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RESEARCH ARTICLE



# Towards person-centred work-focused healthcare for people with cardiovascular disease: a qualitative exploration of patients' experiences and needs

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## ABSTRACT

**Purpose:** To explore the experiences and needs concerning work-focused healthcare of patients experiencing problems with work participation due to cardiovascular disease based on all facets of person-centred care.

**Methods:** Nineteen patients who experienced or continue to experience problems with work participation due to cardiovascular disease participated in semi-structured interviews preceded by preparatory written assignments. The transcripts were analysed by means of directed qualitative content analysis. Adapted principles of the Picker Institute for Person-Centred Care provided a template for the analysis.

**Results:** 28 experiences and needs emerged and were grouped into the eight principles for person-centred work-focused healthcare. Randomly presenting one theme for each of the eight principles, the themes included: (1) frequent encounters with occupational healthcare professionals; (2) substantive work-related advice; (3) transparency in communication; (4) support for family; (5) information provision on the work-focused healthcare process; (6) personal control during the process; (7) empathy for the personal situation; and (8) tailored work-focused support.

**Conclusions:** The identified experiences and needs for work-focused healthcare of patients experiencing problems with work participation due to cardiovascular disease clearly indicate the need to improve the delivery of person-centred work-focused healthcare to better meet the individual needs of patients.

## ARTICLE HISTORY

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## KEYWORDS

Patient-centred care; needs assessment; occupational health; cardiovascular diseases; occupational health services; qualitative research; sick leave



## ► IMPLICATIONS FOR REHABILITATION


- Provided work-focused healthcare services do not always align with the patient's needs when experiencing disease-related sick leave, potentially impacting their ability to stay in or return to work.
- This overview of patients' experiences and needs for work-focused healthcare may provide professionals with better insight into the patients' needs and aids to adapt the healthcare provision to these needs.
- When professionals target the patient's needs, it may facilitate better provision of person-centred work-focused healthcare.

## Introduction

The prevalence of cardiovascular diseases (CVD) in the population of working age is rising [1], often resulting in a temporary or permanent impact on patients' work ability [2,3]. At an individual level, impairments of the patient's ability to work may lead to a diminished quality of life, an increased risk of cardiovascular mortality and financial strain resulting from the potential loss of employment or reduced productivity [4–6]. On a societal level, reduced work ability exacerbates the financial strain through work disability benefits and contributes to an overall decline in workforce productivity [7]. Therefore, for patients with CVD experiencing work participation problems related to their disease, there is a need for healthcare

services that target their work ability. These services, from now on called work-focused healthcare, should aim to facilitate the patient to stay at work (SAW), or return to work (RTW) by identify patients' abilities and limitations concerning work participation and work ability, and offer advice on functional recovery [8–10]. From a patient's perspective the delivery site of these services can vary in both professional as well as setting, for example embedded in cardiac rehabilitation programs or within the setting of occupational healthcare [11]. Hence, given the increasing number of patients with CVD experiencing disease-related work participation problems, the provision of effective and efficient work-focused healthcare for patients living with CVD holds significant importance for both patients and society [12,13].

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Over the past years, multiple interventions have been developed with the aim of enhancing the delivery of work-focused healthcare by a wide range of healthcare professionals [14–17]. However, research consistently reveals that work-focused healthcare continues to fall short in tailor-made addressing all patients' individual needs, remaining a persistent barrier for SAW and RTW [18,19]. Therefore, previous literature highlights the needs of individuals with chronic diseases to strive for optimal work participation through the integration of person-centred work-focused healthcare [8,20,21]. Person-centred healthcare means that the healthcare delivery is tailored to the patient's needs, an approach which is expected to improve health and functional outcomes that are most important to the patient [22]. To establish high-quality person-centred healthcare, the Picker Institute, an internationally renowned non-profit organisation dedicated to developing and promoting a person-centred approach to healthcare, highlights eight principles of person-centred care [23]. Today, these Picker Principles of Person-Centred Care have been widely adopted in healthcare initiatives aiming to provide high-quality person-centred care [23]. In the field of cardiology, evidence-based therapies and guidelines are commonly implemented in accordance with the Picker Institute's eight principles of care, such as heart failure clinics and acute ST-segments care teams [24]. The Picker Principles include: (i) Fast access to reliable healthcare advice; (ii) Effective treatment by trusted professionals; (iii) Continuity of care and smooth transitions; (iv) Involvement and support for family and carers; (v) Clear information, communication and support for self-care; (vi) Involvement in decisions and respect for preferences; (vii) Emotional support, empathy and respect; and (viii) Attention to physical and environmental needs.

To establish high-quality person-centeredness in the delivery of work-focused healthcare for patients experiencing work-participation problems due to CVD, it is paramount to have a comprehensive understanding of these patients' experiences and needs for work-focused healthcare, encompassing all eight principles of person-centred care. Therefore, the objective of the present study is to explore the experiences and needs for work-focused healthcare of patients facing work participation problems due to CVD, guided by the Picker Principles for Person-Centred Care.

## Methods

### Design and setting

To identify experiences and needs for work-focused healthcare from the patients' perspective, a qualitative explorative study was performed. Data were collected through individual semi-structured interviews with individuals experiencing work participation problems due to CVD. The interviews were conducted by two researchers (MH, NZ) from the department of Public and Occupational Health, Amsterdam UMC, the Netherlands. The transcripts were analysed by means of directed qualitative content analysis. Adapted principles of the Picker Institute for Person-Centred Care provided a template for the analysis [23]. The Consolidated criteria for reporting qualitative research (COREQ) checklist was used for reporting the results [25]. As the present study was conducted in the Netherlands, below, the Dutch work-focused healthcare context is explained.

### Work-focused healthcare in the Dutch context

The Dutch work-focused healthcare context is characterized by a strict division that separates the medical roles of clinical and

occupational healthcare professionals. Clinical healthcare professionals are mainly responsible for treating the patient's medical condition, while occupational healthcare professionals focus primarily on work-related health aspects. This includes providing support for staying at work, the sickness absence certification, providing RTW guidance, giving advice on treatment of work-related health problems and assessing of eligibility for social security benefits. These roles are regulated by the Dutch Gatekeeper Act and the Act on Work and Income according to Work Capacity. In the context of cardiac rehabilitation programs, typically delivered by specialised cardiac rehabilitation teams in ambulatory care settings [26], integration of RTW support involves specific attention to barriers related to the resumption of work [27,28].

Moreover, it is important to note that for gainfully employed workers on a full-time or temporary contract, the employer bears financial responsibility for the first two years of sick leave. The employer is legally obligated to contract an occupational health service to provide a problem analysis and RTW plan for sick employees. After the initial two year period, the Dutch Social Security Institute: the Institute for Employee Benefit Schemes (SSA) assesses whether the sick-listed employee is eligible for a long-term disability benefit. For temporary agency workers and unemployed workers, the provision of occupational healthcare and financial responsibility falls directly under the SSA's purview. Self-employed workers must arrange private disability insurance themselves to access occupational healthcare and disability benefits, although this is not compulsory.

