# Statistical Analysis of Clinical Data for Allied Health Professionals

***Organized by Institute of Advanced Allied Health Studies***

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| **Date:** | 8-14 Dec 2025 | 15 Dec 2025 (Mon) | 16 Dec 2025 (Tue) |
| **Time:** | Anytime within the above period | 13:30 – 17:30<br>(Registration starts at 13:15) | |
| **Mode of Delivery:** | Pre-recorded theory class | Identical workshop* | |
| **Venue:** | Attend via eLC+ | Block M, Kowloon Hospital | |

***2 workshops are identical sessions for hands-on practice in using IBM SPSS.***

**Program Objective**:

- To equip participants with skills to conduct basic statistical analyses of common clinical data collected from clinical studies or service evaluation.

**Intended Learning Outcome:**

After completion of the programme, participants will be able to:

- Understand the research or study designs and basic statistical concepts relevant to allied health professions;
- Perform simple statistical analyses using IBM SPSS; and
- Interpret results of statistical analyses and their implications.

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| **Program Design:** | Lecture / Workshop |
| **Target Participant:** | AH participants with basic understanding in research and statistics and wish to have hands-on practice on IBM SPSS. They are expected to bring a notebook with IBM SPSS installed.<br>*(Successful applicants will be informed the web link for downloading and installing the latest trial version of IBM SPSS if they do not have one)* |
| **Class Capacity:** | Theory Class: 60<br>Workshop: 30 per each workshop |
| **Language Medium:** | Cantonese supplemented with English |
| **CPD Points:** | Pending |
| **Award:** | Certificate of Attendance |
| **Completion Requirement:** | Participants should complete at least 80% attendance of overall program |
| **Speaker:** | Prof. Raymond TSANG, MSc Health Care(PT)(Poly U), MMedSc (HKU), PDPT (PolyU) |

# Program Content and Rundown

## Theory Class (attend via eLC+)

| Content | Speaker |
|---|---|
| Total 70 minutes<br>Concept review on Health Research & Measurement<br>✧ Health research - types & Designs<br>✧ Measurement issues – level of measurement<br>Biostatistics<br>✧ Descriptive statistics<br>- Measures of central Tendency & dispersion<br>- Normal distributions<br>✧ Inferential statistics<br>- Sampling<br>- Confidence intervals & standard error<br>- Hypothesis testing<br>- P values<br>- Parametric vs non-parametric tests<br>✧ Statistics which test difference<br>- Independent & paired t-tests<br>- One-way ANOVA<br>- Mann-Whitney U-test, Wilcoxon sign-rank test & Sign test<br>- Chi-square test & Fisher exact test<br>- Relative risk & Odds ratio | Prof. Raymond Tsang<br>(pre-recorded video via eLC+) |

## Workshop (Face-to-face)

15 Dec 2025 & 16 Dec 2025

| Time | Content | Speaker |
|---|---|---|
| 13:15 - 13:30 | *Registration* | |
| 13:30 - 17:30 | 1. Recap on<br>– Sampling<br>– Central limit theorem<br>– Hypothesis testing<br>– Confidence intervals – 8 hypothetical scenarios and interpretations informed with the understanding of minimal clinically important difference, with an illustrated example<br>– Example of good data presentation<br>2. Hands-on practice on basic statistical tests<br>– Parametric tests: independent and paired t tests, one-way ANOVA<br>– Non-parametric tests: Mann-Whitney U test, Wilcoxon signed rank test, Kruskal Wallis test, Chi-square test, Fisher exact test | Prof. Raymond Tsang |
| 17:30 – 17:45 | *Evaluation* | |

## Speaker Profile

**Prof. Raymond TSANG** obtained Master of Science in Health Care (Physiotherapy) with Distinction from The Hong Kong Polytechnic University and Master of Medical Sciences (Medical Statistics) from The University of Hong Kong.

Prof. Tsang had worked in various specialities in public outpatient and inpatient settings before serving as Senior Physiotherapist at the Physiotherapy Department of Queen Mary Hospital from 1995 to 2011 and Advanced Practitioner in Musculoskeletal Physiotherapy from 1998 to 2011, focusing on musculoskeletal rehabilitation in the inpatient setting. He also worked as a clinical educator to undergraduate physiotherapy students of The Hong Kong Polytechnic University in acute orthopaedic wards from 1997 to 2008. He had the experience to be the visiting lecturer and clinical educator to students of the Master of Physical Therapy programmes in Wuhan (2006-2008) and Chengdu (2014-2015), organized by the Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, and physiotherapy students of Rehabilitation Therapy of Kunming Medical University from 2009 to 2013.

From 2011 to 2022, Prof. Tsang was Department Manager of the Physiotherapy Department of The Duchess of Kent Children's Hospital at Sandy Bay, TWGHs Fung Yiu King Hospital, and MacLehose Medical Rehabilitation Centre. He joined the Department of Rehabilitation Sciences of The Hong Kong Polytechnic University as Professor of Practice in October 2022. He is also invited as the visiting professor of the Beijing Sport University in 2023-2024.

Prof. Tsang's clinical speciality is physiotherapy for hand and upper extremity. He is Founding Fellow (Musculoskeletal Physiotherapy) and was President (2016-2020) of The Hong Kong College of Physiotherapy. At present, he is Vice President of the Hong Kong Physiotherapy Association and Chairperson of the Musculoskeletal Specialty Group. He had also been Convenor (2010-2012) of the Allied Health Evidence-Based Practice Advisory Panel, Allied Health Grade Department, Hospital Authority, and a member (2018-2020) of the Grant Review Board, Health and Medical Research Fund, Food and Health Bureau (presently, Health Bureau), The Government of the HKSAR.

Prof. Tsang has extensive experience in teaching research and statistics in Hong Kong and Mainland. Since 2009, he had been invited to be the instructor of a series of workshops "Using IBM SPSS for Statistical Analyses at Introductory, Intermediate and Advanced Levels" by the Institute of Advanced Allied Health Studies, Hospital Authority. He had also delivered face-to-face and online workshops of "Research and Statistics" in Kunming (2016, 2017), Shenzhen (2016), Shanghai (2017, 2019), Changsha (2018), and Beijing (2019, 2022, 2024).

**Enrolment:**

Please send the nomination form via Department Manager / in-charge to IAAHS by email (iaahs@ha.org.hk) quoting *"Program Announcement – Statistical Analysis of Clinical Data for Allied Health Professionals (Ref 036, 049)"* **on or before 7 Nov 2025 (Fri).**

Enrolment result would **NOT** be notified individually, it should be checked before program commencement via HA IAAHS intranet https://hateams.home/knowledge/group/IAAHS/Program_AH/ or through e-Learning Centre http://elc.home/myelc/login_pop.aspx **on or after 21 Nov 2025 (Fri)**.

**Important Notes:**

- Participants are required to **strictly adhere** to **the Infection Control Measures for Training Activities** (see link) when attending the program (for both individual or group registration).

For enquiry, please contact Ms. Waterie YEUNG, TO(AH) at 2300 7566 (program) or Ms. Kary HUI at 2300 7525 (registration).