

Why, What and When in-Home Physiotherapy? 😣

Gabriela Postolache (Universidade de Lisboa, Portugal), Raul Oliveira (Universidade de Lisboa, Portugal), Isabel Moreira (Universidade do Porto, Portugal) and Octavian Postolache (Instituto de Telecomunicações, ISCTE-IUL, Portugal)

Source Title: Health Care Delivery and Clinical Science: Concepts, Methodologies, Tools, and Applications (/gateway/book/181911) Copyright: © 2018 Pages: 25 ISBN13: 9781522539261ISBN10: 1522539263EISBN13: 9781522539278

DOI: 10.4018/978-1-5225-3926-1.ch045

Cite Chapter ❤ Favorite ★

View Full Text HTML >

(/gateway/chapter/full-text-html/192710)

View Full Text PDF >

(/gateway/chapter/full-text-pdf/192710)

Abstract

In the last decade, rehabilitation process has shifted from medical management to issues that enhance quality of life, community participation, treatment and cost effectiveness. In this context physiotherapists design and implement new and/or tailored interventions that enhance physical and functional abilities, restore, maintain, and promote optimal physical function, wellness, fitness and quality of life. The aim of this review was to assess the extent, content, and outcomes of in-home physiotherapy interventions. A search was conducted in Medline, PEDro, and Cochrane Library and IEEE Xplore. RE-AIM and GRADE guidelines were used to report this review. The findings suggest that in-home physiotherapy tailored specifically to the people needs, functioning and disability has positive results, including patients' engagement in their healthcare. Integration of information and communication technology in-home physiotherapy has great potential to increase accessibility, quality and effectiveness of various interventions provided by physiotherapists.

Request access from your librarian to read this chapter's full text.

Full Text Preview

Introduction

In-home physiotherapy is rapidly growing, in line with the current shift in emphasis toward: i) patient- centered healthcare, compliant with 4P medicine (personalized, preventive, predictive, participatory medicine) (see Hood & Galas, 2008); ii) selfmanagement for people with long-term and/or chronic conditions, in which greater use of community settings and individual autonomy are being encouraged (see Lommi, Matarese, Alvaro, Piredda, & De Marinis, 2015); iii) healthcare delivery closer to patients' homes - aiming for increasing access to healthcare services, cost-effectiveness, and sustainability of healthcare system (see Coulter, 2005). With advances in information and communication technologies (ICT), dramatic changes are produced in health care provision. There is increasing evidence suggesting great potential of ICT (see list of definitions) to meet healthcare aspirations of patients and citizens (see Coulter, 2005) as: fast access to reliable information about illness and treatment options; attention to physical and environmental needs; participation in health care decision and service developments, etc. ICT through contribution to patient engagement (see Triberti & Riva, 2014a), particularly on patient engagement in physical rehabilitation process (see Triberti et al., 2014) lead to more appropriate health care, tailored treatment, better health outcome and cost effective use of health services (Graffigna & Barello, 2015; Triberti et al., 2014). Home health technologies are now emerging as a distinct segment within the larger ICT market, forecasting the increase of consumers using home health technologies from 14.3 million worldwide in 2014 to 78.5 million by 2020 (Tractica, 2015). This is produced by: rapidly advances in ICT; increased access to Internet - 82,1% of European and 60% American population has now Internet access at home; development of mobile technologies; and increased access to mobile technologies - approximately 80% of Europeans and Americans have active mobile broadband subscriptions (ITU, 2015).

The interest on model, determinants, and technologies for in-home health care has led to a rise in the number of studies addressing the same, or very similar research questions, with a concurrent increase in discordant findings in terms of direction and magnitude of in-home physiotherapy interventions. Differences in scope, methods, and results in studies realized by health care professionals, engineers or information technology specialists cause great confusion, and make it difficult for decision makers to analyze the level of evidence towards finding solutions to improve practice and identify areas where new research is needed.

We investigated the extent (demographic, health, functioning/disability characteristics of patients, level of evidence, amplitude of practice implementation and adoption), content (what type of physiotherapy intervention, in which clinical condition, what technique or technology is used) and outcomes (e.g. balance, posture, coordination) of in-home physiotherapy. The aim of this chapter is characterization of the level of evidence of in-home physiotherapy in various clinical conditions, and on technology use for in-home physiotherapy. We present the framework for the analysis of the level of evidence related with in-home physiotherapy (Study Design and Methodology section) and the results (Main Evidence section) on what and when in-home physiotherapy, emphasizing why in-home physiotherapy may contribute to patient engagement in health care. Ongoing research and trends in technology for in-home physiotherapy are presented in Future Researches section.

