

Supplementary Table 1. Overview of factors – enablers and/or barriers – that influence nationwide upscaling of telemonitoring.

Domain	Contextual factors	Detailed description	Barrier, Enabler or Both	Number of times mentioned in publications
Context of diffusion	Norms & Attitudes	HCP think that patients become too dependent on technology ^{27 31 39}	Barrier	4
		HCP have scepticism or reservations about TM ^{28 31 35}	Barrier	3
		There must be a perceived usefulness and usability of equipment ^{27 31 39}	Both	3
		TM is convenient for patients ^{27 31 37}	Enabler	3
		HCP have a positive attitude (towards usefulness, feasibility, potential) ^{29 31 37}	Enabler	3
		There is concern amongst HCP that acting on the TM data provided could lead to overtreatment ^{27 31}	Barrier	2
		HCP consider use of TM relevant ^{21 28}	Enabler	2
		HCP have high expectations of working with TM ³⁶	Both	2
		TM makes patients anxious ^{27 31}	Barrier	2
		HCP think that TM can increase workload and make planning more difficult ^{35 36}	Barrier	2
		Make patients feel more empowered to take a pro-active approach to their health ²⁷ or should be empowered to engage with technologies for selfmanagement and self-care purposes ⁴⁰	Enabler	2
		HCP perceive a shift to technology making medical decisions or support in medical decision making ^{29 37}	Both	2
		Although the HCP had high perceptions and expectations of working with TM, these were not positively reflected in the actual experiences. ³⁶	Barrier	1
		HCP expect to manage caseload more efficiently ³⁵	Enabler	1
		Change personal practice ²⁷	Both	1
Concerns about the impact of telehealth on nursing roles ³⁵	Barrier	1		
HCP experience a lack of advantage ²⁸	Barrier	1		

		HCP who have the knowledge and experience in TM, tend to have a less positive attitude compared with technical professionals, who might be driven by their greater enthusiasm for technology in general. ²⁹	Both	1
		HCP think that TM is more expensive than conventional treatment ²⁹	Barrier	1
		Technical professionals are more confident about patient compliance than HCP ²⁹	Both	1
		HCP concern about privacy protection ²⁹	Barrier	1
		HCP concern about the loss of control over the medical treatment ²⁹	Barrier	1
		HCP think that patient acceptance is a factor of influence ³⁷	Both	1
		Use of telehealth is an important new skill for HCP, as was the ability to understand trends in the management of long-term conditions ³¹	Enabler	1
		HCP see TM as an opportunity for professional career development ³¹	Enabler	1
		HCP consider "Our centre is innovative" ²¹	Enabler	1
		Patients need to accept their old age and health condition, before they use TM ³⁹	Both	1
		Reducing the level of face-to-face contact with the patients was a concern for professionals, but this concern was not universally shared by patients, some of whom experienced the non-face-to-face contact as additional and efficient input. ²⁷	Enabler	1
		HCP have concerns about the appropriateness of telehealth for the very severely ill ³¹	Barrier	1
		Early positive experiences and the sharing of success were identified as key enablers for staff acceptance. Early negative experiences of telehealth have a long-lasting impact on staff acceptance and the predominant view among participants ³⁵	Both	1
		HCP state that telemonitoring provides higher patient satisfaction (related to home-monitoring) and does not require hospital staff to visit patients at home ³⁸	Enabler	1
	Organisational structure & process	Security and privacy aspects that influence implementation ^{21 24 28 32 38 40}	Both	6
		Rules and protocols on the implementation of the system and responsibility for incoming data ^{21 28 35 36 40}	Both	5
		Certain processes / coordination support implementation of TM ^{28 32 35 36}	Both	4

		Use of TM enables clinical decision support and influence adoption of guidelines ^{24 26 27}	Enabler	3
		Regular data sharing had a motivating effect on patients, as they were aware that at some point the readings may be reviewed ²⁷ or is a possible limitation ⁴⁰	Both	2
		A wide program of change management to support healthcare transformation and adoption of new working practices ^{24 40}	Both	2
		Reduce admissions or readmissions ^{21 36}	Enabler	2
		Creating central databases making the transmitted data accessible to the treating physician and serving as data registries that benefit medical research ²⁴	Enabler	1
		Set up appropriate vendor agreements and infrastructure ²⁴	Both	1
		Protocols on the acceptable length of time between the moment of incoming patient data and the response of the HCP(response-reaction time) ³⁶	Both	1
		Difficult to obtain relevant data about patients and ensuring that relevant data –	Barrier	1

