg GS, Voora D. Genetically guided statin therapy on statin perceptions, adherence, and cholesterol lowering: a pilot implementation study in primary care patients. *J Pers Med*. 2014 Mar 27;4(2):147-62. doi: 10.3390/jpm4020147. PMID: 25563221; PMCID: PMC4263970.
- Duru OK, Edgington S, Mangione C, Turk N, Tseng CH, Kimbro L, Ettner S. Association of Medicare Part D low-income cost subsidy program enrollment with increased fill adherence to clopidogrel after coronary stent placement. *Pharmacotherapy*. 2014 Dec;34(12):1230-8. doi: 10.1002/phar.1502. Epub 2014 Oct 14. PMID: 25314343; PMCID: PMC4276510.
- Rashid MA, Edwards D, Walter FM, Mant J. Medication taking in coronary artery disease: a systematic review and qualitative synthesis. *Ann Fam Med*. 2014 May-Jun;12(3):224-32. doi: 10.1370/afm.1620. PMID: 24821893; PMCID: PMC4018370.
- Palamaner Subash Shantha G, Ramos J, Thomas-Hemak L, Pancholy SB. Association of vitamin D and incident statin induced myalgia--a retrospective cohort study. *PLoS One*. 2014 Feb 19;9(2):e88877. doi: 10.1371/journal.pone.0088877. PMID: 24586424; PMCID: PMC3929495.
- Zhang H, Plutzky J, Skentzos S, Morrison F, Mar P, Shubina M, Turchin A. Discontinuation of statins in routine care settings: a cohort study. *Ann Intern Med*. 2013 Apr 2;158(7):526-34. doi: 10.7326/0003-4819-158-7-201304020-00004. PMID: 23546564; PMCID: PMC3692286.
- Efstathiou G, Papastavrou E, Raftopoulos V, Merkouris A. Factors influencing nurses' compliance with Standard Precautions in order to avoid occupational exposure to microorganisms: A focus group study. *BMC Nurs*. 2011 Jan 21;10:1. doi: 10.1186/1472-6955-10-1. PMID: 21255419; PMCID: PMC3033845.

Garavalia L, Garavalia B, Spertus JA, Decker C. Medication Discussion Questions (MedDQ): developing a guide to facilitate patient-clinician communication about heart medications. *J Cardiovasc Nurs*. 2011 Jul-Aug;26(4):E12-9. doi: 10.1097/JCN.0b013e3181efea94. PMID: 21099699; PMCID: PMC3114190.

McHorney CA, Spain CV. Frequency of and reasons for medication non-fulfillment and non-persistence among American adults with chronic disease in 2008. *Health Expect*. 2011 Sep;14(3):307-20. doi: 10.1111/j.1369-7625.2010.00619.x. Epub 2010 Sep 23. PMID: 20860775; PMCID: PMC5060587.

### **F) Drug compliance after stroke and myocardial infarction: A comparative study**

By: Arif, Hiba; Aijaz, Bilal; Islam, Muhammad; et al.

Cited by (4):

Barrett LA, Payrovnaziri SN, Bian J, He Z. Building Computational Models to Predict One-Year Mortality in ICU Patients with Acute Myocardial Infarction and Post Myocardial Infarction Syndrome. *AMIA Jt Summits Transl Sci Proc*. 2019 May 6;2019:407-416. PMID: 31258994; PMCID: PMC6568079.

Kamal AK, Khalid W, Muqteet A, Jamil A, Farhat K, Gillani SRA, Zulfiqar M, Saif M, Muhammad AA, Zaidi F, Mustafa M, Gowani A, Sharif S, Bokhari SS, Tai J, Rahman N, Sultan FAT, Sayani S, Virani SS. Making prescriptions "talk" to stroke and heart attack survivors to improve adherence: Results of a randomized clinical trial (The Talking Rx Study). *PLoS One*. 2018 Dec 20;13(12):e0197671. doi: 10.1371/journal.pone.0197671. PMID: 30571697; PMCID: PMC6301764.

Al AlShaikh S, Quinn T, Dunn W, Walters M, Dawson J. Predictive factors of non-adherence to secondary preventative medication after stroke or transient ischaemic attack: A systematic review and meta-analyses. *Eur Stroke J*. 2016 Jun;1(2):65-75. doi: 10.1177/2396987316647187. Epub 2016 May 5. PMID: 29900404; PMCID: PMC5992740.

Kamal AK, Shaikh Q, Pasha O, Azam I, Islam M, Memon AA, Rehman H, Akram MA, Affan M, Nazir S, Aziz S, Jan M, Andani A, Muqteet A, Ahmed B, Khoja S. A randomized controlled behavioral intervention trial to improve medication adherence in adult stroke patients with prescription tailored Short Messaging Service (SMS)-SMS4Stroke study. *BMC Neurol*. 2015 Oct 21;15:212. doi: 10.1186/s12883-015-0471-5. PMID: 26486857; PMCID: PMC4618367.

