Evaluation on Interdisciplinary Complex Intervention: Effectiveness, Efficiency and Continuous Improvement

Professor Amy Y. M. Chow
Project Director, JCECC Project
Professor, The University of Hong Kong

Miss Iris K. N. Chan
Associate Director, JCECC Project
The University of Hong Kong
1. Background of the project
In 2015, the JC Trust approved 255 million to launch the 6-year Jockey Club End-of-Life Community Care Project ("JCECC"), aimed at improving the quality of end-of-life (EoL) care, enhancing the capacity of service providers, as well as raising public awareness. It is a multi-disciplinary, multi-institutional and cross-sectoral collaboration, with special emphasis on the interface between social and health care systems.
Features of Community EoLC Models (2016-2018)

**NGOs**
- Enhanced community health care model
  - Cancer & non-cancer
  - Holistic care with emphasis on home care nursing support
  - Strong ACP facilitating team Respite

**Patients**
- Family capacity building model
  - Cancer & non-cancer
- Community volunteer capacity building model
  - Non-cancer
- Non-cancer patient capacity building model
  - Non-cancer
- Community volunteer capacity building model
  - Cancer & non-cancer

**Interventions**
- Holistic care with cheer-up activities to bring happiness and joy
  - Caregiver stress relieve interventions
- Holistic care with emphasis on equipping patient’s symptom management skills
  - Holistic care assisted by volunteer intensive support
- Training for RCHEs staff
  - EoLC protocol in RCHEs and AD education

**Community Partners**
- Medical Professionals
- EHCCS + Family
- Patient Groups + Professional Volunteers
- Church Groups
- Long-term Care + RCHEs
Unfamiliarity with Familiar Terms

Emotionally-focused Group Therapy for Parents with Children at Preadolescence: Impact and Challenges

Evaluation on Interdisciplinary Complex Intervention: Effectiveness, Efficiency and Continuous Improvement

This webinar will be conducted in Cantonese.此講座以粵語講解及分享。
2. Implementation Sciences
Implementation Sciences (WHO, 2013)

“Neglecting implementation challenges costs lives and money” (p.13)

“implementation research takes what we know and turn it into what we do.” (p.19)

“The basic intent of implementation research is to understanding not only what is and isn’t working, but how and why implementation is going right or wrong, and testing approaches to improve it.” (p.27)
How is implementation research used?
(WHO, 2013)

- Understanding context
- Assessing performance
- Supporting and informing scale-up
- Supporting quality improvement and health system strengthening
Implementation Sciences (WHO, 2013, p.31)
3. Evidence-based Practice
Evidence-Based Practice

Two different approaches (Spensberger et al., 2020)

- The process of Evidence-based practice
- The empirically supported practices or intervention
Practice (Intervention)
Practice Research

Practice (Intervention) is evaluated by Research.
Practice Research

Research \(\rightarrow\) Practice (Intervention) \(\rightarrow\) Research

Informs

Is evaluated by

Jockey Club End-of-Life Community Care Project
Translation:

“The process of turning observations in the laboratory, clinic and community into interventions”

Basic research: scientific exploration that can reveal fundamental mechanisms of biology, disease or behavior. Every stage of the translational research spectrum builds upon and informs basic research.

https://ncats.nih.gov/translation/spectrum
Practice Research

Research → Practice (Intervention) → Research → Practice (Intervention) → Research

Research → Practice (Intervention) → Research → Practice (Intervention) → Research

Research → Practice (Intervention) → Research → Practice (Intervention) → Research

Practice (Intervention)
Development of Evidence-based Practice

- Evidence-Based Medicine (1992)
- Evidence-Based Practice in Psychology (2005)
- Evidence-Based Practice in Social Work (2006)
Evidence-based Medicine

A New Approach to Teaching the Practice of Medicine

Evidence-Based Medicine Working Group

A NEW paradigm for medical practice is emerging. Evidence-based medicine de-emphasizes intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stresses the examination of evidence from clinical research. Evidence-based medicine requires new skills of the physician, including efficient literature searching and the application of formal rules of evidence evaluating the clinical literature. An important goal of our medical education is the teaching of students to present evidence-based medicine in the practice of evidence-based medicine. Strategies include a weekly formal academic half-day for medicine, devoted to learning the necessary skills; recruitment into teaching roles of physicians who practice evidence-based medicine; sharing among family of approaches to teaching evidence-based medicine; and providing faculty with feedback on their performance as role models and teachers of evidence-based medicine. The influence of evidence-based medicine on clinical practice and medical education is increasing.