### Participants

Individuals were eligible to participate if they had been diagnosed with CVD, were of working age (18–67 years), and were either employed or self-employed at the onset of CVD complaints. Additionally, they needed to have experienced complete or partial sick leave or adjustments in work for at least six weeks due to CVD, and they were required to be fluent in Dutch.

Participants were recruited through purposive sampling, ensuring maximum variation based on the eligibility criteria. Patients were individually invited to take part in the study at two Dutch hospitals (St. Antonius Hospital, Nieuwegein, The Netherlands; Amsterdam UMC, VU University Medical Center, Amsterdam, The Netherlands). The recruitment process was overseen by one healthcare professional from each of these hospitals. Patients were selected for invitation based on their age and/or whether contact (written or otherwise) between the treating cardiologist and the occupational physician had occurred in the previous six months, indicating CVD-related work participation problems. In addition, participants were recruited through the SSA. A group of randomly selected patients with CVD ( $n=60$ ) were invited by letter, including a reminder letter after two weeks, to participate in the study. Invitees who expressed interest in participating were contacted by the first (MH) or second (NZ) author by phone for further screening of the eligibility criteria. Initially, the goal was to include fifteen participants to ensure reaching data saturation [29].

In total  $n=26$  (hospitals  $n=16$ ; SSA  $n=10$ ) invitees expressed interest in participating, of which  $n=19$  individuals were included. Out of the remaining seven invitees, two were excluded because they did not speak Dutch fluently, one did not have a CVD diagnosis, one was neither employed or self-employed at the onset of CVD complaints, two could not be reached for further contact, and one exclusion was based on self-assessment, since this invitee deemed participation too burdensome due to burn-out. The

included individuals comprised of a diverse group of workers (84% male), attributed by the different stages after their CVD diagnosis and varying degrees of work participation problems. The participants had a mean age of 54.3 (SD 10.8) years. The demographics of the participants are presented in Table 1. The demographics of each of the participants individually can be found in Supplementary material 1.

### Procedure

Data was collected between February and July 2021 through semi-structured, individual, online video call (Microsoft Teams) interviews ( $n=19$ ) with durations ranging from 50 to 78 minutes. The decision to utilize online video interviews was primarily driven by the ongoing Covid-19 pandemic. Due to governmental regulations conducting contactless interviews was considered the most appropriate and safe approach. One interview was conducted through a telephone call, due to internet issues. The interviews were conducted by the first (MH) and second authors (NZ), alternating the role of facilitating the conversation and asking additional questions while managing the screen sharing. All participants received preparatory assignments prior to the interview to trigger participants to think about their own experiences and needs related to the topics discussed during the interview beforehand, and for the researchers to understand the personal situation of the participant and facilitate further elaboration on specific topics during the interview [30]. The preparatory assignments included: (i) listing of professionals involved in their work-focused healthcare process with an indication of the level of involvement experienced; (ii) listing of work-related topics discussed with the involved professionals and at what point in the care process; and (iii) an inventory of professionals who shared information and/or

communicated with each other during the patients' care process (see Supplementary material 2). All participants received the preparatory assignments in hard copy at their home address and returned them via a pre-paid envelop before the interview. The answers from the preparatory assignments were used as supporting material during the online interview. An interview guide listing topics and open-ended questions was developed by MH and NZ to explore the patients' experiences and needs regarding work-focused healthcare, including three categories: (1) patient characteristics, (2) experiences and needs regarding the work-focused healthcare process and (3) experiences and needs regarding information exchange and communication (see Supplementary material 3). The interview guide was used as a memory aid for the interviewer during the interview. Two pilot interviews took place with workers suffering from chronic diseases recruited through the researchers' own network. While the core construct of the interview guide remained unchanged following the pilot testing, we modified the approach for sharing information related to the preparatory assignments, shifting from an interactive Whiteboard platform to PowerPoint slides. All interviews were voice-recorded and transcribed verbatim and anonymised. The transcripts were sent back to the participants for review, including any additional questions of the researchers. Additional questions included asking participants to elaborate on specific experiences, for example when a participant mentioned experiencing pressure from the occupational physician: 'Could you briefly elaborate on why you felt pressured by your occupational physician?'. Additional written answers of the participants were added to the transcripts ( $n=10$ ). No repeat interviews were carried out. Note that the data collection served a dual purpose: First, to identify patients' experiences and needs regarding work-focused healthcare based on the Picker Principles of Person-Centred Care as presented in the present study, and second, to map the work-focused healthcare process for workers experiencing work-participation problems due to CVD. These results were published elsewhere [11].