### **G) Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence**

G Gujral, K Winckel, LM Nissen, WN Cottrell

Cited by (9):

Mu X, Yin C, He X, Li H, Gong Y, Wei W, Zhang Y, Tang F. Correlation Between Patients' Medication Adherence and Their Psychological Contract with Hospital Pharmacists. *Patient*

Prefer Adherence. 2020 Sep 4;14:1605-1613. doi: 10.2147/PPA.S264026. PMID: 32943852; PMCID: PMC7478916.

Cross AJ, Elliott RA, Petrie K, Kuruvilla L, George J. Interventions for improving medication-taking ability and adherence in older adults prescribed multiple medications. *Cochrane Database Syst Rev.* 2020 May 8;5(5):CD012419. doi: 10.1002/14651858.CD012419.pub2. PMID: 32383493; PMCID: PMC7207012.

Oñatibia-Astibia A, Malet-Larrea A, Larrañaga B, Gastelurrutia MÁ, Calvo B, Ramírez D, Cantero I, Garay Á, Goyenechea E. Tailored interventions by community pharmacists and general practitioners improve adherence to statins in a Spanish randomized controlled trial. *Health Serv Res.* 2019 Jun;54(3):658-668. doi: 10.1111/1475-6773.13152. Epub 2019 Apr 7. PMID: 30957240; PMCID: PMC6505412.

Crawshaw J, Auyeung V, Ashworth L, Norton S, Weinman J. Healthcare provider-led interventions to support medication adherence following ACS: a meta-analysis. *Open Heart.* 2017 Dec 22;4(2):e000685. doi: 10.1136/openhrt-2017-000685. PMID: 29344366; PMCID: PMC5761293.

van Driel ML, Morledge MD, Ulep R, Shaffer JP, Davies P, Deichmann R. Interventions to improve adherence to lipid-lowering medication. *Cochrane Database Syst Rev.* 2016 Dec 21;12(12):CD004371. doi: 10.1002/14651858.CD004371.pub4. PMID: 28000212; PMCID: PMC6464006.

Johnston N, Weinman J, Ashworth L, Smethurst P, El Khoury J, Moloney C. Systematic reviews: causes of non-adherence to P2Y12 inhibitors in acute coronary syndromes and response to intervention. *Open Heart.* 2016 Oct 19;3(2):e000479. doi: 10.1136/openhrt-2016-000479. PMID: 27843565; PMCID: PMC5073512.

Akinbosoye OE, Taitel MS, Grana J, Hill J, Wade RL. Improving Medication Adherence and Health Care Outcomes in a Commercial Population through a Community Pharmacy. *Popul Health Manag.* 2016 Dec;19(6):454-461. doi: 10.1089/pop.2015.0176. Epub 2016 Apr 1. PMID: 27035728; PMCID: PMC5296931.

Nazar H, Nazar Z, Portlock J, Todd A, Slight SP. A systematic review of the role of community pharmacies in improving the transition from secondary to primary care. *Br J Clin Pharmacol.* 2015 Nov;80(5):936-48. doi: 10.1111/bcp.12718. Epub 2015 Oct 3. PMID: 26149372; PMCID: PMC4631167.

McKenzie SJ, McLaughlin D, Clark J, Doi SA. The burden of non-adherence to cardiovascular medications among the aging population in Australia: a meta-analysis. *Drugs Aging.* 2015 Mar;32(3):217-25. doi: 10.1007/s40266-015-0245-1. PMID: 25749743.

#### **H) Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action Process Approach.**

Presseau, Justin; Schwalm, J. D; Grimshaw, Jeremy M; Witteman, Holly O; Natarajan, Madhu K; Linklater, Stefanie; Sullivan, Katrina; Ivers, Noah M.

Cited by {15):

Tesfaye WH, Erku D, Mekonnen A, Tefera YG, Castelino R, Sud K, Thomas J, Obamiro K. Medication non-adherence in chronic kidney disease: a mixed-methods review and synthesis using the theoretical domains framework and the behavioural change wheel. *J Nephrol*. 2021 Feb 9. doi: 10.1007/s40620-020-00895-x. Epub ahead of print. PMID: 33559850.

Xu HY, Yu YJ, Zhang QH, Hu HY, Li M. Tailored Interventions to Improve Medication Adherence for Cardiovascular Diseases. *Front Pharmacol*. 2020 Nov 13;11:510339. doi: 10.3389/fphar.2020.510339. PMID: 33364935; PMCID: PMC7751638.

Schwalm JD, Ivers NM, Bouck Z, Taljaard M, Natarajan MK, Dolovich L, Thavorn K, McCready T, O'Brien E, Grimshaw JM. Length of Initial Prescription at Hospital Discharge and Long-Term Medication Adherence for Elderly, Post-Myocardial Infarction Patients: Protocol for an Interrupted Time Series Study. *JMIR Res Protoc*. 2020 Nov 4;9(11):e18981. doi: 10.2196/18981. PMID: 33146624; PMCID: PMC7673978.

Vesnaver E, Goldman M, O'Brien S, MacPherson P, Butler-Foster T, Lapierre D, Otis J, Devine DV, Germain M, Rosser A, MacDonagh R, Randall T, Osbourne-Sorrell W, Clement-Thorne B, Al-Bakri TB, Rubini KA, Hill NE, Pousseau J. Barriers and enablers to source plasma donation by gay, bisexual and other men who have sex with men under revised eligibility criteria: protocol for a multiple stakeholder feasibility study. *Health Res Policy Syst*. 2020 Nov 2;18(1):131. doi: 10.1186/s12961-020-00643-4. PMID: 33138828; PMCID: PMC7605323.