Continue Reading (/gateway/chapter/full-text-html/192710)

References

Follow Reference	Adie K. Schofield C. Berrow M. Wingham J. Freeman J. Humfryes J. Pritchard C. (2014). Does the use of Nintendo Wii Sports improve arm function and is it acceptable to patients after stroke? Publication of the Protocol of the Trial of Wii in Stroke - TWIST.International Journal of General Medicine, 7(1), 475–481. 10.2147/IJGM.S6537925336985	
Follow Reference	Al-Jundi W. Madbak K. Beard J. D. Nawaz S. Tew G. A. (2013). Systematic review of home-ba exercise programmes for individuals with intermittent claudication. European Journal of Vascula and Endovascular Surgery, 46(6), 690–706. 10.1016/j.ejvs.2013.09.00424076079	
	Alliance for Home Health Quality & Innovation. (2014). <i>The Future of Home Health Care Project</i> . Retrieved August, 2015, from http://www.ahhqi.org/images/pdf/future-whitepaper.pdf (http://www.ahhqi.org/images/pdf/future-whitepaper.pdf)	

Follow Reference	Anderson G. Hussey P. (2001). Comparing health system performance in OECD countries.Health Affairs, 20(3), 219–232. 10.1377/hlthaff.20.3.21911585171	
Follow Reference	Anderson L. Taylor R. S. (2014). Cardiac rehabilitation for people with heart disease: An overview of Cohrane systematic reviews.Cochrane Database of Systematic Reviews, 12, CD011273.25503364	
Follow Reference	Barello S. Graffigna G. (2015). Patient engagement in healthcare: Pathways for effective medical decision-making.Neuropsychological Trend, 17(17), 53–65. 10.7358/neur-2015-017-bare	
Follow Reference	Barzel A. Ketels G. Tetzlaff B. Krüger H. Haevernick K. Daubmann A. Scherer M. (2013). Enhancing activities of daily living of chronic stroke patients in primary health care by modified constraint-induced movement therapy (HOMECIMT): Study protocol for a cluster randomized controlled trial.Trials, 14, 334.24124993	
Follow Reference	Beratarrechea A. Lee A. G. Willner J. M. Jahangir E. Ciapponi A. Rubinstein A. (2014). The impact of mobile health interventions on chronic disease outcomes in developing countries: A systematic review.Telemedicine Journal and e-Health, 20(1), 75–82. 10.1089/tmj.2012.032824205809	
Follow Reference	Boyd R. N. Mitchell L. E. James S. T. Ziviani J. Sakzewski L. Smith A. Scuffham P. A. (2013). Move it to improve it (Mitii): Study protocol of a randomised controlled trial of a novel web-base multimodal training program for children and adolescents with cerebral palsy.BMJ Open, 3(4), 4. 10.1136/bmjopen-2013-00285323578686	
Follow Reference	Broetz D. Birbaumer N. (2013). Behavioral physiotherapy in post stroke rehabilitation.NeuroRehabilitation, 33, 377–384.23949069	
Follow Reference	Bujnowska-Fedak M. M. Kurpas D. (2015). The influence of online health information on the attitude and behavior of people Aged 50.Advances in Experimental Medicine and Biology, 861, 1–17. 10.1007/5584_2015_13026017724	
Follow Reference	Burton E. Lewin G. Clemson L. Boldy D. (2013). Effectiveness of a lifestyle exercise program for older people receiving a restorative home care service: Pragmatic randomized controlled trial.Clinical Interventions in Aging, 8, 1591–1601. 10.2147/CIA.S4461424324331	
	Cancela J. Moreno E. M. Arredondo M. T. Bonato P. (2014) Designing auditory cues for Parkinson's disease gait rehabilitation.Proceedings IEEE Engineering in Medicine and Biology Society (pp. 5852-5855).	
Follow Reference	Chan Y. Wang T. Chang C. Chen L. Chu H. Lin S. Chang S. (2015). Short-term effects of self- massage combined with home exercise on pain, daily activity, and autonomic function in patients with myofascial pain dysfunction syndrome.Journal of Physical Therapy Science, 27(1), 217–221. 10.1589/jpts.27.21725642077	
Follow Reference	Chien C. L. Lee C. M. Wu Y. W. Chen T. A. Wu Y. T. (2008). Home-based exercise increases capacity but not quality of life in people with chronic heart failure: A systematic review. The Australian Journal of Physiotherapy, 54(2), 87–93. 10.1016/S0004-9514(08)70041-218491999	
	Cinel C. Poli R. Citi L. Robertson D. (2013). An exploration of the effects of audio-visual entrainment on Parkinson's disease tremor.Proceedings IEEE EMBS Conference on Neural Engineering (pp. 1562-1565).	