### Data analysis

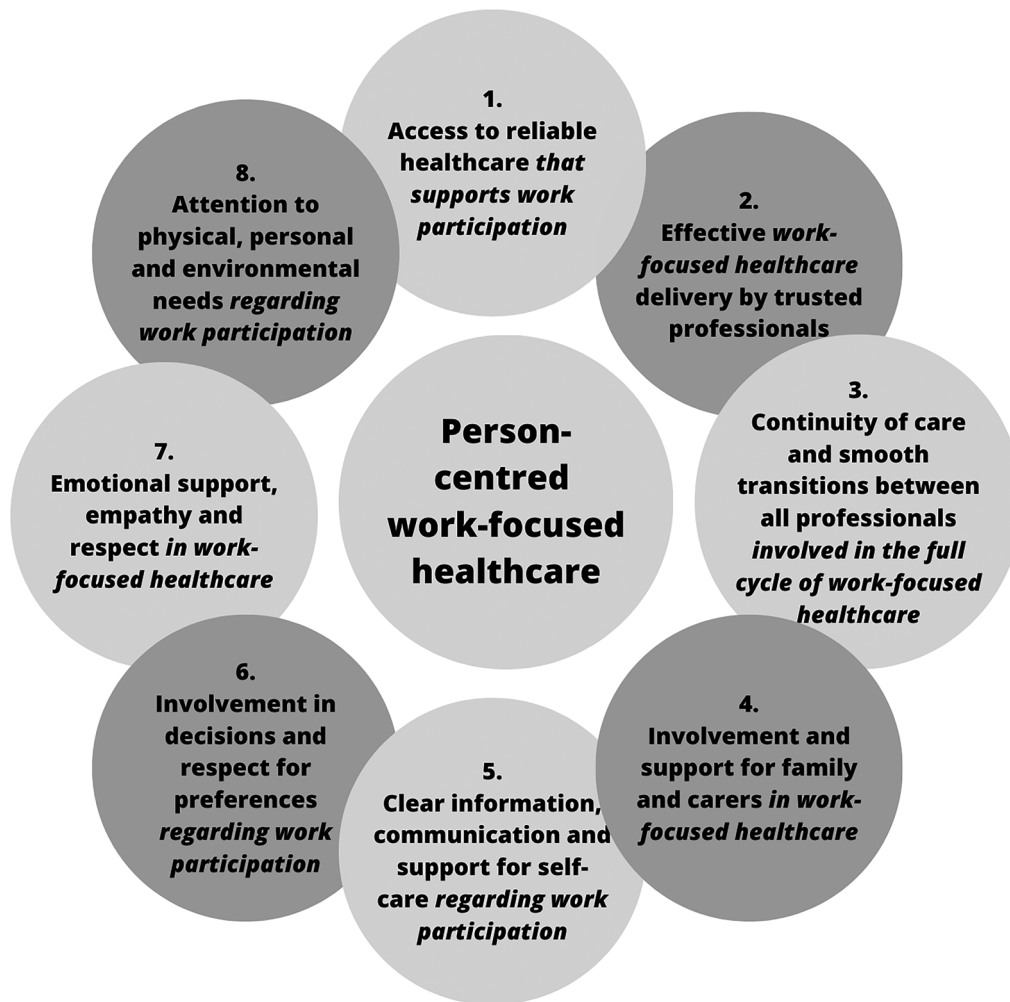
Directed qualitative content analysis was performed [31–33]. Adapted principles of the Picker Institute for Person-Centred Care provided a template for the analysis [34]. The Picker Institute for Person-Centred Care describes eight principles addressing the patient's experiences and needs throughout every aspect of care across the patients' care process [34]. This model was considered most suitable for the present study, as it is widely acknowledged as preferred framework for healthcare providers to assess the extent to which the care they provide is person-centred [23]. Therefore, prior to the data analysis, we enhanced the eight principles by enriching them with the Dutch guidelines for occupational physicians for patients with ischaemic heart disease [35]. The aim of this enrichment was to align the principles with a focus on work participation and work-focused healthcare for individuals living with CVD. This resulted in the following eight principles (Figure 1): (1) Access to reliable healthcare that supports work participation, entailing the type and speed of services; (2) Effective work-focused healthcare delivery by trusted professionals, entailing the perception of receiving appropriate and effective care; (3) Continuity of care and smooth transitions between all professionals involved in work-focused healthcare, entailing the coordination in the work-focused healthcare journey; (4) Involvement and support for family and carers in work-focused healthcare, entailing the involvement of patient's support

Table 1. Demographic characteristics of the participants ( $n=19$ ).

Variable	Mean (SD) or n (percentage)
Age	54.3 (10.8)
Gender (male)	16 (84%)
Time since diagnosis (years)	2.1 (1.4)
Type of CVD	
Cardiac arrest	1 (5.3%)
Cardiac sarcoidosis	2 (10.5%)
Endocarditis	1 (5.3%)
Heart failure	2 (10.5%)
Heart rhythm disorder	2 (10.5%)
MINOCA	2 (10.5%)
Pericarditis	2 (10.5%)
Stroke (multiple)	7 (36.8%)
Type of work agreement*	
Self-employed	2 (10.5%)
Contracted employee	15 (79.0%)
Temporary worker	1 (5.3%)
Temporary agency worker	1 (5.3%)
Job sector	
Education and training	2 (10.5%)
Engineering, production and construction	1 (5.3%)
Healthcare and wellbeing	4 (21.1%)
Security and public administration	3 (15.8%)
Trade and services	4 (21.1%)
Tourism, recreation and catering	1 (5.3%)
Transport and logistics	4 (21.1%)
Work status**	
Fully returned to work	7 (36.8%)
Partly returned to work	4 (21.1%)
Full sick leave	8 (42.1%)

SD, standard deviation; CVD, cardiovascular disease; MINOCA, myocardial infarction with non-obstructive coronary arteries.\*At the moment of diagnosis/start medical intervention. \*\*At the moment of the interview.





**Figure 1.** Graphical representation of the adapted principles of Picker for person-centred work-focused healthcare. Changes to the original Picker Principles are indicated in italics [23].

networks; (5) Clear information, communication and support for self-care regarding work participation, entailing the support for patients to make informed decisions and manage their own work participation; (6) Involvement in decisions and respect for preferences regarding work participation, entailing involvement of the patient's preferences in decisions regarding work-focused healthcare; (7) Emotional support, empathy and respect in work-focused healthcare, entailing the empathy, respect, recognition and emotional needs in work-focused healthcare; and (8) Attention to physical, personal and environmental needs regarding work participation, entailing the attention which is paid to individual needs of the patient. The full definitions of these eight principles can be found in [Supplementary material 4](#). For each transcript, open codes were assigned to all relevant text fragments and deductively subdivided into the adapted principles of the Picker Institute for Person-Centred Care, independently by the first (MH) and second (NZ) author [36], using MAXQDA 2020 [37]. Disagreements were resolved by discussion. Secondly, themes were formulated by identifying relations between the codes. In cases where themes overlapped with multiple principles, deliberate consideration of the first (MH) and second (NZ) author led to the selection of the most suitable principle for each theme, ensuring the development of a comprehensive overview. Finally, emerged themes were again reorganised and reformulated in multiple discussions within the research team (MH, NZ, MM, PW, CH, EC, JH & SB) with the aim

of reaching agreement on the final coding. The findings were not checked by the participants.

#### **Role of the researchers and ethical considerations**

The first (MH) and second (NZ) author are full-time researchers without a background as (occupational) health experts. The other authors (MM, PW, CH, EC, JH & SB) are experienced researchers within the field of occupational health or human-centred design, who helped shape the aim and relevance of the study. The first author (MH) was unexperienced with, and thus received training in, conducting qualitative research at the beginning of the present study. The second author (NZ) was experienced in conducting qualitative research and in performing interviews.

None of the authors had any relations with the participants prior to the study. All participants signed an informed consent form, sent along and returned with the hard copy preparatory assignment, after informing them about the study's objectives by phone. All participants received a small compensation in return for their participation. The Medical Ethics Committee of the Amsterdam University Medical Center declared that the study design did not require comprehensive ethical review, as the Medical Research Involving Human Subjects Act ("Wet Medisch-wetenschappelijk Onderzoek met Mensen") did not apply to the present study (Reference number: W20\_421 # 20.468).

## Results

For the purpose of the present study, the identified experiences and needs from the patient's perspective are presented for each of the eight principles for person-centred work-focused healthcare. Below, the corresponding themes for all eight principles are described. Additional representative quotes for each theme can be found in [Table 2](#).

### 1. Access to reliable healthcare that supports work participation

With respect to the accessibility of work-focused healthcare, planning of occupational healthcare encounters was explicitly mentioned by many of the participants. They indicated the need for a “tailored start of occupational healthcare provision” adapted to their personal situation. The participants often indicated that in current work-focused healthcare, consultations with occupational healthcare professionals started too early as they were not yet ready to think about work at that stage.