CLINICAL SCENARIO

A junior medical resident is working in a teaching hospital and attends a 55-year-old patient who presents with a witnessed grand mal seizure. The patient had never had a seizure before and had not had any recent head trauma. His chart shows no or twice a week and had not had alcohol the day of the seizure. Findings on physical examination are normal. The patient is given a loading dose of phenytoin intravenously and the drug is continued orally. A computed tomographic head scan is completely normal, and the electroencephalogram shows only nonspecific findings. The patient is very concerned about his risk of seizure recurrence. How might the resident proceed?

The Way of the Past

Faced with this situation as a clinical clerk, the resident was told by her senior resident (who was supported in his views by the medical director) that the risk of seizure recurrence is high, though, he could not give the exact figure. The patient, on 0.1) and that was the information that should be conveyed to the patient. She new follows this rule, emphasizing to the patient not to drive, to continue his medication, and to his family physician to follow up. The patient leaves his state of vague frustration about his risk of subsequent seizure.

The Way of the Future

The resident asks herself whether she knows the frequency of this seizure and realizes that she does not. She proceeds to the library and, using the Critical Evidence Guide, quickly finds a number of case reports, case series, case reports, and clinical trials. The evidence is consistent in that seizures recur in 50% of patients within the first year. It is apparent that the risk of recurrence is high, though, he could not give the exact figure.

Evidence-based Medicine Working Group, 1992

• EBM … de-emphasizes intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stresses the examination of evidence from clinical research

• (Evidence-Based Medicine Working Group, 1992)
Evidence-based Medicine

The Rational Clinical Examination

Evidence-Based Medicine

A New Approach to Teaching the Practice of Medicine

Evidence-Based Medicine Working Group

A NEW paradigm for medical practice is emerging. Evidence-based medicine (EBM) is an approach to clinical decision making that integrates the best external evidence with clinical expertise and the values and preferences of the patient to guide practice. This paradigm is based on the principles of evidence-based medicine and the ability to critically appraise and synthesize evidence to make informed decisions. Evidence-based medicine (EBM) integrates the best available scientific information with clinical expertise and patient values to guide decision-making about clinical management.

The aim of EBM is to integrate the experience of the clinician, the values of the patient, and the best available scientific information to guide decision-making about clinical management.

(Evidence-Based Medicine Working Group, 1992)

Evidence-Based Practice in Psychology

APA Presidential Task Force on Evidence-Based Practice

The evidence-based practice movement has become an important feature of healthcare systems and systems of care. While the concept, the APA 2005 Presidential Task Force on Evidence-Based Practice (EBPP) and discusses evidence-based practice in psychology (EBPP). It is an integration of science and practice, the Task Force’s report describes psychology’s fundamental commitment to scientifically based practice and training. Clinical expertise and patient characteristics are not only supported by routine to good outcomes. EBPP promotes effective psychological practice and enhances public health by applying empirically supported principles of psychological assessment, case formulation, therapeutic relationship, and intervention. The report provides a rationale for and expanded discussion of the EBPP policy statement that was developed by the Task Force and adopted as an association policy by the APA Council of Representatives in August 2005.

Keywords: evidence-based practice, best available research, evidence, clinical expertise, patient characteristics, culture, and preferences.

From the very first conceptions of applied psychology as articulated by Lightner Witmer, who formed the first psychological clinic in 1886 (Mehrabian, 1997), psychologists have been deeply and uniquely associated with an evidence-based approach to patient care. As Witmer (1897-1898) pointed out, “the same is true in the applied sciences in a single form. What makes the progress of one, reaches the progress of the other, what flows out, factures the other.” As early as 1947, the idea that doctoral psychologists should be trained as both scientists and practitioners became American Psychological Association (APA) policy (Sklarew, 1947). Early practitioners such as Frederick C. Thriss (1947) articulated the methods by which psychological practitioners can integrate science into their practice by “accelerated application of the experimental approach to the individual case and to the clinician’s own experience” (p. 159). Thus, psychologists have been on the forefront of the development of evidence-based practice for decades.

