



香港復康會  
The Hong Kong Society  
for Rehabilitation



## *HKSR 60th Anniversary Symposium and Workshops*

### *“New Perspectives on Holistic Rehabilitation and Social Inclusion towards 2030”*

*28 - 29 March 2019*

#### *Key Challenges and Solutions to Holistic Health and Rehabilitation Care in Hong Kong*

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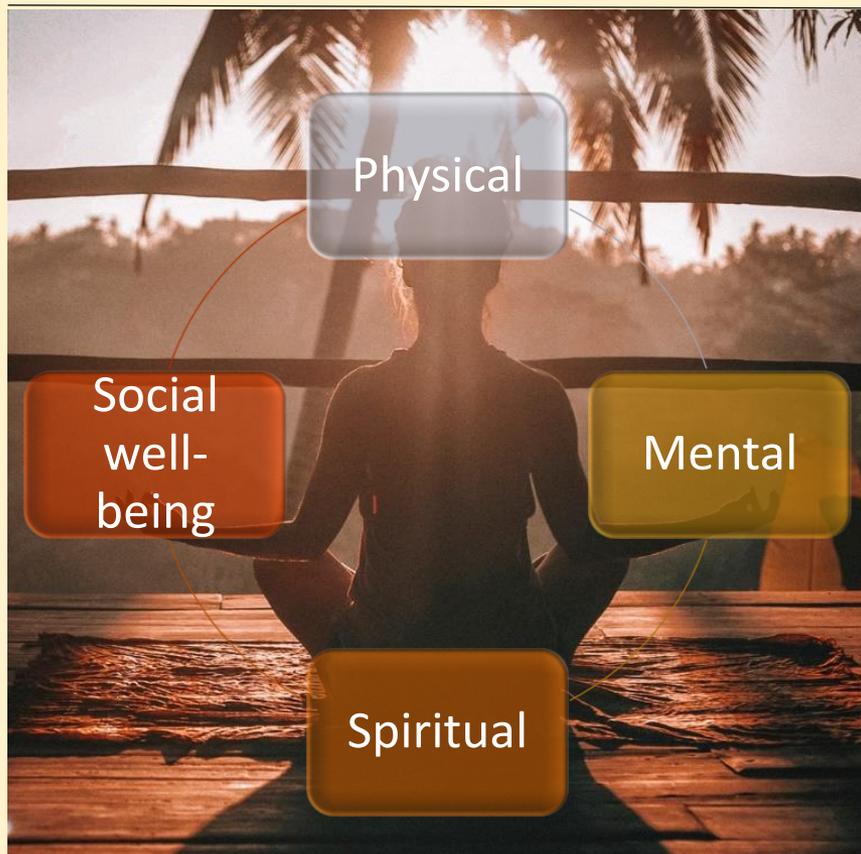
# Key Challenges and Solutions to Holistic Health and Rehabilitation Care in Hong Kong

From the perspective of health and social  
sciences/allied health professionals

Prof. David Shum  
28 March 2019

# Holistic Health

(World Health Organization, 1997)



# Rehabilitation

(World Health Organization, 2011)

A set of measures that assist individuals, who experience or are likely to experience disability, to achieve and maintain optimum functioning in interaction with their environments

Enables people with limitations in functioning to remain or return to their home or community, live independently, and participate in education, the labour market and civic life