[At the moment of the first encounter with the occupational healthcare professional] there was simply no room to think about anything related to work. - PT 6 (male, 57, contracted employee, full sick leave)

In addition, several participants highlighted that access to “frequent encounters with occupational healthcare professionals” contributed to a feeling of confidence in a good assessment of their personal situation. Moreover, many indicated that “timely notification on the outcome of occupational healthcare assessment and/or guidance” was needed, especially when the outcome of the encounter concerned the patient's financial stability.

At that moment [at the end of the first two years of sick leave] a period of uncertainty started. (.) The SSA had not given any clarity [about receiving a disability benefit] at that time. - PT 15 (male, 35, contracted employee, partly returned to work)

A few participants mentioned that they found it difficult to adequately communicate their personal situation in a short encounter time. Notably, both self-employed workers reported a lack of work-related guidance.

No, [I received no work-focused guidance] by no one. (.) In terms of occupational healthcare and guidance from the private disability insurer it was really very poor. - PT 7 (male, 54, self-employed, full sick leave)

Furthermore, multiple participants expressed the need for access to “ongoing support after successful RTW”. Thereby, some reported a feeling of improved confidence to SAW or RTW when they had the possibility to contact an occupational healthcare professional when work-related problems occur, and a few participants indicated that they made thankful use of this possibility.

At that moment [the last appointment with the occupational healthcare professional] I will have fully returned to work. (.) If I still experience any work-related complaints at that point, then I can still rely on that safety net [appointment with the occupational healthcare professional] that I can fall back on. - PT 4 (female, 54, contracted employee, full returned to work)

### 2. Effective work-focused healthcare delivered by trusted professionals

Regarding the delivery of appropriate work-focused healthcare, a lack of “knowledge of CVD within occupational healthcare” was

mentioned by almost all participants, regardless of whether they had a common or rare type of CVD. This lack of medical knowledge resulted in a lack of confidence in the guidance and assessment.

[The occupational healthcare professional] did not even know what a shock was, or what an implantable cardioverter defibrillator was. That did not instill much confidence in her [assessment of work ability].” - PT 10 (male, 63, contracted employee, full sick leave)

However, the participant's confidence in advice on functional recovery by the clinical healthcare professionals was experienced as high, whereby almost all expressed the need for “work-related advice within clinical care”. However, in some cases the time spent on work-related advice within clinical care was experienced as limited.

I would have liked more guidance from [the clinical care professional]. (.) I would have appreciated it if the medical specialist had said: “take a break for two months and then start building up [working hours].” But [the clinical care professional] did not do that at all. - PT 10 (male, 63, contracted employee, full sick leave)

Thereby, a majority of the participants emphasized the significance of a certain level of “substantive work-related advice” by the occupational healthcare professionals. It was emphasized by these participants that this substantive work-related advice was particularly evident during the provision of work-related advice regarding work opportunities and reintegration. The importance of this type of advice lies in its ability to enable the delivery of appropriate care. Current work-related advice by all professionals involved in work-focused healthcare was often experienced being absent or too general. In addition, all participants showed a great need for “psychological counselling” to support the acceptance process of their disease and functional limitations, to find a balance between private and work activities that contributes to meaningful living and to set their own physical and mental boundaries.

During conversations with the psychologist, we were looking for things that would give me energy which I could do without making mistakes. (.) To be meaningful to the company. - PT 7 (male, 54, self-employed, full sick leave)

Furthermore, multiple participants highlighted the importance of receiving “legal guidance”. Some participants also mentioned that their employer often lacked legal knowledge regarding sickness absence and work disability, and needed legal guidance as well, to prevent errors during their sick leave process.

I should have never returned to work before completing the long-term disability benefit process, (.). My employer did not know [about these rules and regulations] either. (.) [My employer] should have received help with [the rules and regulations], - PT 16 (male, 36, contracted employee, fully returned to work)

### 3. Continuity of care and smooth transitions between all professionals involved in the full cycle of work-focused healthcare

Almost all participants indicated that they experienced limited transparency in communication between the various professionals, and, thereby, highlighted their need for “transparency in communication” between all professionals involved in work-focused healthcare to get better insight into which professional has which information. Also, one participant expressed being more interested in transparency in the communication between their occupational

**Table 2.** Overview of the identified themes for each of the eight adapted picker principles for person-centred care including representative quotes.