Seguin ML, Rangnekar A, Renedo A, Palafox B, McKee M, Balabanova D. Systematic review of frameworks used to conceptualise health pathways of individuals diagnosed with cardiovascular diseases. *BMJ Glob Health*. 2020 Sep;5(9):e002464. doi: 10.1136/bmjgh-2020-002464. PMID: 32928800; PMCID: PMC7490945.

Desveaux L, Saragosa M, Russell K, McCleary N, Pousseau J, Witteman HO, Schwalm JD, Ivers NM. How and why a multifaceted intervention to improve adherence post-MI worked for some (and could work better for others): an outcome-driven qualitative process evaluation. *BMJ Open*. 2020 Sep 3;10(9):e036750. doi: 10.1136/bmjopen-2019-036750. PMID: 32883724; PMCID: PMC7473621.

Sud A, Armas A, Cunningham H, Tracy S, Foat K, Persaud N, Hosseiny F, Hyland S, Lowe L, Zlahtic E, Murti R, Derue H, Birnbaum I, Bonin K, Upshur R, Nelson MLA. Multidisciplinary care for opioid dose reduction in patients with chronic non-cancer pain: A systematic realist review. *PLoS One*. 2020 Jul 27;15(7):e0236419. doi: 10.1371/journal.pone.0236419. PMID: 32716982; PMCID: PMC7384622.

Ivers NM, Schwalm JD, Bouck Z, McCready T, Taljaard M, Grace SL, Cunningham J, Bosiak B, Pousseau J, Witteman HO, Suskin N, Wijeyesundera HC, Atzema C, Bhatia RS, Natarajan M, Grimshaw JM. Interventions supporting long term adherence and decreasing cardiovascular events after myocardial infarction (ISLAND): pragmatic randomised controlled trial. *BMJ*. 2020 Jun 10;369:m1731. doi: 10.1136/bmj.m1731. PMID: 32522811; PMCID: PMC7284284.

Freier C, Heintze C, Herrmann WJ. Prescribing and medical non-adherence after myocardial infarction: qualitative interviews with general practitioners in Germany. *BMC Fam Pract*. 2020 May 8;21(1):81. doi: 10.1186/s12875-020-01145-6. PMID: 32384915; PMCID: PMC7210678.



Crawshaw J, Presseau J, van Allen Z, Pinheiro Carvalho L, Jordison K, English S, Fergusson DA, Lauzier F, Turgeon AF, Sarti AJ, Martin C, D'Aragon F, Li AH, Knoll G, Ball I, Brehaut J, Burns KEA, Fortin MC, Weiss M, Meade M, Marsolais P, Shemie S, Zaabat S, Dhanani S, Kitto SC, Chassé M; Canadian Donation and Transplantation Research Program and the Canadian Critical Care Trials Group. Exploring the experiences and perspectives of substitute decision-makers involved in decisions about deceased organ donation: a qualitative study protocol. *BMJ Open*. 2019 Dec 23;9(12):e034594. doi: 10.1136/bmjopen-2019-034594. PMID: 31874899; PMCID: PMC7008441.

Araújo-Soares V, Hankonen N, Presseau J, Rodrigues A, Sniehotta FF. Developing Behavior Change Interventions for Self-Management in Chronic Illness: An Integrative Overview. *Eur Psychol*. 2019;24(1):7-25. doi: 10.1027/1016-9040/a000330. Epub 2018 Aug 16. PMID: 31496632; PMCID: PMC6727632.

Arden MA, Drabble S, O'Cathain A, Hutchings M, Wildman M. Adherence to medication in adults with Cystic Fibrosis: An investigation using objective adherence data and the Theoretical Domains Framework. *Br J Health Psychol*. 2019 May;24(2):357-380. doi: 10.1111/bjhp.12357. Epub 2019 Mar 1. PMID: 30825258; PMCID: PMC6519271.

Ehrler F, Gschwind L, Meyer P, Christian L, Blondon K. SMART-MEDS: Development of a Medication Adherence App for Acute Coronary Syndrome Patients based on a Gamified Behaviour Change Model. *AMIA Annu Symp Proc*. 2018 Dec 5;2018:413-421. PMID: 30815081; PMCID: PMC6371311.

Easthall C, Barnett N. Using Theory to Explore the Determinants of Medication Adherence; Moving Away from a One-Size-Fits-All Approach. *Pharmacy (Basel)*. 2017 Aug 30;5(3):50. doi: 10.3390/pharmacy5030050. PMID: 28970462; PMCID: PMC5622362.

Wittman HO, Presseau J, Nicholas Angl E, Jokhio I, Schwalm JD, Grimshaw JM, Bosiak B, Natarajan MK, Ivers NM. Negotiating Tensions Between Theory and Design in the Development of Mailings for People Recovering From Acute Coronary Syndrome. *JMIR Hum Factors*. 2017 Mar 1;4(1):e6. doi: 10.2196/humanfactors.6502. PMID: 28249831; PMCID: PMC5352859.