# Challenges

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Aging population

Chronic diseases and disabilities

Stressful lifestyle and mental health issues

Access to rehabilitation services

Proliferation of health and rehabilitation information

Good-quality local research

Adherence to treatment

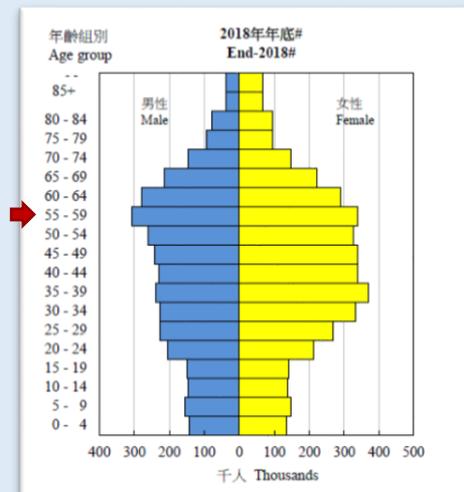
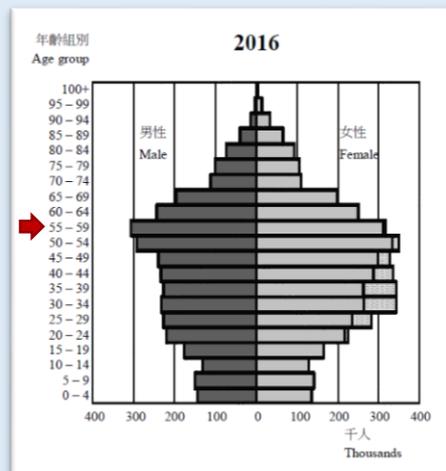
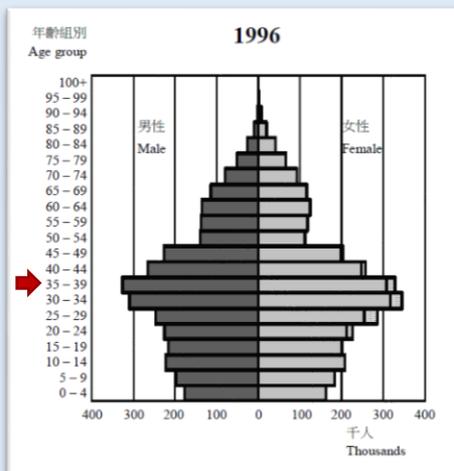
# Aging population

(Census and Statistics Department, 2017, 2019; Hay et al., 2017)