Evidence-based practice in psychology is therefore consistent with the past 20 years of work in evidence-based medicine, which advocated for improved patient outcomes by infusing clinical practice with relevant research (Sackett, Rosenberg, Gray, Haynes, and Richardson, 1996) described evidence-based medicine as “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients” (pp. 71-72). The use and misuse of evidence-based principles in the practice of healthcare has affected the development of healthcare systems, but not always to the benefit of the patient. Therefore, psychologists, who training is grounded in empirical methods, have an important role to play in the continuing development of evidence-based practice and in focus on improving patient care.

Our report aims to implementing evidence-based practice in healthcare settings systems has been through the development of guidelines for best practice. During the early part of the evidence-based practice movement, APA recognized the importance of a comprehensive approach to the conceptualization of guidelines. APA also recognized the role that guidelines might be used not only to guide professional and clinical care but also to guide quality improvement efforts in healthcare settings. The purpose of this report is to promote effective psychological practice and enhance public health by applying empirically supported principles of psychological assessment, case formulation, therapeutic relationship, and intervention.

• APA Presidential Task Force on Evidence-Based Practice in 2005
• EBPP is the integration of the best available research with clinical expertise in the context of patient preferences.”
• the purpose ...to promote effective psychological practice and enhance public health by applying empirically supported principles of psychological assessment, case formulation, therapeutic relationship, and intervention

(APA, 2006, p. 273)
Evidence-Based Practice in Psychology (EBPP)

- Best Available Research Evidence
- Patient Characteristics, Culture, and Preference
- Clinical Expertise
Evidence-based practice in Social Work

• The process and policy of Evidence-based practice in social work as a decision-making process designed to help social workers to integrate ethical, evidentiary, and application concerns

(Gambrill, 2006)
Evidence-Based Practice in Social Work (EBPSW)

Best Available Research Evidence

Clinical Expertise

Clients’ Preference and Actions

Clinical Characteristics and Circumstances

(Gambrill, 2006, p.340)
4. Inter-disciplinarity
Growing trend of Interdisciplinary Collaboration

• Health X Social Work
• Education X Social Work
• Law X Social Work
• Art X Social Work
• Business X Social Work
• Housing X Social Work
• Combinations of above
Three types of professional competencies

(Interprofessional Educational Collaborative Expert Panel, 2011, P.13)
Interprofessional Collaborative Practice Domains

Team work
Value orientation
Communications
Role Delineation

(Interprofessional Educational Collaborative Expert Panel, 2011, P.15)
5. Evaluation of Complex Intervention
Complex Needs of Patients and Family Members

(Chow, Chau, Yu and Mak, 2019, p.137)
Developing and evaluating complex interventions:
Following considerable development in the field since 2006, MRC and NIHR have jointly commissioned an update of this guidance to be published in 2019.

Box 2 What makes an intervention complex?
Some dimensions of complexity
- Number of and interactions between components within the experimental and control interventions
- Number and difficulty of behaviours required by those delivering or receiving the intervention
- Number of groups or organisational levels targeted by the intervention
- Number and variability of outcomes
- Degree of flexibility or tailoring of the intervention permitted

Implications for development and evaluation
- A good theoretical understanding is needed of how the intervention causes change, so that weak links in the causal chain can be identified and strengthened
- Lack of impact may reflect implementation failure (or teething problems) rather than genuine ineffectiveness; a thorough process evaluation is needed to identify implementation problems.
- Variability in individual level outcomes may reflect higher level processes; sample sizes may need to be larger to take account of the extra variability, and cluster- rather than individually-randomized designs considered.
- Identifying a single primary outcome may not make best use of the data; a range of measures will be needed, and unintended consequences picked up where possible.
- Ensuring strict fidelity to a protocol may be inappropriate; the intervention may work better if adaptation to local setting is allowed.