THEME DESCRIBING THE NEED	RESPRESENTATIVE QUOTE
<b>1) ACCESS TO RELIABLE HEALTHCARE THAT SUPPORTS WORK PARTICIPATION.</b>	
Tailored start of occupational healthcare provision	"At a certain moment, you recognize that you are feeling better, and you can think about work again. When I reach that point, I am curious about the opinion of [the occupational healthcare professional]." - PT 9 (male, 61, contracted employee, full sick leave)
Frequent encounters with occupational healthcare professionals	"[The occupational healthcare professional] really had the time to observe my development over time, which helped in making a decision about [my future work ability]." - PT 15 (male, 35, contracted employee, partly returned to work)
Timely notification on the outcome of occupational healthcare assessment and/or guidance	"Bizarre. How [the occupational healthcare professional] (...) can assess [your work ability] within half an hour. (...) I really had no idea which way [the disability assessment] was going." - PT 12 (female, 46, contracted employee, partly returned to work)
Ongoing support after successful RTW	"I thought it was a shame that there was no follow-up [after full RTW]. How things went from that moment on. You have to figure it out yourself." - PT 19 (male, 62, contracted employee, partly returned to work)
<b>2) EFFECTIVE WORK-FOCUSED HEALTHCARE DELIVERED BY TRUSTED PROFESSIONALS.</b>	
Knowledge of CVD within occupational healthcare	"[The clinical care professional] knows all about [my health problem]. (...) When you ask [the cardiologist] what you can do or cannot do, you get an answer you can rely on." - PT 1 (male, 28, contracted employee, fully returned to work)
Work-related advice within clinical care	"Of course, [the clinical care professional] [informed me] what I could still do, the status of my heart, and how much time I could work. We talked a lot about this during [the first sick leave] period." - PT 15 (male, 35, contracted employee, partly returned to work)
Substantive work-related advice	"The only tip I received [from the occupational healthcare professional] was: 'keep moving (...)'. Some general comments, I could have come up with that myself." - PT 18 (male, 65, temporary agency worker, full sick leave)
Psychological counselling	"I feel way too young for this, I had a fantastic job (...), I had different plans for the future, and then everything collapses. (...) you simply need support on a psychological level as well. (...) With my psychologist, I am currently in a process of acceptance" - PT 6 (male, 57, contracted employee, full sick leave)
Legal guidance	"At the moment you are back home [after hospitalisation and start of your sick leave], it is really frustrating that you are not aware of your rights, (...) you do not know what you can do to stand up for yourself." - PT 6 (male, 57, contracted employee, full sick leave)
<b>3) CONTINUITY OF CARE AND SMOOTH TRANSITIONS BETWEEN ALL PROFESSIONALS INVOLVED IN THE FULL CYCLE OF WORK-FOCUSED HEALTHCARE.</b>	
Transparency in communication	"I do not know if my employer also received the report from the SSA. A report that informs the employer about what they should pay attention to. I have no idea, but I hope that was the case." - PT 12 (female, 46, contracted employee, partly returned to work)
Consistency in the provided information	"[My rehabilitation professional] drew up a report [about his view on my work ability], (...) and sent it to [the occupational healthcare professional] by email. But [the occupational healthcare professional] disregarded the report. She just did what she thought was the right thing to do." - PT 19 (male, 62, contracted employee, partly returned to work)
Interdisciplinary teamwork	"[The occupational healthcare professional] only has one interest: how to get my patient back to work as soon as possible? While [the clinical care professional] had the goal of: How can I get my patient better again? There are all kinds of interests." - PT 6 (male, 57, contracted employee, full sick leave)
Permanent professional	"I simply prefer [a professional] who knows what you are going through, understands where you stand [in your process]. When you get a new [occupational healthcare professional], the question is to which extent they are aware of your situation. (...) I prefer a permanent [professional]" - PT 6 (male, 57, contracted employee, full sick leave)
<b>4) INVOLVEMENT AND SUPPORT FOR FAMILY AND CARERS IN WORK-FOCUSED HEALTHCARE.</b>	
Support for family	"Besides, your partner also feels insecure, saying, 'oh my husband has a cardiovascular disease'" - PT 6 (male, 57, contracted employee, full sick leave)
<b>5) CLEAR INFORMATION, COMMUNICATION AND SUPPORT FOR SELF-CARE REGARDING WORK PARTICIPATION.</b>	
Clear purpose and outcome of an encounter	"The letter stating that the disability benefit is granted is a reassuring statement at that time. However, there is a kind of calculation behind it which I still do not understand." - PT 13 (male, 59, contracted employee, partly returned to work)
Information provision on the work-focused healthcare process	"[The rehabilitation professional] explained how the process works. At the moment you become ill, there is something about to happen that you do not know much about at that moment. (...) They guided me through it." - PT 15 (male, 35, contracted employee, partly returned to work)
Information provision on the role and possibilities of the professionals	"During the application for the disability benefit, (...) I had the feeling that I had no idea how the process worked. (...) It would be better if you know the role of the professionals, what they know or do not know and which information they receive." - PT 16 (male, 36, contracted employee, fully returned to work)
Informal contact at the workplace	"I have an employee at the office who can take over all my duties. He (this employee) knows exactly what I am working on. So there is a setup in place that when I am absent everything keeps going." - PT 11 (male, 63, self-employed, fully returned to work)
<b>6) INVOLVEMENT IN DECISIONS AND RESPECT FOR PREFERENCES REGARDING WORK PARTICIPATION.</b>	
Influence of personal factors	"When you are talking to someone who is 35 years old, (...) still at the beginning of their career, these questions [regarding reintegration] become much more important. There is a greater motivation to get back to work. I am just about to retire, that is a different story." - PT 18 (male, 65, temporary agency worker, full sick leave)
Personal control during the process	"I was too sick to fight. (...) I had to tell [to the employer]: 'you are just going to arrange [a suitable working position]. But at that point, I just was too tired.'" - PT 3 (male, 57, temporary agency worker, full sick leave)
<b>7) EMOTIONAL SUPPORT, EMPATHY AND RESPECT IN WORK-FOCUSED HEALTHCARE.</b>	
Empathy for the personal situation	"I really got the feeling that [the occupational healthcare professional] was not interested in my situation. And then I think to myself [during the encounter]: what am I doing here?" - PT 2 (male, 57, contracted employee, fully returned to work)

(Continued)

Table 2. Continued.

THEME DESCRIBING THE NEED	RESPRESENTATIVE QUOTE
No contra productive pressure	"I have been given ample space [for recovery] within the process. (...) Professionals do not need to put pressure [on RTW], especially for cardiovascular patients." - PT 6 (male, 57, contracted employee, full sick leave)
Emotional support from social environment	"My wife told me to call in sick. (...) [My wife] was highly involved in this process." - PT 10 (male, 63, contracted employee, full sick leave)
8) ATTENTION TO PHYSICAL, PERSONAL AND ENVIRONMENTAL NEEDS REGARDING WORK PARTICIPATION.	
Tailored work-focused support	"[The occupational healthcare professionals] have a number of checklists they need to go through. (...) they make a report of it, so they can demonstrate that it happened. (...) they just tick the checklists, and then it is considered sufficient." - PT 16 (male, 36, contracted employee, fully returned to work)
Act in the interest of the patient	"I think [the occupational healthcare professionals] are compelled by the SSA to expedite your return to work as quickly as possible, so the disability benefit is minimized. It is not about you as an individual." - PT 2 (male, 57, contracted employee, fully returned to work)
Sufficiently informed about the medical situation	"If [the occupational healthcare professional] ask you things which are on the first page of you medical file, so to speak, you start doubting if they are taking you seriously. You become suspicious if they are aware of your personal situation." - PT 6 (male, 57, contracted employee, full sick leave)
Support to find an alternative work position	"Yes, [finding suitable work adjustments] went quickly and easily. (...) [my employer] easily adapted to [the situation]." - PT 9 (male, 61, contracted employee, full sick leave)

CVD: Cardiovascular disease, OP; occupational physician, RTW; Return to work, SSA; Dutch Social Security Institute: the Institute for Employee Benefit Schemes.

healthcare professionals and their employer, while being less interested in transparency in communication between two occupational healthcare professionals.

[The occupational healthcare professionals] need to discuss my case. I would find it a bad thing if they don't. (...) I do not need to know what they're discussing, (...) I just want to know if there is contact between the employer and the SSA, or the employer and the occupational healthcare professionals. - PT 15 (male, 35, contracted employee, partly returned to work)

In addition, a few participants reported they experienced mistrust in their self-supplied information when occupational healthcare professionals additionally requested the same medical information from the clinical healthcare professional.

[The occupational healthcare professional] did not trust me, otherwise you would not request my medical file. - PT 2 (male, 57, contracted employee, fully returned to work)

Furthermore, various participants expressed the need for more "consistency in the provided information" in work-focused healthcare, as upon reflection they observed a lack of consensus among multiple professionals regarding the approach to work ability and reintegration.

Then [the occupational healthcare professional working for the SSA] said: "I worry that you are working too much, too fast again." I said: "That is what my other occupational healthcare professional wants." One thinks black and the other white, 100% the opposite of each other. - PT 19 (male, 62, contracted employee, partly returned to work)

Moreover, many participants reflected on their needs for more "interdisciplinary teamwork" in work-focused healthcare, which was experienced to be lacking as a result of the different interests at stake. Therefore, multiple participants suggested that this can be solved by introducing a process coordinator in the work-focused healthcare process. Hereby, a few participants indicated that they highly valued "permanent professionals", reflecting on the trustful relationship they develop with a professional over time. However, when a transition towards another professional was strictly necessary due to professional reasons, all participants indicated to appreciate the new professional being appropriately informed about the personal situation and having a similar view on the reintegration abilities of the patient.