## Global health life expectancy (HALE) (1990 – 2016)

- Increased from **56.9** to **63.1** years

## Population pyramid (1986-2018):

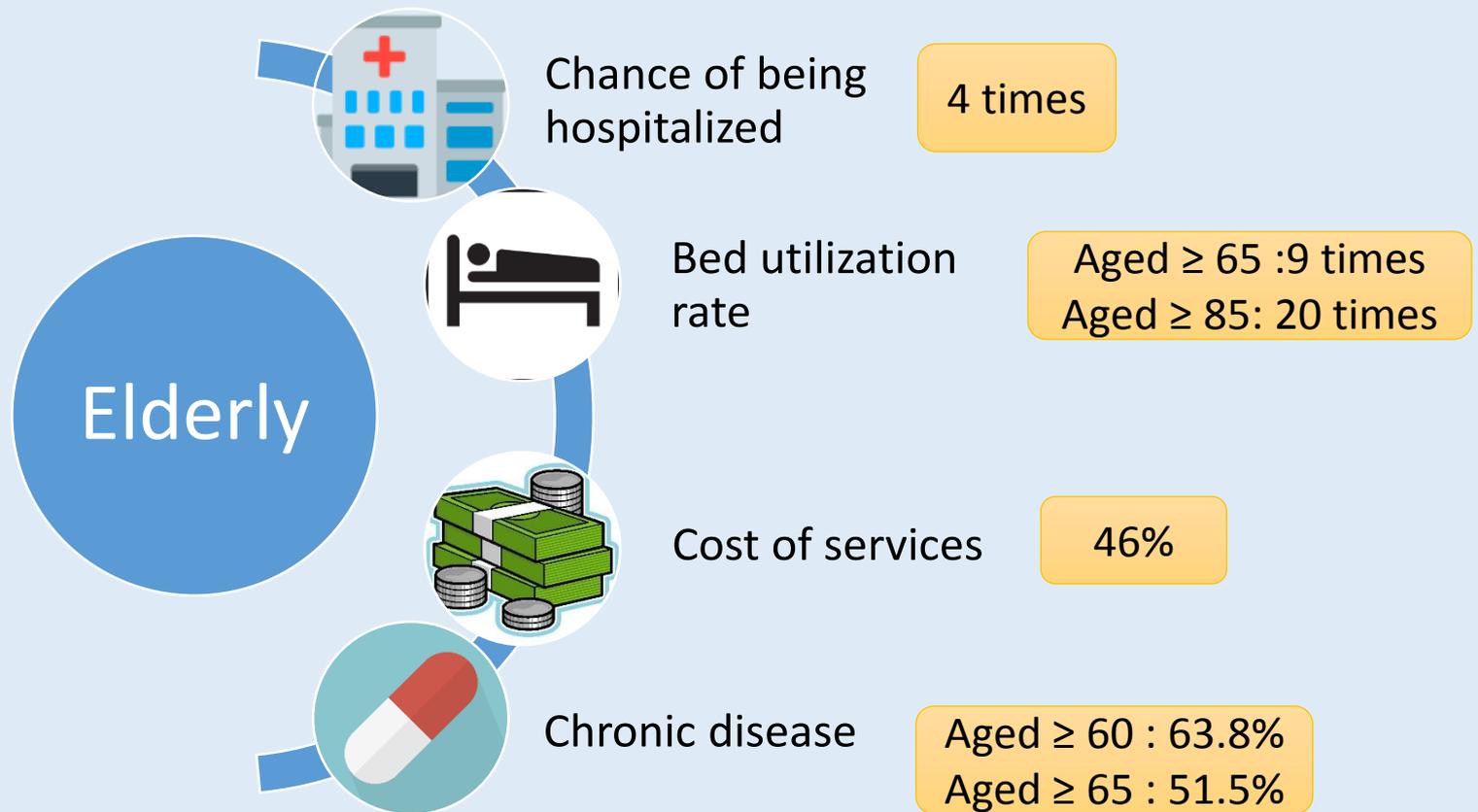


HK Expectation of life at birth:

Males: **81.9** years  
Females: **87.6** years

# Ageing population

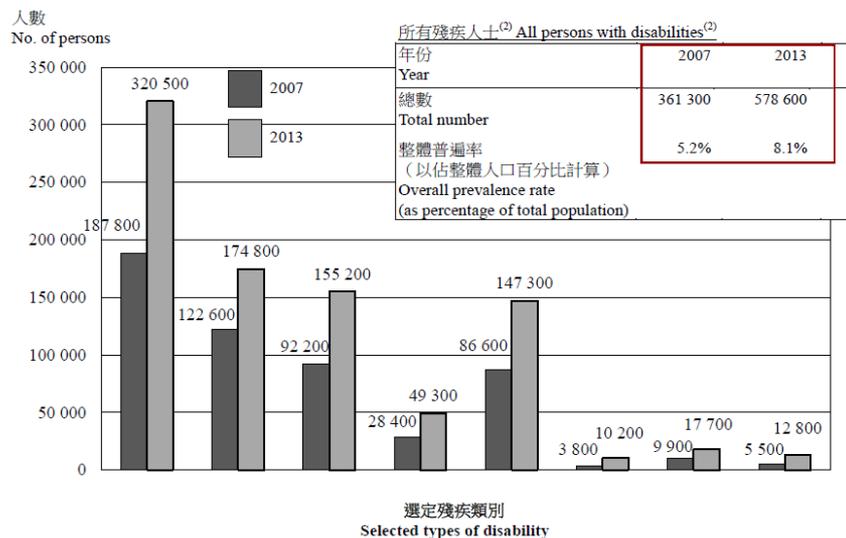
(Hospital Authority, 2017; Census and Statistics Department, 2015)



# Chronic disease and disabilities

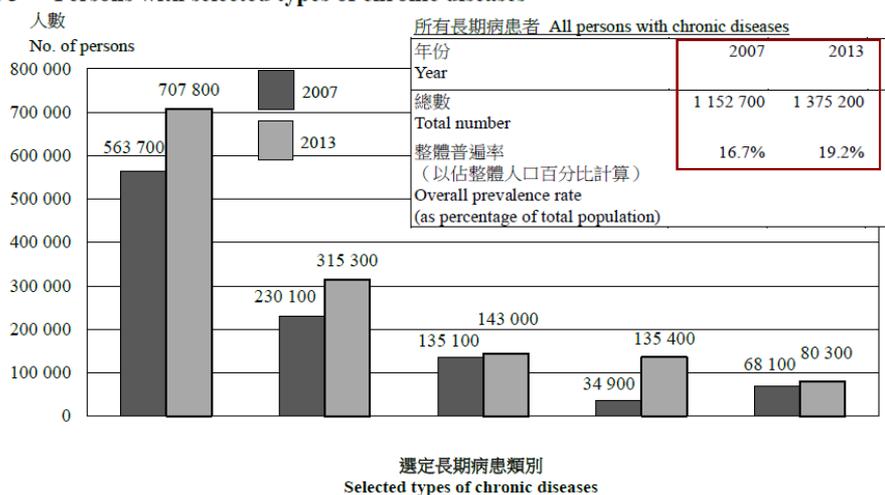
(Census and Statistics Department, 2015)

