

# Open Market Consultation

June 2021



## International OMC Breakout Room 2

June 15, 2021 11:20-12:20 CEST



[www.incareheart.eu](http://www.incareheart.eu)



Incareheart has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 965134.

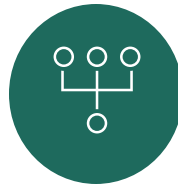
# Session objectives



**Understanding unmet needs** that need to be addressed in your view



**Getting feedback** on comprehensiveness of **INCAREHEART main functionalities**



**Discussing** improvement suggestions for the **INCAREHEART integrated CHF process pathway**

*Understanding  
unmet needs  
addressed in  
**INCAREHEART***



# Key challenges that need to be overcome



- **CHF care is fragmented** with little coordination and transitional care implemented
- Heart failure is **too often detected late**
- **Lack of a dynamic, personalised decision support tool**, considering data collected from various sources and including PREMS and PROMS
- **Information and data silos persist** in CHF care and support
- **Suboptimal identification and treatment of co-morbidities**
- **Enablement and true patient empowerment** needs to be improved

# Let us know what you think!



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# Fragmentation of care delivery



Drivers for change	Current issues
Patient-centred, MDT coordination is a key feature of effective care models	Loss in quality of care due to information loss, misplaced information, and media discontinuity
MDT care reduces hospitalisations, improves quality of life and decreases mortality	Unnecessary duplicate investigations and sub-optimal therapies lead to avoidable personal risks and health system inefficiencies.
<b>Information together with clinical guidelines, and sometimes complemented with local quality circles, is the foundation for cooperation in a decentralised professional network</b>	Fragmentation leads to gaps in treatment
	Solutions available often appear to be add-ons that are not well integrated with the public health and care system and its electronic health records
	Many patients do not receive proper follow-up after discharge

# Late detection of CHF



Drivers for change	Current issues
<p><b>Lack of recognition of symptoms</b> is thought to explain the long delay between onset of symptoms and seeking medical care in CHF patients</p>	<p><b>Lack of leveraging EHR longitudinal data</b> and sharing of patient history, beyond the traditional clinical and health economic domain, for patients, health systems and society</p>
<p><b>Patients are unlikely to seek treatment</b> until they have an acute episode, leading to poor diagnosis, increased risk of hospitalisation and premature mortality</p>	<p><b>Lack of sharing of (real-time) data</b> and information across settings</p>

# Lack of a dynamic, personalised decision support tool



Drivers for change	Current issues
Personalised decision support can indicate prevention and treatment options that take different factors into account	Decision-making processes under several circumstances are still burdensome
Efforts in ICT supported integrated care build upon decision making between MDT and patients as well as informal carers, thereby regularly monitoring and modifying set goals	<b>No tools exist that incorporate patients' treatment preferences</b> into the clinical decision-making process
Decision support systems (DSS) <b>support the complex decision-making processes of diagnosis</b> , prognosis, and therapy planning, <b>reduce unnecessary mistakes</b> and costs, as well as improve patient outcomes	<b>Lack of a dynamic decision support tool</b> , considering real time data collected from EHRs, devices including data from monitoring wearables
<b>PROMs and PREMs are enablers for integrated care provision</b> and quality adherence/improvements, and recognised as providing valuable and essential information for achieving health and care system objectives	Development and use of PREMs (and thus the knowledge about it) is still limited, not to mention the <b>availability of mature ePREMs tools</b>



# Information and data silos persist



Drivers for change	Current issues
Patients' increasing request to access their data	<b>Data is not exchanged timely enough</b> or in a format that lies outside the clinician's workflow
Developments in the field of mHealth applications pose some new challenges both for open interoperability and for seamlessly integrating information	<b>Interoperability issues remain</b>
Need to create an information continuum over all phases of a patient's journey	

# Suboptimal identification and treatment of co-morbidities



Drivers for change	Current issues
Co-morbidities contribute to non-compliance that in turn leads to higher rate of hospitalisation, re-admissions, and ultimately death	So far, focus is more on the prevalence, management, and impact on co-morbidities in heart failure patients, and <b>much less on the detection of these conditions</b>
Need for personalised profiling through better patient stratification capabilities	Solutions missing that <b>facilitate a regular comprehensive assessment</b>
Depression remains poorly detected in CHF patients despite its prevalence	

# Enablement and true patient empowerment needs to be improved



Drivers for change	Current issues
Patients are provided access to their care plan and advice on treatment modification can, be given directly to them, as they are empowered through tailored education for self-management of their condition.	Systems that share and actively provide (health) data to patients to support self-management are still underused
Patients increasingly request to access their data	Lack of comprehensive, multi-component CR and self-management
Patients expect health and care professionals to have access to the full record - including hospital admissions, discharges, medication lists, lab tests and results, and care plans	

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***INCAREHEART***  
***Use Cases and***  
***Draft Process***  
***Pathway***