I was referred to another occupational healthcare professional. (...) I only spoke with the occupational healthcare professional three or four times. So, it did not bother me that I had to switch. (...) The [new occupational healthcare professional] had a somewhat similar approach to reintegration which was nice. - PT 4 (female, 54, contracted employee, full returned to work)

#### 4. Involvement and support for family and carers in work-focused healthcare

Participants did not express the need for work-focused healthcare to involve their family and carers. Only one participant mentioned the need for "support for family", since his partner was feeling very insecure as a result of his CVD diagnosis, however, this was not work-related.

#### 5. Clear information, communication and support for self-care regarding work participation

Many participants highlighted the importance of a "clear purpose and outcome of an encounter" by discussing the goals and optional follow-up right at the beginning of the encounter to manage or to remove any insecurity on the part of the patient.

I was very nervous [for this consultation]. But [the occupational healthcare professional] immediately indicated (...) the goal of reintegrating me within my previous work position. (...) I immediately felt much more confident during the consultation, which was nice. - PT 12 (female, 46, contracted employee, partly returned to work)

Following the encounter, it was deemed crucial for almost all participants that the professional provided a clear and comprehensive report on the encounter. This report serves to confirm and validate the information provided by the patient, encompassing the personal story of the patient.

I would prefer to receive some kind of report with a summary [of the encounter], what we will do in the future, what are [the occupational physician's] expectations and what is [the occupational physician's] vision. - PT 9 (male, 61, contracted employee, full sick leave)

Many participants specified the need for better "information provision on the work-focused healthcare process", since they experienced a lack of clarification on the full work-focused



healthcare process. With regard to the disability benefit process, a lot of participants mentioned that they received enough guidance and information about the application process. Although, there appears to be a lot of uncertainty due to a lack of information about the steps to be taken in the future. When experiencing uncertainty during the disability benefit process, they indicate knowing where to go with their questions. However, some participants did not make use of the opportunity to ask questions mainly due to their fear that any misunderstanding could have negative financial consequences.

Maybe [the SSA] told me, but I am not 100% sure whether I will be reassessed [for disability benefit] again after a year or two. I do not know. (.) I think, there is a threshold [to ask your questions at the SSA]. It is the SSA after all. You might be afraid of being misunderstood. - PT 13 (male, 59, contracted employee, partly returned to work)

Furthermore, many participants indicated that the role of the various professionals was not communicated clearly. It was often not clear what they could expect from and ask of the multiple professionals involved in work-focused healthcare, and what information these professionals need or not. Therefore, a need for better “information provision on the role and possibilities of the professionals” was highlighted.

Thereby, several participants indicated that, even when they were on full sick leave, it was considered important to maintain good “informal contact with the workplace” in order to feel connected and meaningful at an informal level. In contrast, both self-employed workers indicated the need for a self-operating workplace, stimulating them to not get involved too much.

I was at the office every Friday afternoon, just for coffee and a chat with my colleagues. (.) This [contact] encourages someone to return to work as soon as possible. - PT 2 (male, 57, contracted employee, fully returned to work)

## **6. Involvement in decisions and respect for preferences regarding work participation**

Some participants indicated that their own “personal factors” within work-focused healthcare influences their openness to receiving guidance, such as their personality and work responsibilities. Participants who reported a strong vision on their personal reintegration plan or high work responsibilities, such as the self-employed workers, considered work-focused healthcare guidance to be of less importance and indicated navigating reintegration more based on their own intuition.

The question is if you want to accept the support offered [from professionals involved in work-focused healthcare]. (.) I just could not accept it, I am not an ordinary worker. (.) I am too stubborn. - PT 7 (male, 54, self-employed, full sick leave)

In addition, some participants expressed that being younger motivates the desire to RTW more than being older. Moreover, some participants highlighted the feeling that their openness towards the professional was experienced as a positive influence on the patient-doctor relationship and on stimulating trust. However, a few indicated not sharing all important information when they do not trust the intentions of the professionals.

[The psychologist] told me to share these [private matters we discussed] also with [the occupational healthcare professional]. But I did not do this. Because the guidance with the occupational healthcare professional was disappointing, my confidence was damaged. - PT 8 (male, 56, contracted employee, full sick leave)

Therefore, when considering the patients’ experiences and needs regarding the extent to which the patient is involved in the decisions in their work-focused healthcare, a majority of the participants reported that “personal control during the process” was important. Especially notable is that those who expressed a strong vision on their personal reintegration plan or having high work responsibilities considered themselves most crucial in their reintegration process. These participants strongly emphasized that, even when a reintegration plan was created in work-focused healthcare, adherence with the reintegration plan in practice was determined by themselves.

Yes, a [reintegration] plan was made together [with the occupational healthcare professional]. However, (.) I did not stick to this plan, I went my own way. - PT 10 (male, 63, contracted employee, full sick leave)

However, because of the reduced energy levels of many CVDs, some participants indicated not always having the strength to lead their own recovery process and to fight for their own rights and needs.

## **7. Emotional support, empathy and respect in work-focused healthcare**

With respect to the patients’ experiences and needs regarding the emotional support given, all participants reported that a lack of empathy experienced during encounters with professionals involved in work-focused healthcare resulted in lower credibility and trust in fair guidance and assessment. Therefore, many participants mentioned that a certain level of provided “empathy for the personal situation” by all professionals involved in work-focused healthcare is needed. Participants brought up that this empathy can be shown by: taking into account, and showing sympathy for, the personal situation of the patient; showing genuine interest towards the patient; ensuring an equal partnership during encounters; and face-to-face contact between professional and patient.

[The occupational healthcare professional] was a nice person that I had a mutual conversation with. Someone who listened to my story and my experiences. - PT 15 (male, 35, contracted employee, partly returned to work)

In addition, many participants expressed experiencing contra productive pressure for early RTW resulting in crossing the patient’s physical and/or mental boundaries and a relapse in their RTW, such as working hours, at a later time. Therefore, the need for appropriate recovery time with “no contra productive pressure” to RTW or SAW was determined.

Of course, you want to work (.) But, expecting it to happen as quickly as [the occupational healthcare professional] wants it to, that is just unrealistic. (.) I always got the impression that [the occupational healthcare professional] just wanted me back to work as soon as possible. That is not the support you want. - PT 2 (male, 57, contracted employee, fully returned to work)

Besides the importance of emotional support from all professionals involved in work-focused healthcare, a few participants also indicated that “emotional support from their social environment” was a very important factor in their choices regarding (return to) work. Discussing work-related experiences with peers living with a similar medical condition and a motivational attitude by family members can provide patients support, enabling them to feel stronger in the process, and contributing to their confidence in making work-related choices.