(MRC, 2018, P.7)
Evaluation Framework (IOM, 2014)

- **Inputs**
  - Funding
  - Professional (Health & Social Care) Competence Development
  - Professional (Residential Care) Competence Development
  - Professional-led Community EoLC
  - Volunteer-led Community EoLC
  - Community EoLC for Non Cancer Patients
  - Community Knowledge and Skill Transfer

- **Activities**
  - Professionals Trained
  - Service Provided And Beneficiaries Served

- **Outputs**
  - Professionals’ Changes in:
    - Knowledge
    - Attitude
    - Skills
  - Patients’ and Family Members’ changes in:
    - Quality of Life
    - Emotional States
    - Family Relationship
    - Utilization of Health and Social Care Services
  - Patients, Family Members, Volunteers and General Public Changes in:
    - Knowledge
    - Attitude
    - Skills

- **Outcomes**
  - Impact on Professional:
    - Professional Quality of Life
    - Job Satisfaction
  - Impact on Patients and Family Members:
    - Utilization of Health and Social Care Services
  - Impact on Public:
    - Attitude towards death
  - Impact on Community:
    - Coverage of EoLC
    - Choices of EoLC
    - Cost-Effectiveness of EoLC
    - Continuity of EoLC
    - Competency of EoLC providers

- **Impact**
  - (Distal Effects)
Evaluation Component

**Inputs**
- Funding
- Professional (Health & Social Care) Capacity Building (HKU + CUHK)
- Residential Care Staff Capacity Building (HKAG)

**Activities** (Proximal Effects)
- Enhanced Health Care (HHH)
- Volunteer Capacity Building (SKHC)
- Family Capacity Building (SJS)
- Non Cancer Patient Care (HKSRC)
- Community Knowledge and Skill Transfer (HKU + CUHK + 5 NGOs)

**Outputs** (Intermediate Effects)
- Study 1: Service Statistics
  - Study 2: Evaluation on Professionals
    - Pre-post-followup survey
    - **Outcome**: Attitude, knowledge, and skills
    - **Impact**: Professional QoL and Job Satisfaction
  - Study 3: Survey with Health Care Professionals
    - 3-timepoint surveys through self-administered Questionnaires
  - Study 4: Evaluation of Patients and Family Members
    - Pre-post-followup survey
    - **Outcome**: Quality of Life, Emotional Reactions and Family relationships
    - **Impact**: Utilization of health and social care services
  - Study 5: In-depth Interviews with Patients and Family Members
    - In-depth Interviews
    - Self-reported **Outcome** and **Impact**.
  - Study 6: Evaluation on Volunteers
    - Pre-post survey
    - **Outcome**: QoL & Meaning of life, knowledge, and skills
    - **Impact**: Attitude towards EoLC
  - Study 7: User Satisfactory Survey
    - Questionnaires administered by researchers via telephone or face to face interviews
  - Study 8: Survey with General Public
    - 3-timepoint population telephone surveys
    - **Impact**: attitude towards EoLC
  - Study 9: Clinical Data Mining
    - Analysis of available clinical data of two cohorts
    - Impact on Coverage, choices, cost-effectiveness and continuity of care

**Impact** (Distal Effects)
Evaluation of End-of-Life Care

Challenges

– Inform consent
– Respect autonomy to participation
– Random assignment of intervention
– Participants’ induced distress
– Validated measurement
– Recalled biases
– Small n
– Attrition
Process Evaluation of Complex Intervention (Moore et al., 2019)

Evaluation of Process:

- The importance of theory: mechanism of change of the intervention
- The importance of Context
- Description of intervention: how and what has been delivered
- Sampling: all for important data and purposive sampling for in-depth analysis
Process Evaluation of Complex Intervention (Moore et al., 2019)

- Framework of Evaluation of Process

(Moore et al., 2019, p. 24)
The Mechanism of Change of the Intervention

Dying Role Theory
(Emanuel et al., 2007)

Broaden-and-Build Theory
(Frederickson, 2004)

(Chow, Chau, Yu and Mak, 2019, p.139)
Complex Intervention in a Complex Condition

- Complex intervention as part of Complex intervention offered by a system of care providers.