圖 1 有選定殘疾類別的人士<sup>(1)</sup>數目  
Chart 1 Persons with selected types of disability<sup>(1)</sup>



年份/普遍率	身體活動能力受限制	視覺有困難	聽覺有困難	言語能力有困難	精神病/情緒病	自閉症	特殊學習困難	注意力不足/過度活躍症
Year/Prevalence rate	Restriction in body movement	Seeing difficulty	Hearing difficulty	Speech difficulty	Mental illness/ mood disorder	Autism	SpLD	AD/HD
2007	2.72	1.77	1.33	0.41	1.25	0.05	0.14	0.08
2013	4.47	2.44	2.16	0.69	2.05	0.14	0.25	0.18

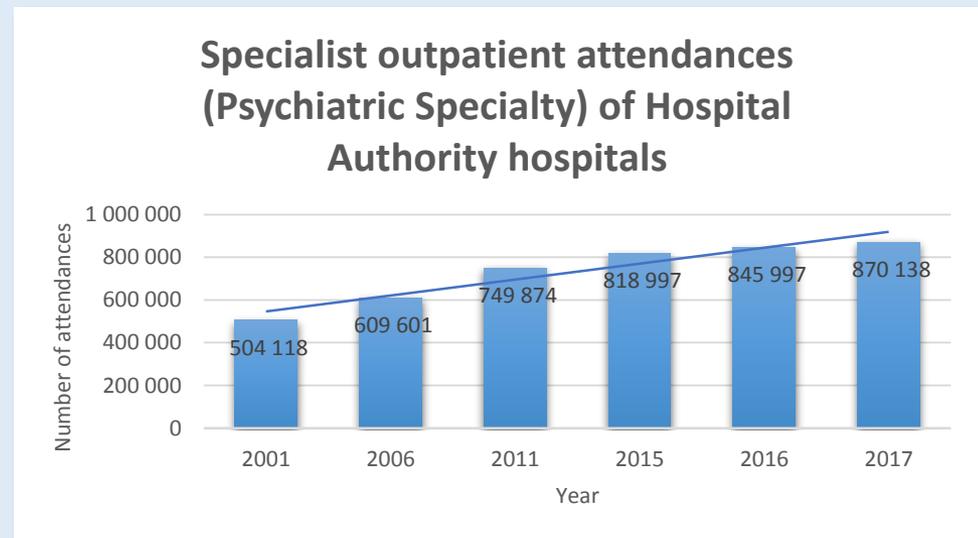
圖 3 有選定長期病患類別的人士數目  
Chart 3 Persons with selected types of chronic diseases



年份/普遍率	高血壓	糖尿病	心臟病	膽固醇過高	白內障
Year/Prevalence rate	Hypertension	Diabetes mellitus	Heart diseases	Hypercholesterolemia	Cataract
2007	8.15	3.33	1.95	0.51	0.98
2013	9.86	4.39	1.99	1.89	1.12

# Stressful lifestyle and mental health issues

- Work oriented culture
  - Extraordinarily long working hours
  - Poor work life balance
- Sedentary work style and lack physical activities
- Vulnerable to mental health issues
- Poor stress coping
- Unwilling to seek psychiatric or psychological help
- Stigma associated with mental health problems



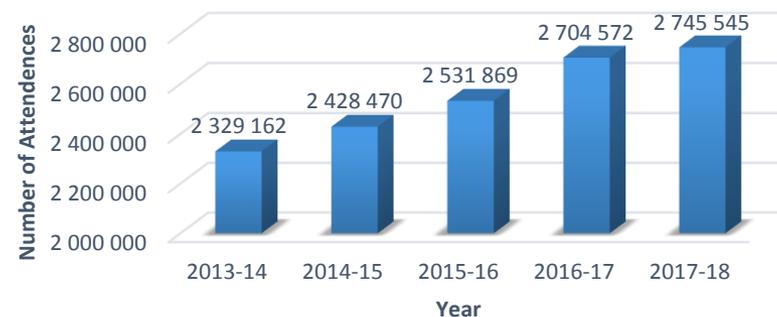
# Access to rehabilitation services

(Department of Health, 2018; Food and Health Bureau, 2018)