Follow Reference	Close J. C. Wesson J. Sherrington C. Hill K. D. Kurrle S. Lord S. R. Clemson L. (2014). Can a tailored exercise and home hazard reduction program reduce the rate of falls in community dwelling older people with cognitive impairment: Protocol paper for the i-FOCIS randomised controlled trial.BMC Geriatrics, 14(89), 1–14.25128411	
Follow Reference	Coulter A. (2005). What do patients and the public want from primary care?BMJ (Clinical Research Ed.), 331(7526), 1199–1201. 10.1136/bmj.331.7526.119916293845	
Follow Reference	Coulter A. Magee H. (2003). The European patient of the future. McGraw Hill Education.	
Follow Reference	Coulter C. L. Scarvell J. M. Neeman T. M. Smith P. N. (2013). Physiotherapist-directed rehabilitation exercises in the outpatient or home setting improve strength, gait speed and cadence after elective total hip replacement: A systematic review.Journal of Physiotherapy, 59(4), 219–226. 10.1016/S1836-9553(13)70198-X24287215	
Follow Reference	Crocker T. Young J. Forster A. Brown L. Ozer S. Greenwood D. C. (2013). The effect of physical rehabilitation on activities of daily living in older residents of long-term care facilities: Systematic review with meta-analysis. Age and Ageing, 42(6), 682–688. 10.1093/ageing/aft13324004604	
	Ferguson, T. (2007). <i>E-Patients: How they can help us heal healthcare</i> . Retrieved from http://e-patients.net/e-Patients_White_Paper.pdf (http://e-patients.net/e-Patients_White_Paper.pdf)	
	Fischer G. (2012). Context-Aware Systems -The 'right' information, at the 'right' time, in the 'right' place, in the 'right' way, to the 'right' person. In TortoraG.LevialdiS.TucciM. (Eds.), Proceedings of the Conference on Advanced Visual Interfaces (AVI 2012), Capri, Italy (pp. 287-294). ACM.	
	Gartner Inc. (2015). <i>Gartner's 2015 hype cycle for emerging technologies identifies the computing innovations that organizations should monitor</i> . Retrieved from http://www.gartner.com/newsroom/id/3114217 (http://www.gartner.com/newsroom/id/3114217)	
Follow Reference	Gee P. M. Paterniti D. A. Ward D. Soederberg Miller L. M. (2015). e-Patients Perceptions of Using Personal Health Records for self-management Support of Chronic Illness.Computers, Informatics, Nursing, 33(6), 229–237. 10.1097/CIN.0000000000015125899440	
Follow Reference	Giangregorio L. M. Thabane L. Adachi J. D. Ashe M. C. Bleakney R. R. Braun E. A. Papaioannou A. (2014). Build better bones with exercise: Protocol for a feasibility study of a multicenter randomized controlled trial of 12 months of home exercise in women with a vertebral fracture.Physical Therapy, 94(9), 1337–1352. 10.2522/ptj.2013062524786946	
	Glasgow, R. E. (2013). <i>Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM).</i> Retrieved from http://www.re-aim.hnfe.vt.edu/presentations/glasgow2013presentation.pdf (http://www.re-aim.hnfe.vt.edu/presentations/glasgow2013presentation.pdf)	
Follow Reference	Grimmer K. Luker J. Beaton K. Kumar S. Crockett A. Price K. (2013). Trialing individualized interventions to prevent functional decline in at-risk older adults (TRIIFL): Study protocol for a randomized controlled trial nested in a longitudinal observational study. Trials, 14(1), 266. 10.1186/1745-6215-14-26623962259	
Follow Reference	Geference Gschwind Y. J. Kressig R. W. Lacroix A. Muehlbauer T. Pfenninger B. Granacher U. (2013). A best practice fall prevention exercise program to improve balance, strength / power, and psychosocial health in older adults: Study protocol for a randomized controlled trial.BMC Geriatrics, 13(1), 105. 10.1186/1471-2318-13-10524106864	