Complex Intervention A
  - Offered by Primary Care Providers

Complex Intervention B
  - Offered by Hospitals

Complex Intervention C
  - Offered by Community NGOs

Complex Intervention D
  - Offered by Family Members

Complex Intervention E
  - Offered by Community Volunteers
Evaluation

• While intervention is complex, evaluation is even more complex
  – The purpose of evaluation: what works the best for patient and family?
  – The process of evaluation: what reduces the induced distress of evaluation? (shared record and relevant data collection only)
  – The use of findings: how can we improve the care?
Efficiency

• **Time Efficiency**
  
  – shorter duration
  
  – Better expectation communication
  
  – Better engagement skills to reduce testing out period
  
  – reduction of components which are not leading to outcome
Efficiency

• Resource Efficiency

– Higher ratio of Useful Output / Total Input
– Conservation of energy by reduction of unnecessary input such as filling form & statistics
6. Evaluation of the Project
Overview of Project Output

*As at 31 December 2018

**End-of-Life Care Services**
- **5,002** Patients and family members served

**Capacity Building**
- **8,192** health and social care professionals
- **2,256** professional and frontline staff of elderly homes

**Public Education**
- **29,025** participants attended 1,377 community education programmes and events
- **350,000+** views through multi-media channels (i.e. project website, mini-movie and case videos)
- **5,600,000** readership of 43 Newspaper reports (i.e. press conference and regular newspaper columns)
Evaluation Framework and Methods

**Inputs**
- Funding
- Innovative Community EoLC Programmes

**Activities**
- Beneficiaries served

**Outputs** (Proximal Effect)
- Patients QoL:
  - Physical
  - Emotional & Social
  - Practical concerns
- Family Carers QoL:
  - Caregiver strain
  - Emotion
  - Family relationship
  - Complicated Grief

**Outcomes** (Intermediate Effect)
- Pre-post-Followup Clinical Assessments
  - Patients: Intake → 1st Month → 3rd Month
  - Family Carers: Intake → 3rd Month → 2 months post death

**Impact** (Distal Effect)
- Patients and Family carers:
  - ↓ unnecessary health and social care services
- Community:
  - Cost effectiveness of service

**Users Satisfaction**
- Survey + Telephone Interviews

**Stakeholders Survey**

**Health and Social Care Utilisation**
- Change Within Patient
- Difference from average patient
- Cost Effectiveness
Standardized Assessment tools

Patients

• Integrated Palliative Care Outcome Scale (IPOS)
• Medical service utilization in the last 6 months of life

Family carers

• 13-item Chinese version Modified-Caregiver Strain Index (C-M-CSI) \((\text{Chan, Chan, & Suen, 2013; Onega, 2008})\)
• Level of intimacy with patient
• Family anxiety (IPOS)
• 19-item Chinese inventory of complicated grief \((\text{Prigerson et al, 1995; Tang & Chow, 2017})\)
Outcomes of the Project

**Physical Symptoms (N=266)**

*↓18%

**Specific Physical Symptoms (N=277-282)**

*↓24%  *↓14%  *↓22%

As measured by Integrated Palliative Care Outcome Scale (IPOS) of King’s College

These analysis was based on 283 Patients have been assessed at intake and 3rd month

*p<.05 for paired t-test; The percentages represent the % of changes of mean score between intake and after 3 months
As measured by Integrated Palliative Care Outcome Scale (IPOS) of King’s College
These analysis was based on 283 Patients have been assessed at intake and 3rd month
*p<.05 for paired t-test; The percentages represent the % of changes of mean score between intake and after 3 months
Outcomes of the Project

Spiritual distress (N=263)

* ↓ 32.2%

Not feeling at peace

Social barrier (N=256)

* ↓ 15.2%

As measured by Integrated Palliative Care Outcome Scale (IPOS) of King’s College
These analysis was based on 283 Patients have been assessed at intake and 3rd month
*p<.05 for paired t-test; The percentages represent the % of changes of mean score between intake and after 3 months
Outcomes of the Project

```
“Family anxiety” was based on the response from 265 Patients have been assessed at intake and 3rd month; caregiver strain and family relationship were based on the response from 164 caregivers with intake and 3rd month assessments *p<.05 for paired t-test; The percentages represent the % of changes of mean score between intake and after 3 months
```

![Family Anxiety](image1)
- *↓ 27%

![Caregiving burden](image2)
- *↓ 19%

![Family relationship](image3)
- ↑ 2.5% p=.052
Bereavement outcomes of family members (N=166)