## Registered Healthcare Professionals (End 2017)

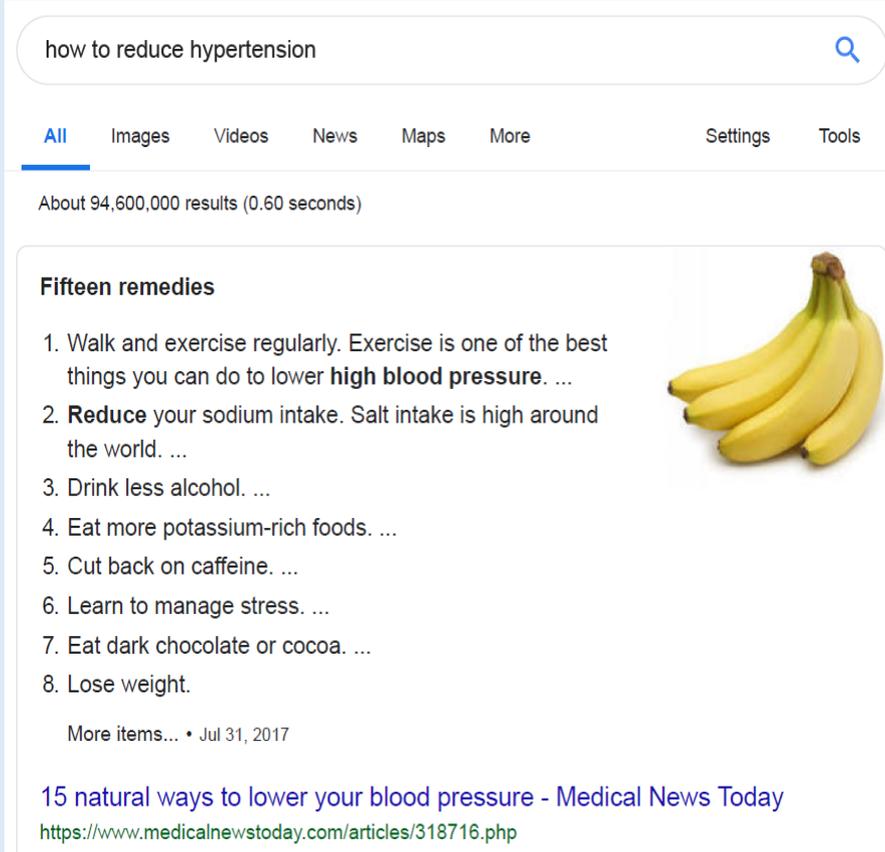
Type of Professional	Total	Healthcare Professionals to Population*
Doctors	14 290	1 : 519
Chinese medicine practitioners		
Registered Chinese medicine practitioners	7 425	1 : 998
Chinese medicine practitioners with limited registration	38	—
Listed Chinese medicine practitioners	2 623	1 : 2 825
Dentists	2 500	1 : 2 964
Dental hygienists	443	1 : 16 734
Nurses	54 231	1 : 137
Midwives	4 611	1 : 1 607
Pharmacists	2 753	1 : 2 692
Medical laboratory technologists	3 567	1 : 2 077
Occupational therapists	2 070	1 : 3 580
Physiotherapists	3 091	1 : 2 397
Optometrists	2 198	1 : 3 371
Radiographers	2 293	1 : 3 231
Chiropractors	218	1 : 33 990

## Number of Allied Health (Outpatient) Attendances (2013-14 to 2017-18)



# Proliferation of health and rehabilitation information

- The internet is full of health and rehabilitation information
- Difficult to keep up with advances and developments
- Research are different in terms of quality and conclusions
- Predatory journals are publishing research without due review process



how to reduce hypertension

All Images Videos News Maps More Settings Tools

About 94,600,000 results (0.60 seconds)

### Fifteen remedies

1. Walk and exercise regularly. Exercise is one of the best things you can do to lower **high blood pressure**. ...
2. **Reduce** your sodium intake. Salt intake is high around the world. ...
3. Drink less alcohol. ...
4. Eat more potassium-rich foods. ...
5. Cut back on caffeine. ...
6. Learn to manage stress. ...
7. Eat dark chocolate or cocoa. ...
8. Lose weight.

