



Ong Poo Lee

Consultant

MD(UKM), MRCP(UK), MMED(Int Med)

Research and Innovation Interests:

- Amputee Rehabilitation
- Trauma Rehabilitation
- Robotics and Assistive technology in rehabilitation

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Biography

Dr. Ong, an accredited Rehabilitation Medicine Specialist since 2020, holds an MRCP (UK) degree earned in 2016. In 2022, he completed the CHI Fellowship Program, furthering his expertise in healthcare innovation. During his tenure at Tan Tock Seng Hospital, Dr. Ong focused on trauma, musculoskeletal, and amputee rehabilitation. He's a fervent advocate for technology in rehabilitation, utilizing wearables, assistive tech, and robotics to enhance patient care. He is a graduate of the NHG CHI Fellowship Program in 2022, HMDP trauma fellowship award in 2025 and awardee of the NMRC clinician innovator award in 2024 and 2025 LKC ACSI young innovator award.

Selected Publications

- Tham SL, Ong PL, Lee AJY, Tay MRJ. Rehabilitation of Patients with Platypnea-Orthodeoxia Syndrome in COVID-19 Pneumonia: Two Case Reports. *J Rehabil Med Clin Commun.* 2020 Nov 20;3:1000044. doi: 10.2340/20030711-1000044. PMID: 33884145; PMCID: PMC8054748.
- Tay MRJ, Ong PL, Puah SH, Tham SL. Acute Functional Outcomes in Critically Ill COVID-19 Patients. *Front Med (Lausanne).* 2021;7:615997. Published 2021 Jan 18. doi:10.3389/fmed.2020.615997
- Ong PL, Tay MRJ, Tham SL. Cost of Rehabilitation in Critically Ill COVID-19 Survivors: A Little Goes a Long Way. *J Int Soc Phys Rehabil Med* 2021;4:104-6.
- Alhossary, A.; Ang, W.T.; Chua, K.S.G.; Tay, M.R.J.; Ong, P.L.; Murakami, T.; Quake, T.; Binedell, T.; Wee, S.K.; Phua, M.W.; et al. Identification of Secondary Biomechanical Abnormalities in the Lower Limb Joints after Chronic Transtibial Amputation: A Proof-of-Concept Study Using

SPM1D Analysis. Bioengineering 2022, 9, 293.
<https://doi.org/10.3390/bioengineering9070293>

- Ong, P.L.; Rosiana, A.; Chua, K.S.G. Characteristics and Functional Impact of Unplanned Acute Care Unit Readmissions during Inpatient Traumatic Brain Injury Rehabilitation: A Retrospective Cohort Study. *Life* 2023, 13, 1720. <https://doi.org/10.3390/life13081720>
- Ong, P.L.; Seah, J.D.; Chua, K.S.G. Inpatient Rehabilitation Outcomes after Primary Severe Haemorrhagic Stroke: A Retrospective Study Comparing Surgical versus Non-Surgical Management. *Life* 2023, 13, 1766. <https://doi.org/10.3390/life13081766>
- Quek MS, Oei CW, Ong PL, Chung CLH, Kong PW, Zhang X, Leo KH. Prognosticating Prosthetic Ambulation Ability in People With Lower Limb Amputation in Early Post-operative Phase. *Arch Phys Med Rehabil.* 2024 Jul;105(7):1346-1354. doi: 10.1016/j.apmr.2024.03.014. Epub 2024 Apr 1. PMID: 38570179.
- Aguirre-Ollinger G, Chua KSG, Ong PL, et al. Telerehabilitation using a 2-D planar arm rehabilitation robot for hemiparetic stroke: a feasibility study of clinic-to-home exergaming therapy. *J NeuroEngineering Rehabil.* 2024;21:207. <https://doi.org/10.1186/s12984-024-01496-6>
- Wu TL, Kwong WHP, Ong PL, Tay MRJ, Phua MW, Chong WB, Ang WT, Chua KSG. Unravelling stroke gait deviations with movement analytics: a case control study. *Front Neurosci.* 2024;18:1425183. doi: 10.3389/fnins.2024.1425183
- Tay MRJ, Kim JM, Ong PL, et al. Targeting osteosarcopenia and multimorbidity for frailty prevention through identification and deep phenotyping methods in healthy ageing and high-burden disease cohorts (OPTIMA-C): a longitudinal observational cohort study protocol for neuromusculoskeletal muscle health. *BMJ Open* 2025;15:e094279. doi: 10.1136/bmjopen-2024-094279

Notable Research and Innovation Awards & Grants from Past 5 Years

Name of Awards & Grants	Year Obtained
CHI Innovation Fellowship Program	2022
NHG CMTi Clinician Innovator Preparatory Programme (CiPP) FY2022 Awardee	2022
NMRC Clinician Innovator Award (CIA)	2025
AHS Young Innovator Award	2025