- High risk group (scored above 25 on the inventory of complicated grief)
- Low risk group (scored 25 or below on the inventory of complicated grief)

△ ↓ 3.7% 10.20% 13.9% China estimated prevalence #

89.90%

Complicated grief (CG) of bereaved family members

Outcomes of the Project

Patients (n=120)

Overall service satisfaction
- 0.9% Unsatisfied (1-4)
- 3.5% Satisfactory (5-6)
- 95.7% Very satisfied (7 or above)

Services met your needs
- 0.8% Unsatisfied (1-4)
- 3.3% Satisfactory (5-6)
- 95.7% Very satisfied (7 or above)

Carers (n=148)

Overall service satisfaction
- 7.4% Unsatisfied (1-4)
- 92.6% Satisfactory (5-6)
- 88.8% Very satisfied (7 or above)

Services effectively helped you take care of patient at home
- 0.7% Unsatisfied (1-4)
- 10.6% Satisfactory (5-6)
- 88.8% Very satisfied (7 or above)

Note: Data collected between Jan 2016 and June 2020 is analysed
Impact on Health Care Utilization of Patients

- LOS (acute and convalesce):
  - CDM (N=13783) vs. JCECC deceased patients with retrospective data from caregivers (N=221)
  - CDM: 39.02 days, JCECC: 34.15 days
  - Δ ↓ 4.87 days, Δ ↓ 12.5%

- A&E attendance:
  - CDM: 2.75, JCECC: 2.43
  - Δ ↓ 0.32 time, Δ ↓ 11.6%

- ICU beddays:
  - CDM: 0.36, JCECC: 0.28
  - Δ ↓ 0.08 day, Δ ↓ 22.2%
Impact on Health Care Utilization of Patients

- Based on the calculation of the 777 patients served by our project from 2016 to 2018, JCECC...

  - Offered 3784 hospital bed days for other needy patients
  - Offered 62 ICU bed days for other needy patients
  - Reduced 249 A&E visits
Integrated Community End-of-Life Care Support Team (ICEST) Model

- Evidence-driven, stakeholder participatory process

Conduct systematic literature review to develop evidence-based assessment & intervention recommendations

Systematic literature review

Participation of stakeholders

Evidence from service evaluations

Consultations with representatives of Food and Health Bureau, Labour and Welfare Bureau, Hospital Authority, and Social Welfare Department

Model building workshops with NGO partners

Synthesis of findings and implications from evaluation of pilot community based EoLC service models
Integrated Community End-of-Life Care Support Team (ICEST) Model

Identify

Assess (Evaluation)

Plan

Intervene

Developed in Jan 2019
Standardised Assessment for Need Based Intervention

• Needs assessment: Multi-dimensional assessments on patients and caregivers’ needs
• Clinical: 3-Ps (physical, psychosocial, spiritual, practical) assessment composed of need-level-stratifying indicators for care planning
• Outcome evaluation: repeated assessments to evaluate outcomes
Technology-facilitated Real Time Assessment

Online assessment platform will be handy for indicating need areas in real time

Use of tablet for assessment

Real-time summary/report on assessment
Multi-dimensional need assessment results with need levels

病人定點評估結果

<table>
<thead>
<tr>
<th></th>
<th>PT0</th>
<th>PT1</th>
<th>PT2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>評估日期</strong></td>
<td>2019-03-28</td>
<td>2019-04-29</td>
<td>2019-07-02</td>
</tr>
<tr>
<td><strong>Physical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>患者身體構造</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>患者焦慮情緒</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>患者抑鬱情緒</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>患者心靈支援</td>
<td>H</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td><strong>Psychosocial</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>患者社交需要</td>
<td>H</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>患者家庭關係促進需要</td>
<td>H</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>患者照顧計劃需要</td>
<td>H</td>
<td>H</td>
<td>NO</td>
</tr>
<tr>
<td><strong>Practical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>患者生活實踐困難</td>
<td>H</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>患者資訊需要</td>
<td>H</td>
<td>L</td>
<td>H</td>
</tr>
</tbody>
</table>