Follow Reference	Gubbi J. Buyya R. Marusic S. Palaniswami M. (2013). Internet of Things (IoT): A vision, architectural elements, and future directions.Future Generation Computer Systems, 29(7), 1645-1660. 10.1016/j.future.2013.01.010	
Follow Reference	Gunn H. Cattaneo D. Finlayson M. Freeman J. Sosnoff J. J. (2014). Home or away? Choosing a setting for a falls-prevention program for people with multiple sclerosis.International Journal or MS Care, 16(4), 186–191. 10.7224/1537-2073.2014-05825694777	
Follow Reference	Hoerbst A. Ammenwerth E. (2010). Electronic Health Records. A systematic review on quarequirements. Methods of Information in Medicine, 49(4), 320–336. 10.3414/ME10-01-003820603687	
	Hood, L. E., & Galas, D. J. (2008). <i>P4 Medicine: personalized, predictive, preventive, participatory. A change of view that changes everything.</i> Washington: Computing Community Consortium. Retrieved from http://cra.org/ccc/wp-content/uploads/sites/2/2015/05/P4_Medicine.pdf (http://cra.org/ccc/wp-content/uploads/sites/2/2015/05/P4_Medicine.pdf)	
Follow Reference	Imbeault-Nepton I. Otis M. J. D. (2014). Synchronized walking cadence for TUG in perturbed environments: using Earcon or Tacton cues?Proceedings of IEEE Internation Symposium on Haptic, Audio and Visual Environments and Games (HAVE) (pp. 41-46). 10.1109/HAVE.2014.6954329	
	International Telecommunication Union. (2015). <i>The World Telecommunication/ICT Indicators Database</i> . Retrieved from http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx (http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx)	
Follow Reference	Irizarry T. DeVito Dabbs A. Curran C. R. (2015). Patient portals and patient engagement: A state of the science review.Journal of Medical Internet Research, 17(6), e148. 10.2196/jmir.425526104044	
Follow Reference	Jaggers J. R. Dudgeon W. Blair S. N. Sui X. Burgess S. Wilcox S. Hand G. A. (2013). A home- based exercise intervention to increase physical activity among people living with HIV: Study design of a randomized clinical trial.BMC Public Health, 13(1), 502. 10.1186/1471-2458-13- 50223706094	
Follow Reference	Jolly K. Taylor R. Lip G. Y. H. Greenfield S. Raftery J. Mant J. Stevens A. (2007). The Birmingham Rehabilitation Uptake Maximisation Study (BRUM). Homebased compared wit hospital-based cardiac rehabilitation in a multi-ethnic population: Cost-effectiveness and pati adherence.Health Technology Assessment, 11(35), 1–118. 10.3310/hta1135017767899	
Follow Reference	Jull G. Moore A. (2013). Manual Therapy.Manual Therapy, 18(6), 447–448. 10.1016/j.math.2013.09.00624188381	
Follow Reference	Kaye R. Kokia E. Shalev V. Idar D. Chinitz D. (2010). Barriers and success factors in health information technology: A practitioner's perspective.Journal of Management & Marketing in Healthcare, 3(2), 163–175. 10.1179/175330310X12736577732764	
Follow Reference	Kent P. Laird R. Haines T. (2015). The effect of changing movement and posture using motion sensor biofeedback, versus guidelines-based care, on the clinical outcomes of people with sub acute or chronic low back pain-a multicentre, cluster-randomised, placebo-controlled, pilot trial.BMC Musculoskeletal Disorders, 16(1), 131. 10.1186/s12891-015-0591-526022102	