More items... • Jul 31, 2017

[15 natural ways to lower your blood pressure - Medical News Today](https://www.medicalnewstoday.com/articles/318716.php)  
<https://www.medicalnewstoday.com/articles/318716.php>



# Proliferation of health and rehabilitation information



FEMS Microbiology Letters, 364, 2017, fnx206

doi: 10.1093/femsle/fnx206  
Advance Access Publication Date: 9 October 2017  
Minireview

MINIREVIEW – Professional Development

## Due diligence in the open-access explosion era choosing a reputable journal for publication

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E-mail: [yondell.masten@ttuhsc.edu](mailto:yondell.masten@ttuhsc.edu)

**One sentence summary:** Faculty, researchers, scientists, and professionals need to ensure scholarly work is submitted to reputable vs. predatory open-access publishers for publication.

**Editor:** Beatrix Fahnert

**Table 1.** Five-year increase in predatory publishers (Beall 2016; Narimani and Dadkhah 2017)

Year	Number of publishers
2011	18
2012	23
2013	225
2014	477
2015	693
2016	923

# Good-quality local research

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- More research for basic and biomedical sciences than rehabilitation research
- Low success rate for research grant applications
- Not enough research personnel
- Not enough local research to replicate research conducted in the west
- Lack of world class rehabilitation institute/infrastructure

# Adherence to treatment

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The extent to which a person's behavior—taking medication, following a diet, and/or executing lifestyle changes— corresponds with agreed recommendations from a health care provider.

50% of patients with chronic illness did not take medication as prescribed

*- World Health Organization, 2003*

# Adherence to treatment

Rehabilitation Psychology  
2003, Vol. 48, No. 3, 215-219

Copyright 2003 by the Educational Publishing Foundation  
0090-5550/03/\$12.00 DOI: 10.1037/0090-5550.48.3.215

## Factors affecting adherence:

Patients  
characteristics

Treatment  
provider  
characteristics

Environmental  
characteristics

Treatment  
Accommodation

## Treatment Adherence in Rehabilitation: The Role of Treatment Accommodation

Daniel L. Clay and Joshua A. Hopps  
University of Iowa

### Examples of Treatment Characteristics Associated With Adherence

- Deviation required from the normal routine
- Level of compliance necessary for sufficient improvement
- Adverse side effects of medication
- Amenability to assistive technology
- Aversive tasks in administering treatment
- Technical skills needed
- Complexity of treatment regimen
- Duration of treatment administration
- Face validity of treatment
- Self-awareness needed to implement treatment
- Level of noticeable improvement
- Acute versus chronic treatment
- Cumbersome equipment

# Solutions



Primary Healthcare Initiatives  
Interdisciplinary rehabilitation  
Promoting holistic health  
Health technology  
Evidence-based practice  
Good quality local research  
Adherence to treatment

# Primary Healthcare Initiatives

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- Community Health Centres (CHCs)
  - Located in Tin Shui Wai, North Lantau and Kwun Tung
  - Aimed at reducing the need for hospitalization
  - Multi-disciplinary healthcare services for patients with chronic diseases
    - Medical consultation
    - Health risk assessment
    - Specific care services

# Primary Healthcare Initiatives

## South China Morning Post

Health & Environment

### **Fast-ageing Hong Kong district Kwai Tsing to test drive subsidised health care plan**

Community hub first of planned network to be rolled out across city's 18 districts as officials look to ease burden on public hospitals

Topic | Hong Kong health care and hospitals

- District Health Center in Kwai Tsing (3<sup>rd</sup> Q, 2019)
- Ease burden of ageing population and chronic disease (hypertension, diabetes, obesity) on public hospitals
- Health promotion, assessment, chronic disease management, and community rehabilitation

# Interdisciplinary rehabilitation

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Healthcare professionals from different field meet regularly in order to discuss and collaboratively set treatment goals for the patients and jointly carry out the treatment plans.

*- Korner, 2010*



# Interdisciplinary rehabilitation

## Evidence-Based Clinical Practice Guidelines for Interdisciplinary Rehabilitation of Chronic Nonmalignant Pain Syndrome Patients

Steven H. Sanders, PhD<sup>\*</sup>; R. Norman Harden, MD<sup>†</sup>; Peter J. Vicente, PhD<sup>‡</sup>

<sup>\*</sup>Siskin Hospital's Center for Pain Rehabilitation, Chattanooga, Tennessee; <sup>†</sup>Rehabilitation Institute of Chicago Center for Pain Studies, Chicago, Illinois; <sup>‡</sup>LoDo Pain and Headache Clinic, Denver, Colorado, U.S.A.