### **Systematic Searching Using 'Similar Articles' in PubMed**

**26/3/21**

#### **A) Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study.**

By: Hilt, Alexander D; Mamaqi Kapllani, Kevin; Hierck, Beerend P; et al.

105 results

Attebring MF, Herlitz J, Ekman I. Intrusion and confusion--the impact of medication and health professionals after acute myocardial infarction. *Eur J Cardiovasc Nurs*. 2005 Jun;4(2):153-9. doi: 10.1016/j.ejcnurse.2005.02.001. Epub 2005 Mar 4. PMID: 15904886.

## Similar articles (182):

Hilt AD, Mamaqi Kapllani K, Hierck BP, Kemp AC, Albayrak A, Melles M, Schaliij MJ, Scherptong RWC. Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study. *JMIR Hum Factors*. 2020 Jun 23;7(2):e17147. doi: 10.2196/17147. PMID: 32573464; PMCID: PMC7381062.

## Cited by (3):

Östbring MJ, Hellström L, Mårtensson J. Trivial or Troublesome: Experience with Coronary Heart Disease Medication from the Patient's Perspective. *Patient Prefer Adherence*. 2020 Feb 27;14:411-424. doi: 10.2147/PPA.S230120. PMID: 32184571; PMCID: PMC7053281.

## Similar articles (92):

Jalal Z, Antoniou S, Taylor D, Paudyal V, Finlay K, Smith F. South Asians living in the UK and adherence to coronary heart disease medication: a mixed- method study. *Int J Clin Pharm*. 2019 Feb;41(1):122-130. doi: 10.1007/s11096-018-0760-3. Epub 2018 Dec 18. PMID: 30564971; PMCID: PMC6394505.

## Cited by (1)

**B) "It's up to me with a little support" - Adherence after myocardial infarction: A qualitative study**

By: Hanna, Admi; Yael, Eilon-Moshe; Hadassa, Levy; et al.

124 results

Gujral G, Winckel K, Nissen LM, Cottrell WN. Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence. *Int J Clin Pharm*. 2014 Oct;36(5):1048-58. doi: 10.1007/s11096-014-9993-y. Epub 2014 Aug 19. PMID: 25135805.

Hilt AD, Mamaqi Kapllani K, Hierck BP, Kemp AC, Albayrak A, Melles M, Schaliij MJ, Scherptong RWC. Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study. *JMIR Hum Factors*. 2020 Jun 23;7(2):e17147. doi: 10.2196/17147. PMID: 32573464; PMCID: PMC7381062.

**C) South Asians living in the UK and adherence to coronary heart disease medication: a mixed- method study**

By: Jalal, Zahraa; Antoniou, Sotiris; Taylor, David; et al.

127 results

Östbring MJ, Hellström L, Mårtensson J. Trivial or Troublesome: Experience with Coronary Heart Disease Medication from the Patient's Perspective. *Patient Prefer Adherence*. 2020 Feb 27;14:411-424. doi: 10.2147/PPA.S230120. PMID: 32184571; PMCID: PMC7053281.

#### **D) Clinician-patient discord: Exploring differences in perspectives for discontinuing clopidogrel**

By: Garavalia, Linda; Ho, P. Michael; Garavalia, Brian; et al.

83 results

Garavalia L, Garavalia B, Spertus JA, Decker C. Exploring patients' reasons for discontinuance of heart medications. *J Cardiovasc Nurs*. 2009 Sep-Oct;24(5):371-9. doi: 10.1097/JCN.0b013e3181ae7b2a. PMID: 19707097; PMCID: PMC3351271.

Decker C, Garavalia L, Garavalia B, Spertus JA. Clopidogrel-taking behavior by drug-eluting stent patients: Discontinuers versus continuers. *Patient Prefer Adherence*. 2008 Feb 2;2:167-75. doi: 10.2147/ppa.s3443. PMID: 19920959; PMCID: PMC2770390.

Similar articles (99):

Garavalia L, Ho PM, Garavalia B, Foody JM, Kruse H, Spertus JA, Decker C. Clinician-patient discord: exploring differences in perspectives for discontinuing clopidogrel. *Eur J Cardiovasc Nurs*. 2011 Mar;10(1):50-5. doi: 10.1016/j.ejcnurse.2010.04.002. Epub 2010 May 21. PMID: 20483665; PMCID: PMC2932847.

Garavalia L, Garavalia B, Spertus JA, Decker C. Exploring patients' reasons for discontinuance of heart medications. *J Cardiovasc Nurs*. 2009 Sep-Oct;24(5):371-9. doi: 10.1097/JCN.0b013e3181ae7b2a. PMID: 19707097; PMCID: PMC3351271.

Cited by (7)

#### **E) Exploring Patients' Reasons for Discontinuance of Heart Medications**

By: Garavalia, Linda; Garavalia, Brian; Spertus, John A.; et al.

76 results

Garavalia L, Ho PM, Garavalia B, Foody JM, Kruse H, Spertus JA, Decker C. Clinician-patient discord: exploring differences in perspectives for discontinuing clopidogrel. *Eur J Cardiovasc Nurs*. 2011 Mar;10(1):50-5. doi: 10.1016/j.ejcnurse.2010.04.002. Epub 2010 May 21. PMID: 20483665; PMCID: PMC2932847.