Follow Reference	Kraal J. J. Peek N. van den Akker-Van Marle M. E. Kemps H. M. (2013). Effects and costs of home-based training with telemonitoring guidance in low to moderate risk patients entering cardiar rehabilitation: The FIT@Home study.BMC Cardiovascular Disorders, 13(1), 82. 10.1186/1471-2261-13-8224103384	
Follow Reference	Lee H. N. Lee S. Y. Lee Y. S. Han J. Y. Choo M. S. Lee K. S. (2013). Pelvic floor muscle training using an extracorporeal biofeedback device for female stress urinary incontinence. International Urogenicology Journal, 24(5), 831–838. 10.1007/s00192-012-1943-423052631	
Follow Reference	Linder S. M. Rosenfeldt A. B. Reiss A. Buchanan S. Sahu K. Bay C. R. Alberts J. L. (2013). The home stroke rehabilitation and monitoring system trial: A randomized controlled trial.International Journal of Stroke, 8(1), 46–53. 10.1111/j.1747-4949.2012.00971.x23280269	
Follow Reference	Lommi M. Matarese M. Alvaro R. Piredda M. De Marinis M. G. (2015). The experiences of self- care in community-dwelling older people: A meta-synthesis.International Journal of Nursing Studies, 52(12), 1854–1867. 10.1016/j.ijnurstu.2015.06.01226296653	
Follow Reference	McAuley E. Wójcicki T. R. Gothe N. P. Mailey E. L. Szabo A. N. Fanning J. Mullen S. P. (2013). Effects of a DVD-delivered exercise intervention on physical function in older adults. The Journal of Gerontology. Series A, Biological Sciences and Medical Sciences, 68(9), 1076–1082. 10.1093/gerona/glt01423401566	
Follow Reference	Mehta S. P. Roy J. S. (2011). Systematic revie of home physiotherapy after hip fracture surgery.Journal of Rehabilitation Medicine, 43(6), 477–480. 10.2340/16501977-080821491074	
Follow Reference	Mhatre P. V. Vilares I. Stibb S. M. Albert M. V. Pickering L. Marciniak C. M. Toledo S. (2013). Wii Fit balance board playing improves balance and gait in Parkinson disease.PM & R, 5(9), 769– 777. 10.1016/j.pmrj.2013.05.01923770422	
Follow Reference	Mortazavi B. Nyamathi S. Lee S. I. Wilkerson T. Ghasemzadeh H. Sarrafzadeh M. (2014). Near- realistic mobile exergames with wireless wearable sensors. <i>Biomedical and Health Informatics</i> . IEEE Journal of, 18(2), 449–456.	
	Naylor, C., Parsonage, M., McDaid, D., Knap, M., Fossey, M., & Galea, A. (2012). <i>Long-term conditions and mental health. The cost of co-morbidities</i> . The Kings Fund Report. Retrieved from http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/long-term-conditions-mental-health-cost-comorbidities-naylor-feb12.pdf (http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/long-term-conditions-mental-health-cost-comorbidities-naylor-feb12.pdf)	
Follow Reference	Nhavoto J. A. Gronlund A. (2014). Mobile technologies and geographic information systems to improve health care systems: A literature review.JMIR Mhealth and Uhealth, 2(2), e21. 10.2196/mhealth.321625099368	
Follow Reference	Novak I. (2011). Effective home programme intervention for adults: A systematic review.Clinical Rehabilitation, 25(12), 1066–1085. 10.1177/026921551141072721831927	
Follow Reference	December). The Epidemiologic Transition: A Theory of the Epidemiology of Population Change. The Milbank Quarterly, 83(4), 731–757?> Omran A. R. (2005). First published 1971). The epidemiological transition: A theory of the epidemiology of population change. The Milbank Quarterly, 83(4), 731–757. 10.1111/j.1468-0009.2005.00398.x16279965	
Follow Reference	Ontario H. Q. (2013). In-home care for optimizing chronic disease management in the community: An evidence-based analysis.Ontario Health Technology Assessment Series, 13(5), 1–65.24167539	

