

*Multimedia Appendix 3: Evaluating WelTel: characterizing its delivered BCTs, linking them to their intervention functions and COM-B*  
<sup>a</sup>BCT definitions from [18]. Refer to *Multimedia Appendix 2* for COM-B model definitions. Linkages specified in *Multimedia Appendix 1*.

(1) Automated text message component (2)(3)(4) Personalized communication component		CAPABILITY		OPPORTUNITY		MOTIVATION	
		P H Y S I C A L	P S Y C H	P H Y S I C A L	S O C I A L	R E F L E C T	A U T O M A T I C
Text description of intervention (from WelTel user manual)	Identified BCT <sup>a</sup> <hr/> Intervention Function (refer to <i>Multimedia Appendix 1</i> for individual definitions)						
(1) “Patients received weekly message saying ‘Mambo’ (how are you?), must reply ‘Sawa’ (fine) or ‘Shida’ (not fine)”	7.1 (prompts/cues): “Introduce or define environmental or social stimulus with the purpose of prompting or cueing the behavior” <hr/> Environmental restructuring			✓			✓
(2) “The clinician then called patients who said they had a problem or who failed to respond within 2 days.”	3.1 (social support - unspecified): “Advise on, arrange or provide social support or non-contingent praise or reward for performance of the behavior. It includes encouragement and counselling, but only when it is directed at the behavior” 7.1 (prompts/cues): “Introduce or define environmental or social stimulus with the purpose of prompting or cueing the behavior” <hr/> Enablement, Environmental restructuring			✓	✓		✓
(3) “The clinician appropriately provides patient with personalized support, such as addressing stigma around HIV/AIDS, provision of education relating to the importance of adhering to treatment, and the consequences of not engaging in this behavior”	11.2 (reduce negative emotions): “Advise on ways of reducing negative emotions to facilitate performance of the behavior” 9.1 (credible source): “Present verbal or visual communication from a credible source in favour of or against the behavior” 5.1 (natural consequences): “Information about health consequences” 3.3 (social support - emotional): “Advise on, arrange, or provide emotional support for performance of the behavior” <hr/> Education, Persuasion, Enablement		✓	✓	✓	✓	✓
(4) “The clinician may help to clarify patient ART dosing regimen upon confusion, as well as how to manage adverse effects”	3.2 (social support - practical): “Advise on, arrange, or provide practical help for performance of the behavior” 4.1 (instruction on how to perform a behavior): “Advise or agree on how to perform the behavior” <hr/> Training, Enablement	✓	✓	✓	✓		✓