© 2005 World Institute of Pain, 1530-7085/05/\$15.00  
*Pain Practice*, Volume 5, Issue 4, 2005 303–315

Improve physical function

Improve general function

Increase pain self-management

Improve vocational/ disability status

Reduce used of sedation

Reduce health care chronic pain

Reduce pain level

# Promoting holistic health

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- Address not just physical but also psychological, social and spiritual well being
- Person centred and empowerment
- Look after and involve carers
- Acceptance, affection, autonomy, alliance, active participation (Skinner & Cradock, 2000)

# Promoting holistic health

JAMDA 18 (2017) 766–773



ELSEVIER

JAMDA

journal homepage: [www.jamda.com](http://www.jamda.com)



Original Study

## Use of a Robotic Seal as a Therapeutic Tool to Improve Dementia Symptoms: A Cluster-Randomized Controlled Trial



Wendy Moyle PhD<sup>a,b,\*</sup>, Cindy J. Jones PhD<sup>a,b</sup>, Jenny E. Murfield BSc(Hons)<sup>a,b</sup>,  
Lukman Thalib PhD<sup>c</sup>, Elizabeth R.A. Beattie PhD<sup>d</sup>, David K.H. Shum PhD<sup>a,e</sup>,  
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<sup>g</sup> Center for Applied Health Economics, School of Medicine, Nathan Campus, Griffith University, Nathan, Brisbane, Queensland, Australia

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# Health Technology

- Biomedical Engineering
- Bionics
- Neurofeedback and neurotraining
- Virtual Reality
- Telehealth
- Robotics

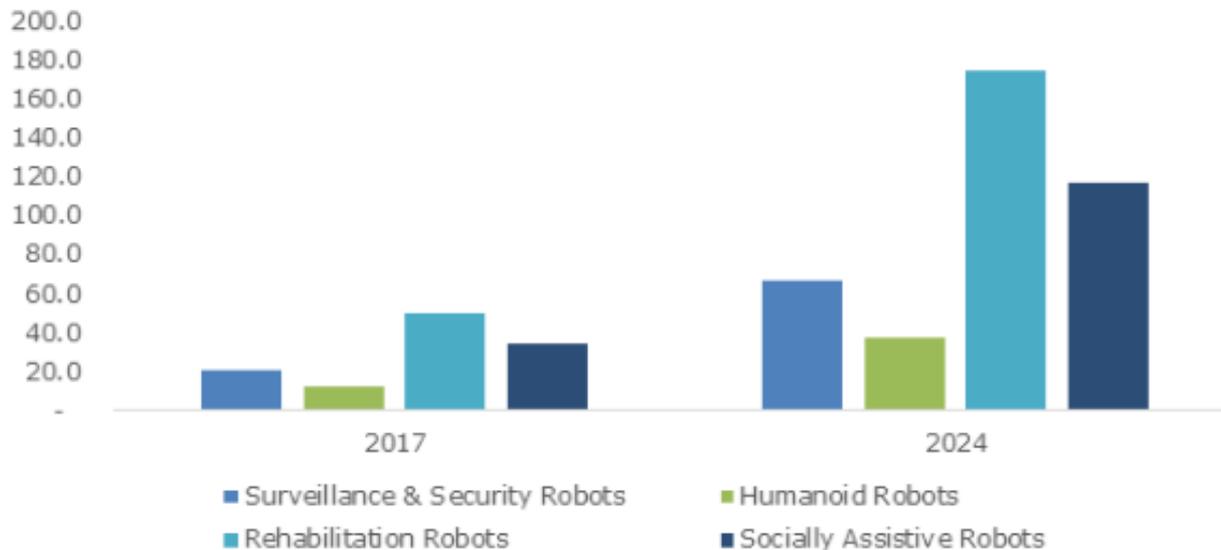


# Health Technology – Healthcare Assistive Robot

## Industry Trends

Healthcare assistive robot market size was valued at USD 359.1 million in 2017 and is expected to witness 19.3% CAGR from 2018 to 2024.