家屬定點評估結果

<table>
<thead>
<tr>
<th></th>
<th>第一次評估</th>
<th>第二次評估</th>
<th>第三次評估</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>評估日期</strong></td>
<td>2019-03-28</td>
<td>2019-07-02</td>
<td></td>
</tr>
<tr>
<td><strong>Psychosocial</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>家屬抑鬱</td>
<td>H2</td>
<td>L</td>
<td>/</td>
</tr>
<tr>
<td>家屬焦慮</td>
<td>H</td>
<td>NO</td>
<td>/</td>
</tr>
<tr>
<td>家屬照顧計劃需要</td>
<td>H</td>
<td>H</td>
<td>/</td>
</tr>
<tr>
<td>家屬複雜性衰弱危機</td>
<td>L</td>
<td>L</td>
<td>/</td>
</tr>
<tr>
<td>家屬複雜性衰弱</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Practical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>家屬照顧壓力</td>
<td>H</td>
<td>NO</td>
<td>/</td>
</tr>
<tr>
<td>家屬資訊需要</td>
<td>L</td>
<td>NO</td>
<td>/</td>
</tr>
</tbody>
</table>

H1 High (top) need  H2 High (middle) need  L Low  No No indicated
Need-based targeted intervention

- **Need-stratifying indicators (assessment)**
  - **High needs**
  - Targeted interventions for high needs
  - Targeted interventions for low needs
  - **Low needs**
  - No indicated needs

**Assess**

- **Need-stratifying indicators (evaluations)**
  - **Low needs**
  - **Reduced**

**Need-based targeted interventions**

1st and 3rd month for patient
3rd month for caregivers

**Targeted outcomes**
Development of Intervention Recommendations

- Literature search on evidence-based clinical practice in palliative and EoLC and relevant practice guidelines according to the search strategy in Clinical Decision Support Tool developed for the IPOS items

(van Vliet, Harding, Bausewein, Payne, & Higginson, 2015)
ICEST Model

Identify

HA identifies and refers patients

ICEST engages patients and families; and introduces services in 5 working days

Assess (Evaluate)

Comprehensive 3P (Physical, Psychosocial, spiritual and Practical) assessment on patient and carer

Intake: Intake form, Pt T0, CG T0
Month 1: Pt T1
Month 3: Pt T2, CG T1
When it is deemed necessary by workers: Phase change questionnaire

Discuss assessment results with patients & carers, set intervention priority

Plan

High need areas
Assess the causes and develop targeted intervention

Low need areas: Provide supportive care and monitor changes regularly

Determine an integrated care plan jointly with patients and carers and set care goal(s)

Intervene

Provide targeted interventions for intended outcomes, with considerations of patients and carers’ needs, preferences and care goals

Death of Patient

Death of patient?

Yes

Reach scheduled evaluation time?
- Change of care phrases (change between stable, unstable, deteriorating, terminal)?
- Changes in care plans (change of caring place or carers)?

Regular review of care plan with patient and carers

No

Choose care plan

Close case

No indicated needs

Carer declines support

Post-death brief assessment on family carers
(1) As soon the patient’s death,
(2) Before funeral,
(3) Right after funeral

Outcome Evaluation
Evaluate the grief outcomes for caregiver at 2 months post-death (CG T2)

Follow-up assessment
Evaluate the grief outcomes for caregiver at 4-6 months post-death

Needs present

Needs present

Needs present

Provide immediate support according to expressed needs

Develop a bereavement care plan with the results of grief assessment taken into consideration

Provide stratified levels of support based on needs:
(1) Universal support to all bereaved
(2) Selective support to family members who need more support
(3) Indicative support to those who require specialist interventions

Refer out to specialist services for complicated grief cases

Notes:
1. Assessments on patients and family carers with standardized questionnaire on patient (Pt), family carers (CG).
Professional Capacity Building Programmes

Couse types
- Short-term courses
  - Model-specific courses
  - Care Setting-specific courses
  - Competence domain specific course
- Intermediate-term courses
  - Advanced Course
  - Intermediate course
  - Basic course
- Long-term course
  - Leadership Training programme

Target groups
- Care professionals & managers in community elderly care service units
- Health & Social Care Professional (Practitioners)
- Middle-managerial staff in community care service units
- Social work students
3-tier course structure