I have a few friends who also suffer from CVD. Their advice was genuinely helpful. (.) Sometimes, seeing how someone else deals with a situation serves as a good example. He (a friend living with CVD) was a strong role model for me. - PT 1 (male, 28, contracted employee, fully returned to work)

### 8. Attention to physical, personal and environmental needs regarding work participation

Multiple participants indicated that they experienced some encounters with care professionals as a formality following standard protocols. In addition, a few reported an absence of work-focused healthcare during cardiac rehabilitation, as the result of a lack of tailoring of the rehabilitation programme towards their needs.

Within the cardiac rehabilitation program (.) everything was focused on older [CVD] patients. (.) I really wanted to follow [the cardiac rehabilitation program], but it did not help me at all. - PT 12 (female, 46, contracted employee, partly returned to work)

Moreover, some participants expressed the feeling of a mismatch in the relationship between some professionals involved in work-focused healthcare. This mismatch was felt because these professionals are either hired by the employer or work for the SSA. A majority of the participants mentioned concerns about these professionals potentially prioritizing the interest of the employer or SSA over those of the patients themselves. Therefore, they highlighted appreciating more “tailored work-focused support,” in which all professionals involved in work-focused healthcare “act in the interest of the patient.”

Independent, not affiliated with the company, as the company has to bear the cost. (.) You just need an independent body that will assess [your work ability]. Not everything needs to be arranged by the employer. - PT 3 (male, 57, temporary agency worker, full sick leave)

Hereby, various participants reported that, for the professionals to be able to tailor and act in accordance with the patients’ individual needs for work-focused healthcare, it is important that all involved professionals are “sufficiently informed about the medical situation” of the patient. For instance, by carefully preparing the encounter by reading the medical file or by carefully listening to the patient during a consultation.

[The occupational healthcare professional and I] talked extensively about how I feel, what I am going through, how I got there, and what my current complaints are. Based on this information, the disability benefit was awarded. - PT 13 (male, 59, contracted employee, partly returned to work)

Additionally, due to the influence on their energy levels as a result of CVD, participants often indicate their need for “support to find an alternative work position” matching their reduced energy capacity. Therefore, various participants added that it is highly important that their employer takes the functional limitations of the patient into account and thinks along to create a suitable alternative work position. However, some participants experienced that the employer acts more in the interest of the company, which, according to them, could be addressed by exerting pressure on the employer by occupational healthcare professionals. In addition, the SSA, which already has the responsibility to assess whether the employer offered adequate reintegration opportunities, can compel the employer to provide suitable reintegration through sanctions, such as continued payment of wages.

[The occupational healthcare professional] is hired by the employer and will, therefore, not antagonize the employer. (.) I think, this is wrong.

[The occupational healthcare professional] should put pressure on the employer to create another working position or provide less physically demanding work tasks. - PT 3 (male, 57, temporary agency worker, full sick leave)

## Discussion

In the present study, 28 themes describing the patients’ experiences and needs for work-focused healthcare emerged and were grouped into the eight principles for person-centred work-focused healthcare based on the Picker Principles. The number and variety of themes represent a comprehensive set of needs of people living with CVD ( $n=19$ ) regarding work-focused healthcare. The themes included, randomly presenting one theme for each of the eight principles, experiences with and needs for a tailored start of occupational healthcare provision; frequent encounters with occupational healthcare professionals; substantive work-related advice; transparency in communication; support for family; information provision on the work-focused healthcare process; personal control during the process; empathy for the personal situation; and tailored work-focused support. The overview of needs from the perspective of patients can be used to provide input to tailor and improve work-focused healthcare.

For multiple themes identified in the present study, agreements and disagreements with previous literature were found. For the first principle “Access to reliable healthcare that supports work participation,” the identified need of patients for ongoing work-focused healthcare support after RTW was previously identified in a qualitative study in patients after coronary bypass surgery [18]. Furthermore, consistent with our results, earlier literature studying a broad range of chronic diseases identified the need for access to occupational healthcare as soon as possible during sick leave [38]. In addition, a previous study examining individuals on long-term sick leave due to common mental disorders, have noted that an invitation for consultation shortly after the onset of work-related difficulties can evoke feeling of distrust and lack of understanding among patients [39]. This finding supports the necessity highlighted in the present study that the start of occupational healthcare provision needs to be tailored to the personal situation. For the second principle “Effective work-focused healthcare delivery by trusted professionals,” the present study is consistent with previous literature on CVD patients, emphasizing the importance to receive work-related advice from clinical care providers [18,40] and psychological counselling [19,41]. Nevertheless, earlier literature has indicated that clinical care providers face obstacles in providing work-related advice, primarily due to time constraints and insufficient knowledge in this domain [42]. This observation aligns with the experiences reported by the participants in the present study. At the same time, in alignment with the findings in the present study, sufficient medical knowledge of occupational healthcare professionals has also been identified as a need by cancer survivors who face challenges in RTW [9].

For the third principle “Continuity of care and smooth transitions between all professionals involved in the full cycle of work-focused healthcare,” previous research focussing on RTW after various diseases have indicated that professionals involved in work-focused healthcare recognise suboptimal collaboration and information exchange between the involved professionals, resulting in a lack of continuity in the work-focused healthcare process [43, 44]. Consequently, both in the present study and in earlier literature addressing RTW after stroke, patients and professionals argue for the involvement of a process coordinator [44].

Such a process coordinator could take on the role of supporting the process of occupational healthcare as well as function as a permanent contact person for the patient [44]. For the fifth principle “Clear information, communication and support for self-care regarding work participation”, the participants in the present study indicated the need for information on rights and regulations during sick leave, which was also confirmed in a population of individuals living with brain injury [45]. Healthcare professionals, as highlighted in previous literature, acknowledged that these rules and regulations are not always in line with the needs of patients with CVD and can even hamper the RTW process [44]. Moreover, previous literature on sick leave after various diseases also emphasizes the importance of implementing a structured process and good information provision early in the process, to foster a sense of empowerment, inclusion in the process and faster RTW [46].

For the sixth principle “Involvement in decisions and respect for preferences regarding work participation,” the present study aligns with previous literature on patients who underwent a carpal tunnel release surgery, emphasizing the importance of involvement in decisions and respect for the preferences of the patient, recognising the importance of professionals supporting patients in their own decision-making process during RTW [47]. Following recommendations in earlier studies [47,48], professionals should, to empower patients in their own decision-making, communicate the short-term functional impact of the disease on work, discuss examples of what their RTW may look like, provide sufficient information, and use shared-decision making within work-focused healthcare as suggested in previous studies. Moreover, in a population of workers with mental health problems, it was found that the degree of work-focused guidance is affected by the attitude of the worker towards their own RTW process [49]. Workers who have a positive attitude towards their own RTW capacity may show more active problem-solving behaviour and request occupational healthcare support in order to RTW in comparison with workers with a more negative attitude towards their own RTW capacity [49].

