

**All information regarding future IHI Call topics is indicative and subject to change. Final information about future IHI Calls will be communicated after approval by the IHI Governing Board.**

## **Topic 3: Combining hospital interventional approaches to improve patient outcomes and increase hospital efficiency**

### **Expected impacts to be achieved by this topic**

The following impacts are expected:

- Improve patient outcomes of hospital care and foster faster recovery by overcoming issues of fragmentation through combining innovative interventional approaches.
- Seamless and successful implementation in hospital settings of cross-sectoral innovations, integrated products and services delivering proven benefits to patients, healthcare systems (including hospital staffing), and society as a whole.
- Advanced analytics/artificial intelligence (AI) supporting health research and innovation, resulting in improved clinical decision support for increased efficacy of treatment.

### **Expected outcomes**

Research and innovation (R&I) actions (projects) to be supported under this topic should aim to deliver results that contribute to all of the following expected outcomes:

- Patients will be offered improved, evidence-based, innovative hospital treatment combinations that lead to better outcomes.
- Healthcare professionals will have access to improved clinical decision support systems that will recommend personalised treatments using patient-specific datasets collected in the hospital setting.
- Healthcare systems will have better evidence on cost-effective combinations of interventions and how these combinations can increase hospital efficiency.
- Researchers will have improved information on treatment combinations to facilitate the development of improved interventions.

### **Scope**

Patients admitted to hospital to undergo elective or non-elective procedures typically require recovery and rehabilitation to get back to normal life. New treatment approaches such as minimally invasive surgical approaches, locoregional interventions, novel imaging and diagnostic techniques, clinical decision support systems, and robotics have the potential to reduce complications, facilitate faster recovery, and help increase hospital efficiencies. However, due to limitations in interoperability, reliable evidence and suitable guidelines, these innovative approaches, treatment options and clinical decision support systems are not being optimally combined to provide the best patient care.

Projects funded under this topic should address this challenge by showcasing how existing hospital interventions, treatment approaches and technologies can be optimally combined to improve patient outcomes, enhance patient pathways, generate efficiency gains, reduce hospital staffing challenges, help to lower costs, and decrease societal burden.

In particular, projects should:

- Access and integrate clinical data routinely generated using existing technologies during the patient journey (e.g. medical history profile of patients, diagnosis achieved, for example, by medical imaging and in-vitro diagnostic (IVD) tests, digital information generated during the hospital procedure, vital signs and anaesthesia management, electronic healthcare record systems (EHRs), and drug prescriptions such as analgesics). The interoperability of these data should be addressed as appropriate. Suitable, secure IT infrastructure to support edge and cloud computing in compliance with the general data protection regulation (GDPR) and other data privacy policies at national and local levels should be utilised.
- Train and clinically validate explainable AI algorithms to support the development of training programmes, procedure planning and intraoperative assistance solutions, including clinical decision support systems.
- Demonstrate, via use cases using these data & algorithms, how combinations of and/or synergies between the above-mentioned tools, technologies, and therapeutic approaches can be harnessed to improve patient care. This should include comparing the combination of innovative interventional approaches and clinical decision support systems (CDSS) versus limited or no systematic combination of these innovative interventional approaches and CDSS.
- Implement tools to confirm successful treatment during or after the procedure and monitor therapy response and disease regression.
- Develop and implement new methodologies to assess and demonstrate the added value of combining innovative interventional approaches and clinical decision support systems to all relevant stakeholders.
- Encourage the uptake of the results of the project through a strong communication and outreach plan, including the publication of a gap assessment in order to guide future research in this field.

Applicants are expected to consider allocating appropriate resources to explore synergies with other relevant initiatives and projects including any projects resulting from Horizon Europe Cluster 1 Health topics, and, where relevant, seek engagement with regulators (e.g. through the EMA Innovation Task Force, scientific advice).

### **Why the expected outcomes can only be achieved by an IHI project**

To achieve the transformation outlined above, a broad cross-sectoral collaboration is needed including healthcare professionals to give insights on their experience with the current technology utilisation and act as champions for the new developments, academic researchers, health economists, hospital management, public procurers, technology developers and vendors, and patients, who will benefit from the solutions. Integrating data from multiple origins/sources requires the cooperation of data holders, both public and private, in a non-competitive, neutral setting like an IHI project.

### **Indicative budget**

Applicant consortia will be competing for the maximum financial contribution from IHI of up to EUR 30 000 000.

IHI estimates that an IHI financial contribution of between EUR 8 000 000 and EUR 10 000 000 would allow a proposal to address these outcomes appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Applicant consortia must ensure that at least 45 % of the action's eligible costs are provided by contributions from industry members, their constituent or affiliated entities, and contributing partners.

Additional activities from industry members and their constituent or affiliated entities may also contribute towards this 45 % threshold, providing these activities are related to the project. Contributing partners do not contribute additional activities.

### **Indicative duration of the actions**

Applicants should propose a project duration that matches the project's activities and expected outcomes and impacts.

### **Dissemination and exploitation obligations**

The specific obligations described in the Conditions of the calls and calls management rules under "Specific conditions on availability, accessibility and affordability" do not apply<sup>1</sup>.

INDICATIVE TEXT

<sup>1</sup> See section 4.2.3.2 of this second amended Work Programme.