# Draft requirements and use cases available online

**UC1:** CHF early detection

**UC2:** Enrolling people with CHF, the MDT care team and carers/family members

**UC3:** Supporting empowerment & self-management of the person living with CHF and their family carers

**UC4:** Optimising cardiac rehabilitation and treatment adherence

**UC5:** Ensuring seamless transitions of care and support

**UC6:** Treatment adjustment

**UC7:** Slow or no internet connection

**UC8:** Regular MDT assessment

**UC9:** Multidisciplinary team decision support

**UC10:** Early detection of complications and co-morbidities

**UC11:** Interoperability

Read the scope document for the Open Market Consultation: [https://incareheart.eu/wp-content/uploads/2021/06/INCAREHEART\\_Scope.pdf](https://incareheart.eu/wp-content/uploads/2021/06/INCAREHEART_Scope.pdf)

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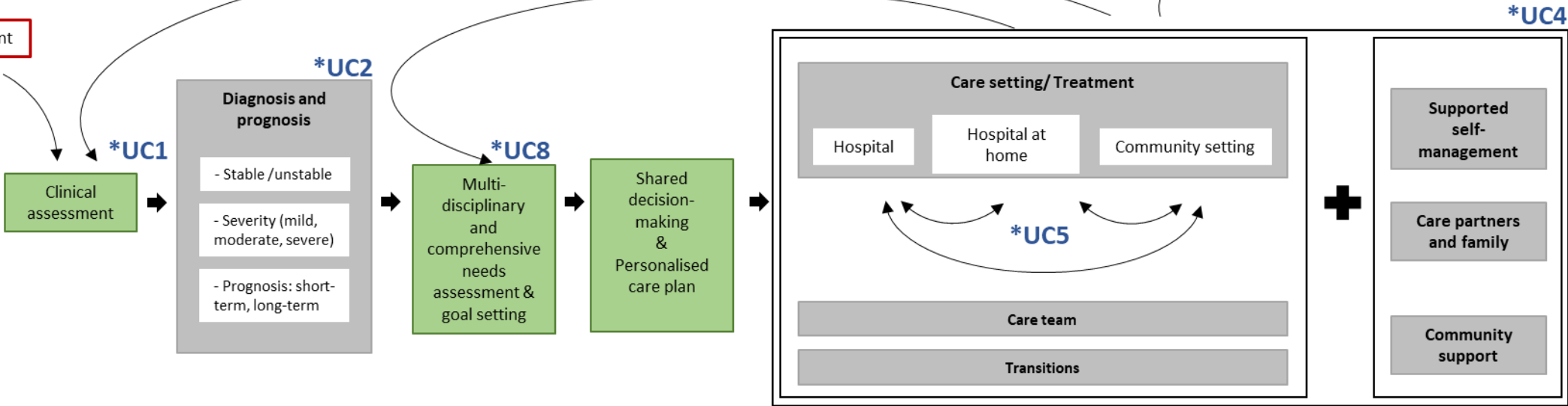
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# Mapping Use Cases to the INCAREHEART Integrated Process Pathway

Follow-up and Monitoring \*UC6 \*UC10

Entry-point



- Exit**
- Intervention
  - Transplant
  - Palliative Care
  - Death
  - TIQUE
  - Other

Assessment \*UC8

Self-management \*UC3

Co-design of the personalised care plan \*UC4

Care support \*UC5

Care coordination \*UC9

Access to data and information \*UC7 \*UC11



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*Key  
functionalities  
INCAREHEART  
solution has to  
include*



## Continuous management and seamless transitions modules: Key features

- MDT digital shared care plan
- MDT communication/coordination tools
- MDT data and information sharing platform
- Interoperability and integration



INCAREHEART

### Early detection & anticipatory care planning: Key features

- Leveraging EHR longitudinal and other data sources
- Module for comprehensive assessment results sharing and review
- ICT-enabled patient education
- ACP digital directory
- ICT-enabled training module for professionals

### Care and follow-up: Key features

- Digital discharge pathway and post-acute care support
- MDT "Situation reports"
- Remote support, messaging, virtual visits
- Patient-facing module summarising medication regimen
- Multi-component CR

### Living with heart failure: Key features

- Adherence feedback
- Integrated comprehensive low-cost monitoring system
- Mobile app data integration
- Remote exercising
- ePREMS & ePROMS collection
- Digital peer-patient support

# Key functionalities



Functionality	Short description
Data dashboard	The approach to decision support in <b>INCAREHEART centres on a care plan</b> shared between health and social care professionals and patients, as well as a data dashboard accessible based on defined roles. <b>Patient preference and clinical judgement is to be brought together</b> and conflict resolved in physician-patient discussion, to enable commitment to a common care plan.
Decision support system	Suppliers should provide a <b>DSS system used by both patients and professionals that establishes the personalised care plan based on patient preferences and clinical parameters</b> , avoiding fragmented decision-making. Decision support systems should be envisaged that <b>integrate a combination of various outcomes to facilitate treatment decisions</b> , predict exacerbations and share information between patients, primary care specialists, and health insurers or health authorities. The DSS should be <b>integrated with existing EHR systems</b> .