Decker C, Garavalia L, Garavalia B, Spertus JA. Clopidogrel-taking behavior by drug-eluting stent patients: Discontinuers versus continuers. *Patient Prefer Adherence*. 2008 Feb 2;2:167-75. doi: 10.2147/ppa.s3443. PMID: 19920959; PMCID: PMC2770390.

Presseau J, Schwalm JD, Grimshaw JM, Witteman HO, Natarajan MK, Linklater S, Sullivan K, Ivers NM. Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action

Process Approach. Psychol Health. 2017 Oct;32(10):1176-1194. doi: 10.1080/08870446.2016.1260724. Epub 2016 Dec 20. PMID: 27997220.

**F) Drug compliance after stroke and myocardial infarction: A comparative study**

By: Arif, Hiba; Aijaz, Bilal; Islam, Muhammad; et al.

106 results- zero within criteria sift.

**G) Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence**

G Gujral, K Winckel, LM Nissen, WN Cottrell

321 results

Presseau J, Schwalm JD, Grimshaw JM, Witteman HO, Natarajan MK, Linklater S, Sullivan K, Ivers NM. Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action Process Approach. Psychol Health. 2017 Oct;32(10):1176-1194. doi: 10.1080/08870446.2016.1260724. Epub 2016 Dec 20. PMID: 27997220.

Jalal Z, Antoniou S, Taylor D, Paudyal V, Finlay K, Smith F. South Asians living in the UK and adherence to coronary heart disease medication: a mixed- method study. Int J Clin Pharm. 2019 Feb;41(1):122-130. doi: 10.1007/s11096-018-0760-3. Epub 2018 Dec 18. PMID: 30564971; PMCID: PMC6394505.

Hanna A, Yael EM, Hadassa L, Iris E, Eugenia N, Lior G, Carmit S, Liora O. ``It's up to me with a little support" - Adherence after myocardial infarction: A qualitative study. Int J Nurs Stud. 2020 Jan;101:103416. doi: 10.1016/j.ijnurstu.2019.103416. Epub 2019 Sep 5. PMID: 31670171.

**H) Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action Process Approach.**

Presseau, Justin; Schwalm, J. D; Grimshaw, Jeremy M; Witteman, Holly O; Natarajan, Madhu K; Linklater, Stefanie; Sullivan, Katrina; Ivers, Noah M.

129 results

Gujral G, Winckel K, Nissen LM, Cottrell WN. Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence. Int J Clin

Pharm. 2014 Oct;36(5):1048-58. doi: 10.1007/s11096-014-9993-y. Epub 2014 Aug 19. PMID: 25135805.

Garavalia L, Garavalia B, Spertus JA, Decker C. Exploring patients' reasons for discontinuance of heart medications. *J Cardiovasc Nurs.* 2009 Sep-Oct;24(5):371-9. doi: 10.1097/JCN.0b013e3181ae7b2a. PMID: 19707097; PMCID: PMC3351271.

Desveaux L, Saragosa M, Russell K, McCleary N, Presseau J, Witteman HO, Schwalm JD, Ivers NM. How and why a multifaceted intervention to improve adherence post-MI worked for some (and could work better for others): an outcome-driven qualitative process evaluation. *BMJ Open.* 2020 Sep 3;10(9):e036750. doi: 10.1136/bmjopen-2019-036750. PMID: 32883724; PMCID: PMC7473621.

Similar articles (67):

Presseau J, Schwalm JD, Grimshaw JM, Witteman HO, Natarajan MK, Linklater S, Sullivan K, Ivers NM. Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action Process Approach. *Psychol Health.* 2017 Oct;32(10):1176-1194. doi: 10.1080/08870446.2016.1260724. Epub 2016 Dec 20. PMID: 27997220.

Cited by (0).

## Summary of Results

### Database search

<b>Database Used</b>	<b>No. Results Combined Concepts</b>	<b>No. Results Within Criteria</b>
PubMed	52	5
SCOPUS	101	7
PsychINFO	12	2
Cochrane Library	49	2
Web Of Science	135	6
<b>Total</b>	<b>349</b>	<b>22</b>
<b>Unique results</b>		<b>8</b>

### Snowball results

Search Type	No. Of Results	No. results within Criteria	No. New results within criteria
Cited by	66	2	1
Similar Articles	1181	21	4

### **Full-read Selection of results:**

Hilt AD, Mamaqi Kapllani K, Hierck BP, Kemp AC, Albayrak A, Melles M, Schaliy MJ, Scherptong RWC. Perspectives of Patients and Professionals on Information and Education After Myocardial Infarction With Insight for Mixed Reality Implementation: Cross-Sectional Interview Study. *JMIR Hum Factors*. 2020 Jun 23;7(2):e17147. doi: 10.2196/17147. PMID: 32573464; PMCID: PMC7381062.

Hanna A, Yael EM, Hadassa L, Iris E, Eugenia N, Lior G, Carmit S, Liora O. "It's up to me with a little support" - Adherence after myocardial infarction: A qualitative study. *Int J Nurs Stud*. 2020 Jan;101:103416. doi: 10.1016/j.ijnurstu.2019.103416. Epub 2019 Sep 5. PMID: 31670171.