Follow Reference	Outpatient Service Trialists . (2004). Rehabilitation therapy services for stroke patients living at home: Systematic review of randomized trials.Lancet, 363(9406), 352–356. 10.1016/S0140-6736(04)15434-215070563	
Follow Reference	Papalia R. Vasta S. Tecame A. D'Adamio S. Maffulli N. Denaro V. (2013). Home-based vs supervised rehabilitation programs following knee surgery: A systematic review.British Medical Bulletin, 108(1), 55–72. 10.1093/bmb/ldt01423690452	
Follow Reference	Pepa L. Ciabattoni L. Verdini F. Capecci M. Ceravolo M. G. (2014). Smartphone based fuzzy logic freezing of gait detection in Parkinson's disease.Proceeding IEEE/ASME Conference on Mechatronic and Embedded Systems and Applications (MESA) (pp. 1-6).	
	Postolache G. Girao P. S. Postolache O. (2013). Requirements and barriers to pervasive health adoption. In MukhopadhyayS. C.PostolacheO. A. (Eds.), Pervasive and Mobile Sensing and Computing for Health Care. Technological and Social Issues (pp. 315–352). Springer Verlag. 10.1007/978-3-642-32538-0_15	
	Rechel, B., Doyle, Y., Grundy, E., & McKee, M. (2009). <i>Policy brief. 10 Health system and policy analysis. How can health system respond to population ageing?</i> WHO Report. Retrieved from http://www.euro.who.int/data/assets/pdf_file/0004/64966/E92560.pdf (http://www.euro.who.int/data/assets/pdf_file/0004/64966/E92560.pdf)	
Follow Reference	Rodger M. W. Young W. R. Craig C. M. (2014). Synthesis of walking sounds for alleviating gait disturbances in Parkinson's.IEEE Transactions on Neural Systems and Rehabilitation Engineering, 22(3), 543–548. 10.1109/TNSRE.2013.228541024235275	
Follow Reference	Siemonsma P. Döpp C. Alpay L. Tak E. van Meeteren N. Chorus A. (2014). Determinants influencing the implementation of home-based stroke rehabilitation: A systematic review.Disability and Rehabilitation, 36(24), 2019–2030. 10.3109/09638288.2014.88509124520957	
Follow Reference	Sinclair J. Hingston P. Masek M. (2007). Considerations for the design of exergames.Proceeding GRAPHITE'07 International Conference on Computer Graphics and Interactive Techniques in Australia and Southeast Asia (pp. 289-295). 10.1145/1321261.1321313	
Follow Reference	Srikesavan C. S. Shay B. Robinson D. B. Szturm T. (2013). Task-oriented training with computer gaming in people with rheumatoid arthritisor osteoarthritis of the hand: Study protocol of a randomized controlled pilot trial.Trials, 14(1), 69. 10.1186/1745-6215-14-6923497529	
Follow Reference	Stange K. C. Nutting P. A. Miller W. L. Jaén C. R. Crabtree B. F. Flocke S. A. Gill J. M. (2010). Defining and measuring the patient-centered medical home.Journal of General Internal Medicine, 25(6), 601–612. 10.1007/s11606-010-1291-320467909	
Follow Reference	Takekawa T. Abo M. Ebihara K. Taguchi K. Sase Y. Kakuda W. (2013). Long-term effects of injection of botulinum toxin type A combined with home-based functional training for post-stroke patients with spastic upper limb hemiparesis. Acta Neurologica Belgica, 113(4), 469–475. 10.1007/s13760-013-0208-423716062	
Follow Reference	Thomas M. J. Simpson J. Riley R. Grant E. (2010). The impact of home-based physiotherapy interventions on breathlesness during activities of daily living in severe COPD: A systematic review.Physiotherapy, 96(2), 108–119. 10.1016/j.physio.2009.09.00620420957	