		limited tailoring to individual patient - is shared with HCP ³⁵		
		Limited options for discharging patients who will benefit from continued use ³⁵	Barrier	1
		Referral routes should be opened up for patients with other conditions and with less complex needs ³⁵	Both	1
		A changing environment is a barrier ³⁵	Barrier	1
		The introduction (the way of communication, red.) to frontline staff influences implementation ³⁵	Both	1
		Organisational size influences implementation of TM ²⁵	Both	1
	Resources	Costs / financing of TM ^{21 24-26 28 35-38}	Both	9
		Knowledge of HCP / training of frontline staff ^{21 24 28 32 35-37 40}	Both	8
		Reimbursement as an element of financial resources ^{21 24 26 28 33 37 38 40}	Both	8
		The TM-system access to the EMR / interfacing of technologies ^{24 26 27 32 35 37}	Both	6
		Design of telemonitoring system / usability ^{26 27 32 37 39 40}	Both	6
		Availability of equipment ^{21 28 35 37}	Both	5
		Sufficient staffing ^{26 28 32 37 40}	Both	5

		Time for implementation TM ^{27 32 35}	Both	5
		Lack of evidence for TM ^{21 24 26 40}	Both	4
		Engage stakeholders in system design ^{32 35 40}	Both	4
		(Lack of)Cloud acces, internet access or cellular access ^{28 32 37}	Both	3
		Organisational readiness ^{25 33}	Both	2
		Significant income disparities which impact the ability to enforce guidelines and advance adoption of TM ²⁴	Barrier	2
		An externally resourced system for installation, technical support, maintenance and de-installation ^{35 37}	Both	2
		Local "champions" ³⁵	Both	1
		Top management support ^{25 40}	Both	1
		Staff to assume monitoring and management responsibilities for patients outside the hospital ²⁶	Both	1
		On-boarding process to a TM project. ³⁷	Both	1
		(Patient)education to address concerns regarding the use of remote monitoring , specifically for older adults, as an enabler ⁴⁰	Enabler	1
		Assessment of added value should be calculated ³⁸	Enabler	1
	Policies & Incentives	Addressing security, social and ethical issues to enable implementation of TM ^{24 28 32 37 38}	Both	5
		A (lack of) vision of an organisation on implementing TM ^{21 28 35}	Both	3
		Worldwide, European and statelevel policies and legal and regulatory frameworks ^{24 26 40}	Both	3
		New or adjusted workflows, care paths or data management ^{24 27 37}	Both	3
		Consensus statements and national guidelines ^{22 24}	Both	2
		Reimbursement or alternative payment models as a financial incentive for organisations ^{24 26}	Both	2
		Target patients, volume of population, data load and work intensity within organisations ^{28 35 37}	Both	3
		Interoperability standards crucial to the success of scaling remote patient monitoring programs ³²	Both	1

	Policy and practice developments affecting health care services ³⁵	Both	1
	Importance of TM for health authorities ²¹	Enabler	1
Networks & Linkages	Collaboration non-profit or public-private organisations ^{22 24 26 35 40}	Both	5
	Not being able to collaborate with other hospitals or clinics and primary care providers ^{28 32}	Barrier	2
	Professional organisations in collaboration with national societies can play an important role in catalysing reimbursement and adoption ²⁴	Enabler	1
Media & Change Agents	Advocates, early adopters and local champions enable implementation of TM ^{24 35}	Enabler	2
	Create (and increase) awareness in the general clinical community of the potential that remote monitoring has ^{37 40}	Enabler	2
	A standardized initiation video call to inform and instruct each participating centre ³⁷	Enabler	1
	(Lack of) guidelines from health care authorities ²¹	Both	1
	Device manufacturer that invest in TM ²⁴	Enabler	1
	The dynamics [SEP] in the COVID-19 pandemic may have impacted the use of TM ³⁷	Enabler	1
	Consensus on the implementation and research agenda can pave the road to the widespread use of digital health services ³⁸	Enabler	1
	A national repository could act as the first port of call where policy makers, clinicians and users could access information on remote monitoring projects ⁴⁰	Enabler	1
	Information about strategies to educate and empower patients were provided ³⁷	Enabler	1
	Professional societies can review and potentially endorse TM applications that offer valuable decision support and empower the physician's relationship to the patient ²⁴	Enabler	1

HCP= Health Care Professional, TM= Telemonitoring