Jalal Z, Antoniou S, Taylor D, Paudyal V, Finlay K, Smith F. South Asians living in the UK and adherence to coronary heart disease medication: a mixed-method study. *Int J Clin Pharm*. 2019 Feb;41(1):122-130. doi: 10.1007/s11096-018-0760-3. Epub 2018 Dec 18. PMID: 30564971; PMCID: PMC6394505.



Garavalia L, Ho PM, Garavalia B, Foody JM, Kruse H, Spertus JA, Decker C. Clinician-patient discord: exploring differences in perspectives for discontinuing clopidogrel. *Eur J Cardiovasc Nurs*. 2011 Mar;10(1):50-5. doi: 10.1016/j.ejcnurse.2010.04.002. Epub 2010 May 21. PMID: 20483665; PMCID: PMC2932847.

Garavalia L, Garavalia B, Spertus JA, Decker C. Exploring patients' reasons for discontinuance of heart medications. *J Cardiovasc Nurs*. 2009 Sep-Oct;24(5):371-9. doi: 10.1097/JCN.0b013e3181ae7b2a. PMID: 19707097; PMCID: PMC3351271.

[Arif H, Aijaz B, Islam M, Aftab U, Kumar S, Shafqat S. Drug compliance after stroke and myocardial infarction: a comparative study. *Neurol India*. 2007 Apr-Jun;55(2):130-5. doi: 10.4103/0028-3886.32783. PMID: 17558116. \*\*Questionnaire\*\*]

[Gujral G, Winckel K, Nissen LM, Cottrell WN. Impact of community pharmacist intervention discussing patients' beliefs to improve medication adherence. *Int J Clin Pharm*. 2014 Oct;36(5):1048-58. doi: 10.1007/s11096-014-9993-y. Epub 2014 Aug 19. PMID: 25135805. \*\*Not separated diagnoses\*\*]

Presseau J, Schwalm JD, Grimshaw JM, Witteman HO, Natarajan MK, Linklater S, Sullivan K, Ivers NM. Identifying determinants of medication adherence following myocardial infarction using the Theoretical Domains Framework and the Health Action Process Approach. *Psychol Health*. 2017 Oct;32(10):1176-1194. doi: 10.1080/08870446.2016.1260724. Epub 2016 Dec 20. PMID: 27997220.

Attebring MF, Herlitz J, Ekman I. Intrusion and confusion--the impact of medication and health professionals after acute myocardial infarction. *Eur J Cardiovasc Nurs*. 2005 Jun;4(2):153-9. doi: 10.1016/j.ejcnurse.2005.02.001. Epub 2005 Mar 4. PMID: 15904886.

[Östbring MJ, Hellström L, Mårtensson J. Trivial or Troublesome: Experience with Coronary Heart Disease Medication from the Patient's Perspective. *Patient Prefer Adherence*. 2020 Feb 27;14:411-424. doi: 10.2147/PPA.S230120. PMID: 32184571; PMCID: PMC7053281. \*\*Not separated diagnoses\*\*]

Decker C, Garavalia L, Garavalia B, Spertus JA. Clopidogrel-taking behavior by drug-eluting stent patients: Discontinuers versus continuers. *Patient Prefer Adherence*. 2008 Feb 2;2:167-75. doi: 10.2147/ppa.s3443. PMID: 19920959; PMCID: PMC2770390.

Desveaux L, Saragosa M, Russell K, McCleary N, Presseau J, Witteman HO, Schwalm JD, Ivers NM. How and why a multifaceted intervention to improve adherence post-MI worked for some (and could work better for others): an outcome-driven qualitative process evaluation. *BMJ Open*. 2020 Sep 3;10(9):e036750. doi: 10.1136/bmjopen-2019-036750. PMID: 32883724; PMCID: PMC7473621.



**Supplement B: Characteristics of Included Studies**

Authors	Year	Country of Origin	Aim	Design	Methodology	Sample size	Cohort detail	Main Findings
Attebring MF, Herlitz J, Ekman I.	2005	Sweden	To explore patients' experiences of secondary prevention of MI	In depth interview	Hermeneutical analysis	20	No previous CVD. 12 men, 8 women	Impact of medication- Bodily sensations perceived as due to medicines rather than disease. Impact of health professionals- Communication resulted in confusion about medication and severity of disease.
Decker C, Garavalia L, Garavalia B, Spertus JA.	2008	USA	To investigate why patients stopped a medication and barriers to adherence	Qualitative interview	Content analysis	11	NSTEMI patients with stent. Those who discontinued taking clopidogrel within one month of starting, compared to continuing patients. 41-77 years, mostly male and Caucasian.	Discontinuers cited a misunderstanding over treatment duration. Discontinuers also claimed weakness in system, such as gaps in transfer of care.
Desveaux L, Saragosa M, Russell K, McCleary N, Presseau J, Witteman HO, Schwalzm JD, Ivers NM.	2020	Canada	Explore the extent, mechanism and future of a behavioural intervention to improve adherence to cardiac rehab and medicine taking	Semi-structured interview	Framework analysis, coding according to Theoretical Domains Framework	31	Post -AMI patients given a behavioural intervention booklet. Purposive sample to ensure variance of age, gender, SES, marital status and ethnicity. Separated into not engaged with intervention, engaged with positive outcome, engaged with negative outcome.	Patient's belief about consequences, belief about capability, intentions, social influence and emotions affected their adherence to treatment. The intervention helped patients adhere through reinforcement, behavioural regulation, providing knowledge and social influence.
Garavalia L, Garavalia B, Spertus JA, Decker C.	2009	USA	Explore reasons for stopping clopidogrel or cholesterol lowering medication in post-AMI patients	Semi-structured interview	Framework analysis, coding according to Health Belief Model	11	Post AMI patients, who either discontinued clopidogrel (45-77 years, 18% minority ethnic, 36% female), or cholesterol lowering medication n=29 (44-78 years, 19%	Cholesterol lowering medication mostly stopped due to side effects, treatment confusion, cost and mistrust of medicines. Clopidogrel stopped mostly due to duration confusion, side effects and cost.