Why, What and When in-Home Physiotherapy? | IGI Global

Follow Reference	Thomas S. Fazakarley L. Thomas P. W. Brenton S. Collyer S. Perring S. Hillier C. (2014). Testir the feasibility and acceptability of using the Nintendo Wii in the home to increase activity levels vitality and well-being in people with multiple sclerosis (Mii-vitaliSe): Protocol for a pilot randomised controlled study.BMJ Open, 4(5), e005172. 10.1136/bmjopen-2014-0051722481219	
Follow Reference	Tousignant M. Corriveau H. Kairy D. Berg K. Dubois M. F. Gosselin S. Danells C. (2014). Tai Chi-based exercise program provided via telerehabilitation compared to home visits in a post-stroke population who have returned home without intensive rehabilitation: Study protocol for a randomized, non-inferiority clinical trial.Trials, 15(1), 42. 10.1186/1745-6215-15-4224479760	
	Tractica. (2015). Home health technologies, medical monitoring and management, remote consultations, eldercare, and health and wellness applications: Global market analysis and forecast. Retrieved August, 2015, from https://www.tractica.com/research/home-health-technologies/ (https://www.tractica.com/research/home-health-technologies/)	
Follow Reference	Triberti S. Barello S. Graffigna G. Riva G. Candelieri A. Archetti F. (2014). Evaluating patient engagement and user experience of a positive technology intervention: the H-CIM case. In GraffignaG.BarelloS.TribertiS. (Eds.), Patient Engagement. A consumer Centered Model to Innovate Healthcare (pp. 66–77). De Gruyter Open.	
Follow Reference	Triberti S. Riva G. (2014a). Positive technology for enhancing the patient engagement experience In GraffignaG.BarelloS.TribertiS. (Eds.), Patient Engagement. A consumer Centered Model to Innovate Healthcare (pp. 44–55). De Gruyter Open.	
Follow Reference	Triberti S. Riva G. (2014b). Engaging users to design positive technologies for patient engagement: the perfect interaction model. In GraffignaG.BarelloS.TribertiS. (Eds.), Patient Engagement. A consumer Centered Model to Innovate Healthcare (pp. 56–65). De Gruyter Open.	
Follow Reference	Tzallas A. T. Tsipouras M. G. Rigas G. Tsalikakis D. G. Karvounis E. C. Chondrogiorgi M. Fotiadis D. I. (2014). PERFORM: A system for monitoring, assessment and management of patients with Parkinson's disease.Sensors (Basel), 14(11), 21329–21357. 10.3390/s14112132925393786	
Follow Reference	Valdes K. Naughton N. Michlovitz S. (2014). Therapist supervised clinic-based therapy versus instruction in a home program following distal radius fracture: A systematic review.Journal of Hand Therapy, 27(3), 165–174. 10.1016/j.jht.2013.12.01024508093	
	Wagner S. Hansen F. O. Pedersen C. F. Memon M. Aysha F. H. Mathissen M. Wesby O. L. (2013). CareStore Platform for seamless deployment of ambient assited living applications and devices.Proceedings of International Conference on Pervasive Computing Technologies for Healthcare and Workshops (pp. 240-243).	
Follow Reference	Williams T. Samarth A. (2011). Electronic Health Records for Dummies. Hobokem, NJ: Wiley Publishing, Inc.	
Follow Reference	Zhao Y. Anhalt F. Fietzek U. M. D'Angelo L. T. (2013). Multi-cue unit: An independent device and actuator of a wearable system for gait-support in Parkinson patients.Proceedings of IEEE International Conference on Microwaves, Communications, Antennas and Electronics Systems (COMCAS) (pp. 1-5). 10.1109/COMCAS.2013.6685287	

Request Access

You do not own this content. Please login to recommend this title to your institution's librarian or purchase it from the IGI Global bookstore (/chapter/why-what-and-when-in-home-physiotherapy/192710).

26.05.2021

0.2021	
Username or email:	
Password:	
	Log In >
Forgot individual login password? (/ga	ateway/login/reset-password/)

Research Tools

Database Search (/gateway/) | Help (/gateway/help/) | User Guide (/gateway/user-guide/) | Advisory Board (/gateway/advisory-board/)

User Resources

Librarians (/gateway/librarians/) | Researchers (/gateway/researchers/) | Authors (/gateway/authors/)

Librarian Tools

COUNTER Reports (/gateway/librarian-tools/counter-reports/) | Persistent URLs (/gateway/librarian-tools/persistent-urls/) | MARC Records (/gateway/librarian-tools/marc-records/) | Institution Holdings (/gateway/librarian-tools/institution-holdings/) | Institution Settings (/gateway/librarian-tools/institution-settings/)

Librarian Resources

Training (/gateway/librarian-corner/training/) | Title Lists (/gateway/librarian-corner/title-lists/) | Licensing and Consortium Information (/gateway/librarian-corner/licensing-and-consortium-information/) | Promotions (/gateway/librariancorner/promotions/) | Online Symposium Series (/gateway/librarian-corner/online-symposium-series/)

Policies

Terms and Conditions (/gateway/terms-and-conditions/)

(http://www.facebook.com/pages/IGI-

Global/138206739534176?ref=sgm)

(http://twitter.com/igiglobal) (https://www.linkedin.com/company/igiglobal)



children.org)

(https://publicationethics.org/category/publisher/igiglobal)

Copyright © 1988-2021, IGI Global - All Rights Reserved