**Basic Course (6 hours)**
- **E-learning courses (8 X 0.75 hour/Total 6 hours)**
  - 8 modules covering basic knowledge in EoLC competence domains
  - Videos, self-reflection questions, pre-post course assessment by MCQ

**Intermediate Course (23 hours)**
- **E-learning courses (8 X 0.75 hours/Total 6 hours)**
  - 7 modules covering theories and latest evidence on effective practices in 7 EoLC competence domains
  - Videos, readings, pre-post course MCQ tests

- **Small group Tutorials (3 X 3 hours/Total 9 hours)**
  - Group discussion, Application of knowledge, case sharing

**Advanced Course (39 hours)**
- **E-learning courses (6 X 0.5 hours/Total 3 hours)**
  - 6 modules covering in-depth knowledge and latest evidence on ACP, Communication, Psychosocial care, bereavement care, self-care and multidisciplinary teamwork
  - Videos, short questions, readings, pre-post course MCQ tests

- **Workshop (1 X 8 hours)**
  - Lecture, group activities

- **Tutorials (12 X 3 hours/Total 36 hours)**
  - Skill-building activities, role-plays, case discussion

**Assessments**
- MCQ, course-end short questions
- Examinations
- Case reports
- Self-reflection paper
- Examinations
- Case reports
- Live demonstrations
- Self-reflection paper

64
EoLC Competency Framework
Evaluation Framework

Professional Capacity Building Evaluation

INPUTS
Funding

ACTIVITIES
Professional capacity building
Professionals trained

OUTPUTS (Proximal Effect)

OUTCOMES (Intermediate Effect)
Professionals’ outcomes:
\[\uparrow\text{Knowledge in EoLC}\]
\[\uparrow\text{Attitude towards EoLC}\]
\[\uparrow\text{skills in EoLC}\]
\[\uparrow\text{Satisfaction}\]

IMPACT (Distal Effect)
Professionals:
\[\uparrow\text{Job satisfaction}\]
\[\downarrow\text{Job stress}\]
\[\uparrow\text{EoLC competences among professionals in general}\]

Follow-up evaluation
Participants’ supervisor’s assessment
Focus groups
Participants’ changes in EoLC behavior
Project Outcomes

Pre-post differences on basic online course participants’ EoLC competences

**Domain 1:** Overarching values and knowledge in EoLC (and application)  
Pre: 3.77, Post: 5.59  
N=398

**Domain 2:** Self-care and self-reflection  
Pre: 4.52, Post: 6.05  
N=238

**Domain 3:** Communication Skills  
Pre: 4.07, Post: 5.92  
N=190

**Domain 4:** Optimizing Comfort and Wellbeing of patients  
Pre: 3.85, Post: 5.83  
N=174

**Domain 5:** Psychosocial and spiritual care  
Pre: 3.6, Post: 5.41  
N=153

**Domain 6:** End-of-life Decision Making  
Pre: 3.66, Post: 5.31  
N=149

**Domain 7:** Bereavement Care  
Pre: 3.93, Post: 5.57  
N=146

Notes. Outcomes between Oct 1, 2019 – June 30, 2020; ***p<.001
### Project Outcomes

35 students completed both pre- and post-evaluation.

#### Changes in EoLC Competence in two time points (Paired T-test; N= 35)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overarching</td>
<td>3.30</td>
<td>6.07</td>
<td>4.31</td>
<td>6.13</td>
<td>4.02</td>
<td>5.90</td>
<td>3.76</td>
<td>6.03</td>
<td>3.69</td>
<td>5.90</td>
<td>3.52</td>
<td>5.89</td>
</tr>
<tr>
<td>values and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EoLC (and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>application)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>self-reflection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 3:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 4:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimizing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>well-being of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 5:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychosocial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and spiritual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 6:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-of-life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision Making</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 7:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bereavement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. ***p<.001
References


References


References

「賽馬會安寧頌」
社區安寧全人照顧課程

歡迎來到「賽馬會安寧頌」社區安寧全人照顧課程 - 基礎單元

歡迎來到「賽馬會安寧頌」社區安寧全人照顧課程 - 進階單元

歡迎來到「賽馬會安寧頌」社區安寧全人照顧課程 - 高階單元

QR code:  
https://foss.hku.hk/jcecc/online/learning
Questions and Answers