							minority ethnic, 56% female).	
Garavalia L, Ho PM, Garavalia B, Foody JM, Kruse H, Spertus JA, Decker C.	2011	USA	Describe patient and professional perspectives on why clopidogrel stopped after stent implantation	Semi-structured interview	Content analysis	22	Patients with stent following MI, given clopidogrel. Comparison of discontinuers vs. continuers. 45-77 years, mostly male and Caucasian.	Patients perceived lack of knowledge of duration and purpose of clopidogrel treatment. Poor communication between clinicians and clinicians to patient, cost of clopidogrel and poor transfer of care between inpatient to outpatient were stated as barriers.
Hanna A, Yael EM, Hadassa L, Iris E, Eugenia N, Lior G, Carmit S, Liora O.	2019	Israel	To gain patient perception of health-related adherence behaviours post-AMI	Semi-structured interview	Content analysis	22	Patients recruited from a hospital rehab programme, or through community setting, a Jewish Kibbutz and Arab community (20 men, 2 women).	Adherence motivation was facilitated or impinged by inherent factors – willpower, competency and individual preferences. Extrinsic factors were found to be the threat of a recurrent AMI, family and significant others, and healthcare
Hilt AD, Mamaqi Kapllani K, Hierck BP, Kemp AC, Albayrak A, Melles M, Schaliy MJ, Scherptong RWC	2020	Netherlands	Understand how patients perceive information provided to them post AMI.	Semi-structured interview	Content analysis, patient journey mapping	12	Patients (9 men, 3 women), and professionals n=6 (3 men, 3 women). Average patient age 62.7 years. STEMI n=10, NSTEMI n=2.	Patients said information provided was too extensive. They perceived medication as a hurdle to recovery, mainly due to side effects, but coupled with an unclear benefit of medication. Their knowledge of anatomy was poor.
Jalal Z, Antonio S, Taylor D, Paudyal V, Finlay K, Smith F	2019	UK	Investigate beliefs and experiences of CHD and medicine-taking behaviour in post-	Mixed methods - (Morisky scale, Belief About Medicines Questionnaire.)	Framework approach	13	South Asian patients attending a London heart attack centre (13 men, 1 woman). 32-72 years.	Most patients perceived medication as important for their health. Half the patients could explain what their medications were for, half relied on family or professionals for this knowledge. Factors that influenced adherence were forgetfulness, family

			AMI patients	semi-structured interview				support, side effects, a healthcare practitioner, social deprivation and cardiac rehabilitation.
Presseau J, Schwalzm JD, Grimshaw JM, Witteman HO, Natarajan MK, Linklater S, Sullivan K, Ivers NM.	2017	France	To compare the usefulness of varying behavioural theory based interventions for improving medication adherence in post-AMI patients	Semi structured interview  (Questionnaire based upon Likert scale)	Framework approach based upon Theoretical Domains Framework	24	Patients contacted at 0-2 weeks, 3-12 weeks, 13-24 weeks and 25-36 weeks post-AMI.	Key factors were beliefs about the consequences of taking medicines, memory, attention or decision processes, behavioural regulation, social role and role of identity.

**Supplement C: Quality Assessment of Included Studies using COREQ standards**

Key: Present (+), Absent (-)

Authors	Interviewer	Credentials	Occupation	Gender	Experience	Relationship est.	Participant knowledge	Interviewer characteristic
Attebring et al., (2005)	-	-	-	-	-	-	-	-
Decker et al., (2008)	-	-	-	-	-	+	-	-
Desveaux et al., (2020)	-	-	-	-	-	-	+	-
Garavalia L, Garavalia B et al., (2009)	-	-	-	-	-	+	+	-
Garavalia L, Ho et al., (2011)	-	-	-	-	-	-	-	-
Hanna et al., (2019)	-	-	-	-	-	+	+	-
Hilt et al., (2020)	-	-	-	-	-	-	-	-
Jalal et al., (2019)	-	-	-	-	-	+	+	-
Presseau et al., (2017)	-	-	-	-	-	+	-	-