For the seventh principle “Emotional support, empathy and respect in work-focused healthcare,” earlier literature, particularly focusing on patients RTW after sick leave due to depression, suggested that professionals may be able to influence the perceptions and emotions of workers by taking the patient seriously, without any contra productive pressure to RTW [50]. However, participants in the present study frequently appointed perceived contra productive pressure. Additionally, in alignment with the findings in the present study, existing literature indicates that involving family and caregivers may potentially exert a beneficial influence on the patients’ expectations of work participation [51]. However, as shown in the fourth principle of the present study “Involvement and support for family and carers in work-focused healthcare,” input regarding the significance of support for family members in work-focused healthcare was derived solely from a single study participant. Regarding the last principle “Attention to physical, personal and environmental needs regarding work participation,” the finding in the present study to adjust the work-focused healthcare support to the personal situation is reinforced by recommendations from prior studies investigating the requirements of patients with CVD, advocating for the flexible application of work-focused healthcare tailored to the patient’s needs [52,53].

### **Methodological considerations**

One strength of the present study lies in the utilization of the eight principles derived from the Picker domains for Person-Centred

Care, which are extracted from a valid set of indicators [54]. These principles are applicable to various healthcare contexts [54], providing a structured overview for framing patients’ experiences and needs [55]. There was overlap of themes across multiple principles; for instance, the theme interdisciplinary teamwork overlapped with effective work-focused healthcare, clear communication, and continuity of care. Nonetheless, we are confident that a comprehensive overview was achieved through careful selection of the most suitable principle for each theme. Another strength of the present study is that the participants exhibited a large variety in, for example, CVD, time since diagnosis, job sector and current work status, representing a wide range of patients involved in work-focused healthcare living with CVD. The independent coding by two authors (MH, NZ) and excessive discussion of the coding by the entire research team ensured confirmability of data. Other methodological measures ensuring the credibility and trustworthiness of the data were the pilot testing, the review of the transcripts by the participants, and the expertise and variability in the background of the research team [56]. A complete member check of the results was not conducted, which could potentially constrain the credibility and trustworthiness of the present study. Nevertheless, we aimed to strengthen credibility and trustworthiness through thorough discussion of the final themes with the entire research team.

We feel that conducting interviews via an online video call platform contributed both positively and negatively to the heterogeneity of participants. On a positive note, it allowed us to include participants with a wider geographical distribution. However, there was a potential downside, as it introduced the risk of selection bias towards patients with higher digital literacy [57]. Although no exclusions were made for this, it is plausible that some individuals chose not to respond due to the digital nature of the interviews. In addition, the study sample included an unequal distribution in gender, which may be explained by the lower prevalence of women diagnosed with CVD. This unequal distribution may limit the generalizability of the research findings given the gender-specific differences in experiences and needs within healthcare, and RTW strategies [58,59]. In addition, a certain level of recall bias can be expected in the present study due to the retrospective character. However, the influence of recall bias on the findings was reduced to some extent by using preparatory assignments for the participants prior to the interviews.

### **Implications for future research**

The present study shows that the needs of individuals with CVD within work-focused healthcare can be categorized using an adapted version of the eight Picker Principles of Person-Centred Care. This observation suggests that existing interventions, designed to enhance person-centred care by targeting needs within one or more of the Picker Principles, could potentially be adapted for application in work-focused healthcare for these patients. Therefore, future research is necessary to explore the feasibility of implementing interventions aimed at promoting person-centred care within work-focused healthcare. Furthermore, the emphasis in our study was on capturing patients’ perspectives. However, we recognize that exploring the views of healthcare professionals can provide valuable insights into potential challenges they face in meeting patients’ needs. Future research could delve into understanding these challenges faced by healthcare professionals. Moreover, while examining the perspective of patients on work-focused healthcare, the present study did not encompass their workplace-related needs. Future research could delve into understanding the needs of

individuals with CVD concerning their work environment. Additionally, the present study aimed to present a rich and inclusive overview of the diverse range of needs expressed by the participant. Subsequent research may focus on understanding the hierarchical significance of the identified needs. Furthermore, the importance of involvement and support for family and caregivers in work-focused healthcare was underrepresented in our data. We believe this was mainly caused by the focus on the patients' perspective on work-focused healthcare rather than the social environment. The involvement and support for family and caregivers needs to be further explored using additional qualitative research.

### Implications for practice

Given the results of the present study, current needs of patients underscore the necessity for work-focused healthcare to be redesigned with a stronger focus on patient-centeredness. Therefore, the rich overview of patients' needs given in the present study, based on all facets of person-centred care, is a starting point for healthcare professionals and policymakers to enhance the provision of person-centred work-focused healthcare. Some of these needs can be promptly addressed by healthcare professionals in their service delivery. For instance, healthcare professionals can ensure that patient do feel respected and do not face contra productive pressure to RTW or SAW. On the other hand, also broader systematic changes at the policy level are required to better meet the needs of patients. For example, adjustments in the system are necessary to ensure a smoother and more continuous process for patients. In The Netherlands work-focused healthcare is incorporated into routine care within cardiac rehabilitation programs [27]. However due to suboptimal implementation of these programs, both SAW and RTW are addressed inadequately [60]. Furthermore, the findings of the present study also show that patients continue to perceive a lack of work-focused support within cardiac rehabilitation. Therefore, it is recommended that healthcare professionals involved in work-focused care should encourage participation in cardiac rehabilitation programs and assist in customizing the SAW and RTW aspects of cardiac rehabilitation programs to better match patient characteristics and needs.

While the present study was conducted in the specific context of the Dutch healthcare system, the similarities observed with studies examining the needs regarding work-focused healthcare of CVD patients in other healthcare settings [19,44,52,53] suggests that the overview of patients' needs presented in this study is applicable to healthcare contexts beyond the Netherlands. Besides, given the similarities in the identified needs regarding work-focused healthcare in other patient populations [9,45,46,50], the identified experiences and needs likely apply to a broad range of chronic diseases.

### Conclusions

The present study shows work-focused healthcare received by patients with CVD often does not (yet) align with their needs. This encompasses the lack of appropriate timing for the start of consultations with the occupational healthcare professional based on the individuals' personal situation, as well as encountering inconsistencies in the exchange of information between the professionals and towards the patient. Therefore, enhancing person-centred work-focused healthcare for individuals with CVD involves aligning the work-focused healthcare provision more closely with the patients' needs, as outlined in the present study.

This adjustment can include personalising the start of the consultation with the occupational healthcare professional based on the individuals' personal situation and ensuring a more consistent and clear information provision to the patient about the process.

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The authors report there are no competing interests to declare.

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