# Appendix 1: Search strings

In order to cover the whole variety of existing literature about health technology assessment of eHealth technologies, a systematic literature search was conducted in two steps:

1) Identification of HTA models assessing eHealth technologies (addressing RQ 1).

2) Nested search for each model to identify instruments and methods used within the models (addressing RQ2).

## Databases

The online data basis PubMed (Medline), Cochrane (Wiley), PsychINFO (EBSCO), Embase, Web of Science (Thomson Reuters / Clarivate Analytics) was searched using the synonyms of the main concepts as search terms. For each database, separate dedicated search strings were developed.

## Benchmark definitions

The main concepts of the systematic review were defined as follows:

### eHealth Technology

The field of eHealth makes use of information and communication technologies for health (WHO); i.e. eHealth technologies. The aim of using eHealth technologies is either to provide the health service itself, or deliver and enhance information about health care through the Internet in order to improve overall health. eHealth technologies refer to a spectrum of information and communication devices including diagnostic, preventive, and treatment methods, the equipment needed to provide information, as well as organizational and support systems used to deliver the eHealth care. Since all these technologies serve different purposes, they all address very different target groups. In this review, mHealth technologies are considered as a special branch of eHealth.

### eHealth Intervention

eHealth interventions refer to the provision of health care services across distances by means of information and communication technologies. Similar to a mental health intervention, an eHealth intervention needs to fulfill certain criteria to be considered as such: the eHealth intervention need to be evidence-based (meaning that the effectiveness is proven by scientific evaluation), they need to have a clinical value, and are initially designed to and performed for the purpose to assess, improve, maintain, promote or modify health, functioning, or health conditions.

### HTA frameworks

In general, Health Technology Assessment (HTA) HTA is concerned with the production of evidence about efficacy and efficiency of clinical interventions including eHealth technology with the aim to inform policy. Put differently, an HTA concerns the systematic evaluation of the mainly quantitative properties and effects of a health technology, addressing the direct and intended effects, as well as its indirect and unintended consequences. HTA is a multidisciplinary process to evaluate the social, economic, organizational and ethical issues of a health technology.

In conducting HTA, the evaluations are structured in accordance with a pre-specified structure or framework to enable comparison and transfer of assessments to other healthcare contexts. The term framework here refers to the outline or plan consisting of various descriptive categories that are presumed to be relevant in addressing relevant questions in policymaking. These frameworks do not provide explanations of phenomena, but provide descriptions structured into a set of categories. The end-point of any HTA is to inform decision making regarding health technologies.

### Instruments

To increase the quality and transparency of the assessments, certain pre-defined techniques and instruments (e.g. systematic reviews of clinical effectiveness of an intervention expressed in numbers-needed-to-be-treated, or in assessing cost-effectiveness using estimates of Incremental Cost-Effectiveness Ratios, or cost-benefit analysis) are used in addressing the various aspects of the frameworks used.

Instruments here refers to the whole of concepts, measurement approaches, and mathematical techniques within the HTA framework used to assess certain aspect of the intervention that is assessed.

## Synonyms

### Health technology assessment

Technology Assessment, Biomedical (indexed), HTA, technology assessment\*, technology evaluation\*

### eHealth

Mobile Applications (indexed), Telemedicine (indexed), ehealth, e-health, emental, e-mental, etreat\*, e-treat\*, etherap\*, e-therap\*, blended\*, e-counsel\*, ecounsel\*, mhealth, m-health, mobile-device\*, mobile-phone\*, mobilephone\*, smartphone\*, smart-phone\*, cell-phone\*, cellphone\*, cellular-phone\*, ICT, information-technolog\*, tele-med\*, telemed\*, telehealth, tele-health, tele-care\*, telecare\*, telepsy\*, tele-psy\*, tele-therap\*, teletherap\*, telemon\*, tele-mon\*, telecommunicat\*, tele-communicat\*, tele-conferenc\*, teleconferenc\*, videoconf\*, video-conf\*, distance-counsel\*, distance-therapy , distance-care\*, computer-based\*, computerbased\*, computer-assist\*, computerassist\*, computer-mediated\*, computermediated\*, computer-generated\*, computergenerated\*, computerized\*, computerised\*, computer-sup\*, computersup\*, computer-program\*, computer-therap\*, computer-monit\*, internet-based\*, internet-deliver\*, internet-intervent\*, internet-treat\*, internet-assis\*, internet-administered, internet-aided, internet-application\*, internet-clinic\*, internet-consult\* , internet-counsel\*, internet-deploy\*, internet-doctor, internet-enabled, internet-guided, internet healthcare, internet-provided, internet-mediated, internet-therap\*, internet-monit\*, webbased\*, web-based\*, web-pag\*, webpag\*, webapp\*, web-app\*, webconf\*, web-conf\*, web-servic\*, webservic\*, web-administered, web-deliver\*, web-mediated, web-monit\*, electronic-based\*, electronic-assist\*, electronic-mediated\*, electronic-communicat\*, electronic-device\*, electronic-therap\*, electronic-treat\*, digital-device\*, digital-treat\*, digital-therap\*, digital-technolog\*, digital-assist\*, digital-monit\*, cybercounsel\*, cyber-counsel\*, online-treat\*, online-therap\*, onlinetherap\*, online-intervention\*, online-prevention\*, online-counsel\*, online-tool\*, onlinetool\*, online-health\*, onlinehealth\*, online-monit\*, text-messag\*, textmessag\*, SMS-based, short message service\*, mobile-app, mobile-apps, mobile-application\*, mobile-therap\*, mobile-monit\*, mobile-treat\*, software-app\* , electronic-app\*, handheld-device\*, hand-held-device\*, handheld-computer\*, hand-held-computer\*, email, e-mail, electronic mail, sensor\*, wearable\*, palmtop\*, telephone\* , forum, forums, forumclinic, virtual-realit\*, VR

### Search string (general)

[Health technology assessment] AND [eHealth]