Authors	Methodological theory	Sampling	Method approach	Sample size	Non-participation	Setting	Presence of other	Description of sample
Attebring et al., (2005)	+	+	+	+	+	+	-	+
Decker et al., (2008)	+	+	+	+	-	+	-	+
Desveaux et al., (2020)	+	+	+	+	+	+	-	+



Garavalia L, Garavalia B et al., (2009)	+	+	+	+	+	+	-	+
Garavalia L, Ho et al., (2011)	+	+	+	+	-	+	-	+
Hanna et al., (2019)	+	+	+	+	-	+	-	+
Hilt et al., (2020)	+	+	+	+	-	-	-	+
Jalal et al., (2019)	+	+	+	+	-	+	-	+
Presseau et al., (2017)	+	+	+	+	+	-	-	+

Authors	Interview guide	Repeat interviews	A/V recording	Field notes	Duration	Data saturation	Transcript returned	No. coders
Attebring et al., (2005)	-	-	+	-	+	-	-	+
Decker et al., (2008)	+	-	+	-	+	+	-	+
Desveaux et al., (2020)	+	-	+	-	-	+	-	+
Garavalia L, Garavalia B et al., (2009)	+	-	+	-	+	+	-	+
Garavalia L, Ho et al., (2011)	+	-	+	-	+	+	-	+
Hanna et al., (2019)	+	-	+	+	+	+	-	+
Hilt et al., (2020)	+	-	-	-	-	-	-	-
Jalal et al., (2019)	+	-	+	-	+	-	-	+

Presseau et al., (2017)	+	-	-	-	-	+	-	-
-------------------------	---	---	---	---	---	---	---	---

Authors	Coding tree	Derivation of themes	Software	Participant checking	Quotations	Data and findings match	Clarity major themes	Clarity minor themes
Attebring et al., (2005)	+	+	-	-	+	+	+	+
Decker et al., (2008)	+	+	+	-	+	+	+	+
Desveaux et al., (2020)	+	+	-	-	+	+	+	+
Garavalia L, Garavalia B et al., (2009)	+	+	-	-	+	+	+	+
Garavalia L, Ho et al., (2011)	+	+	+	-	+	+	+	+
Hanna et al., (2019)	+	+	-	-	+	+	+	+
Hilt et al., (2020)	-	-	-	-	+	+	+	-
Jalal et al., (2019)	+	+	-	-	+	+	+	+
Presseau et al., (2017)	+	+	-	-	+	+	+	-

Authors	Total + (ex. 32)
Attebring et al., (2005)	16
Decker et al., (2008)	19
Desveaux et al., (2020)	18
Garavalia L,	20

Garavalia B et al., (2009)	
Garavalia L, Ho et al., (2011)	18
Hanna et al., (2019)	20
Hilt et al., (2020)	9
Jalal et al., (2019)	18
Presseau et al., (2017)	14

**Supplement D: Themes Provided by Authors of Included Studies**

Study Authors	Method of Analysis	Themes Summarised
Attebring et al., (2005)	Hermeneutical Analysis	Beliefs about consequences
		Memory/ Attention/ Decision processes
		Behavioural regulation
		Social influence
		Social/ Professional role and identity
Decker et al., (2008)	Content Analysis	Failure to recognise signs and symptoms of disease
		Seen as not serious
		Believe health is good
		Inaccurate perception
		Denial
		Worsening condition
		Family history/ Fatalism
		Lack of continuity
		Lack of / poor communication
		Inadequate patient education
		Self medicating
		Mistrust
		Side effects
		Unhealthy lifestyle choices
		Economic burden
		Lack of knowledge
		Personal health feelings and beliefs
Lack of effective communication		
Unaware of cardiac rehabilitation		
Lack of prompts from family and friends		
Missed general cues		
Desveaux et al., (2020)	Theoretical Domains Framework	Beliefs about capabilities
		Beliefs about consequences (positive outcomes)
		Social influences (pre-existing beliefs)
		Behavioural regulation
		Reinforcement
		Knowledge
Social influence (having knowledge)		

		Beliefs about consequences (negative outcomes)
		Emotion
		Identity
		Memory, attention, decision making
Garavalia L, Garavalia B et al., (2009)	Heath Belief Model	Similarities: Cost Side Effects Distrust of Doctors Prescription confusion
		Reduced sense of threat of disease with CLT, higher with clopidogrel
		CLT knowledgeable yet discontinued
		Clopidogrel less knowledge
		Use of 'natural' lifestyle measures in CLT, none reported with clopidogrel
Garavalia L, Ho et al., (2011)	Content Analysis	Lack of knowledge
		Poor communication
Hanna et al., (2019)	Content Analysis	Willpower
		A sense of competency
		Personal preferences
		Recurrent event
		Family and relatives
		Healthcare providers
Hilt et al., (2020)	Content Analysis	Medicine perceived as a barrier to recovery
Jalal et al., (2019)	Content Analysis	Necessity versus concerns
		Knowledge
		Forgetfulness
		Family support
		Side effects
		Relying of health practitioner
		Living in areas of deprivation
		Cardiac rehabilitation
Presseau et al., (2017)	Theoretical Domains Framework	Beliefs about consequences
		Memory / Attention / Decision processes
		Behavioural regulation
		Social influence
		Social / Professional role and identity