U.S. Healthcare Assistive Robot Market, By Product, 2017 & 2024 (USD Million)

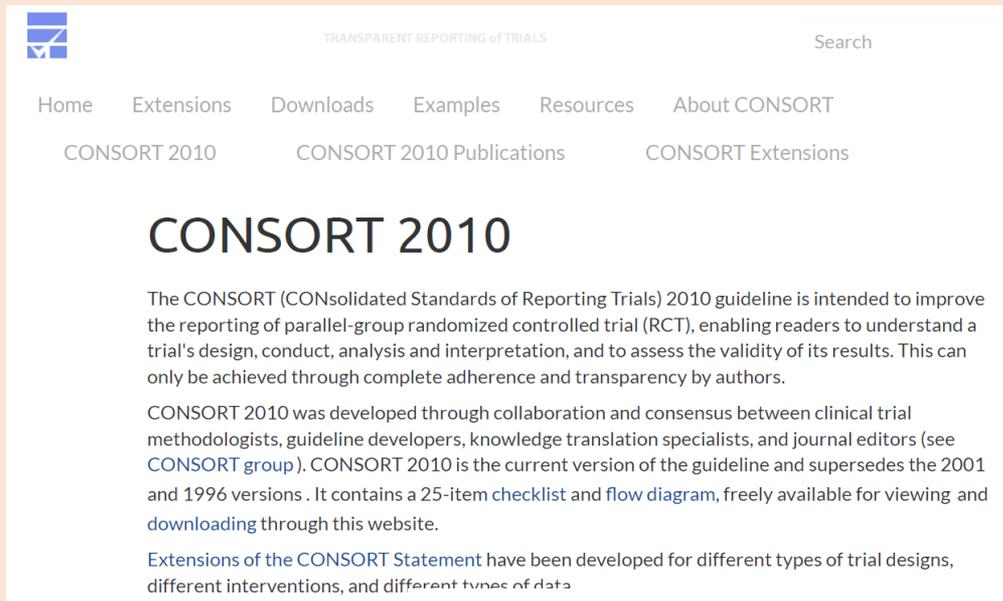


# Evidence-based practice

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- Education and professional development
  - Predatory journals
  - CONSORT statement about RCT
  - Sources of trusted information
- Promote evidence-based practice
  - Systematic review and meta-analysis
  - Cochrane Review

# Evidence-based practice



TRANSPARENT REPORTING of TRIALS

Search

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CONSORT 2010 CONSORT 2010 Publications CONSORT Extensions

## CONSORT 2010

The CONSORT (CONsolidated Standards of Reporting Trials) 2010 guideline is intended to improve the reporting of parallel-group randomized controlled trial (RCT), enabling readers to understand a trial's design, conduct, analysis and interpretation, and to assess the validity of its results. This can only be achieved through complete adherence and transparency by authors.

CONSORT 2010 was developed through collaboration and consensus between clinical trial methodologists, guideline developers, knowledge translation specialists, and journal editors (see [CONSORT group](#)). CONSORT 2010 is the current version of the guideline and supersedes the 2001 and 1996 versions. It contains a 25-item checklist and flow diagram, freely available for viewing and downloading through this website.

Extensions of the CONSORT Statement have been developed for different types of trial designs, different interventions, and different types of data.

## STROBE Statement

Strengthening the reporting of observational studies in epidemiology

### STROBE checklists

Version 4 as published in Oct / Nov 2007!

- STROBE checklist for **cohort, case-control, and cross-sectional studies** (combined)  
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- STROBE checklist for **cohort, case-control, and cross-sectional studies**  
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- Checklist for **cohort studies**  
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- Checklist for **case-control studies**  
download [PDF](#) / [Word](#)
- Checklist for **cross-sectional studies**  
download [PDF](#) / [Word](#)
- Draft STROBE checklist for **conference abstracts**  
download [PDF](#)



Trusted evidence.  
Informed decisions.  
Better health.

# Good quality local research

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- Lobby for more research funding for the rehabilitation area
- Actively recruit the next generation of rehabilitation researcher
- Fund innovative local research and fund local research to validate research conducted in the west
- Conduct long-term follow up research
- Build a world-class rehabilitation research institute

# Adherence to treatment



- More research to understand the extent of problem (e.g., memory, motivation, support from environment)
- More research to evaluate the efficacy of various techniques to promote adherence to treatment
- Take adherence to treatment into consideration when planning and delivering rehabilitation

# Conclusion

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1. Many big challenges at different levels
2. Need input from various stakeholders
3. Despite these challenges, there are some possible solutions:
  - Primary healthcare initiatives
  - Interdisciplinary rehabilitation
  - Address psychological, spiritual and social well-being
  - Research
  - Health technology