# Key functionalities ctd.



Functionality	Short description
Shared Care Plan	<p>The solution must enable the <b>creation, view, and exchange of a shared care plan in real time</b>. The shared care plan includes core elements required to coordinate CHF care, including:</p> <ul style="list-style-type: none"><li>• <b>target goals and, if appropriate, measurable success criteria for each goal</b></li><li>• <b>activities and timeframes to achieve each goal</b></li><li>• <b>roles and responsibilities of members of the care team to help achieve goals</b></li><li>• <b>care plan conditions, i.e., clinical reasons or concerns for the care plan, including comorbidities</b></li><li>• <b>the ability to review the status of a care share plan.</b></li></ul> <p>All INCAREHEART <b>patients must have access to a shared care plan</b> that can be shared electronically between health care providers.</p> <p>The solution must allow to <b>extract data from existing clinical management systems</b> to produce a shared care plan.</p> <p>The solution should <b>secure permanent access to patients' medical history data</b> (e.g., medical exams, lab results, vital signs values; generate indicators; their care plan; medication and posology; occurrence of crisis and exacerbations).</p>

# Key functionalities ctd.



Functionality	Short description
Leverage EHR data	In countries with strong focus on personal health records, such as Turkey, the assessment tool can be integrated on the health provider's web portal and linked to the PHR account of the person, allowing quicker assessment with reliable data and establishment of contact between the patient and a healthcare professional. <b>Linking to the EHR/PHR systems will also allow identification of sub-optimally treated patients</b> , who need intensified treatment in secondary prevention.
Real-time data sharing	The solution should be able to share data and information across care settings in real-time.
Personalised therapeutic recommendation tool	Therapeutic <b>recommendation tools should be personalised, addressing data sharing and infrastructure needs such as integrating highly heterogeneous multi-scale data sources or integrating imaging data</b> . The provision of multiple channels to establish bi-directional communication of text, images, voices, video should be addressed as well.

# Key functionalities ctd.



Functionality	Short description
Digital discharge pathway	<p>The implementation of a <b>digital discharge pathway</b> should allow <b>effective information sharing across health and care providers/professionals</b>, improving the accuracy, efficiency, and reliability to support hospital discharge and other transitions in the CHF pathway</p> <p>Features suppliers are requested to include in the solution are:</p> <ul style="list-style-type: none"><li>▶ <b>Discharge summary,</b></li><li>▶ <b>Medication documentation</b></li><li>▶ <b>Care and treatment plan</b></li><li>▶ <b>Self-care advice</b></li></ul>
Multi-component CR and self-management support	<p>The solution shall allow cardiac rehabilitation to be accessed via a mobile phone to increase uptake amongst minority groups. Web- and mobile-based solution shall offer the opportunity to remotely provide programmed feedback based on individually set preferences, short- and long-term goals, and personally tailored feedback from a cardiac rehabilitation provider. Activity tracking results shall be integrated with EHRs or medical records.</p>
Exergaming component	<p>Suppliers should consider the inclusion of an exergaming component integrated with the sensor system to create a powerful combination of telemonitoring and rehabilitation. Commercial solutions like Nintendo Wii could be integrated via API with wearables and the data processing system. Exergames will be carefully selected or developed according to special needs and exercise recommendations for CHF patients.</p>

# Key functionalities ctd.



Functionality	Short description
ePROMS and ePROMS	<p>Suppliers of the INCAREHEART solution must provide procurers with <b>weekly analyses and summaries of care provided and its outcomes.</b></p> <ul style="list-style-type: none"><li>▶ Analysis is to be provided of <b>medical and organisational quality parameters alongside assessment of the efficiency of care</b>, thereby relying on effective data linkage across care transitions</li><li>▶ <b>ePROMS collection should be integrated into the existing electronic health record system</b> of the user to allow for the flow of information. Data should be collected at a pre-specified time points, with a focus for <b>PREMs on care transitions such as hospital discharge, (re)admission or detection of exacerbations.</b></li><li>▶ The solution shall <b>provide procurers with bi-annual analyses and summaries pf patient experiences along the care pathway.</b></li><li>▶ Information collected will include but are not limited to<ol style="list-style-type: none"><li>a) Communication and information,</li><li>b) Care received (e.g., time spent waiting, knowledge of care plan),</li><li>c) Physical and emotional support,</li><li>d) Shared decision-making and</li><li>e) Consideration of family &amp; home environment.</li></ol></li></ul>



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DO YOU HAVE ANY  
QUESTIONS?





# THANKS

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#ChronicHeartFailure  
#digitalhealth  
#Horizon2020