Quality improvement initiatives of mental health services in Japan

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Japan, a leader of high quality products

High quality products
  Kaoru Ishikawa (1915-1989), Fishborn diagram
  Taichi Ono (1912-1990), TOYOTA
  Akio Morita (1921-1999), Sony

1986: Imai M. “KAIZEN”
2004: Liker J. “THE TOYOTA WAY”
“Quality” is a new concept in Japanese healthcare organization*

1980’s: Self-check manuals for hospitals
1987: A committee of Tokyo JCAHO (Joint Commission on Accreditation of Healthcare Organizations)
1990: Japan Society for Quality in Health Care (JSQua)
1995: Japan Council for Quality Health Care (JCQHC)
1997: JCQHC start formal accreditation activities

Examples of Quality Improvement Initiatives

• Japan Council for Quality Health Care (JCQHC), 1997

• JCI Accreditation (2009-)

• Clinical Indicators by National Hospital Organization (2010-)
Challenges

• Bench-marking systems in mental health field
  – “multi-centre” quality improvement programs
  – especially for the process of care and outcomes

• Clarifying process of care
  – Using management techniques in Japan
Outline of my talk

1. “Mental Health Care KAIZEN projects”
   • Suicide prevention program in psychiatric inpatient care
   • Infection control initiative in psychiatric hospitals
   • Feedback system of quality of mental health care

2. Process-visualization project in psychiatric services

3. Conclusions
Nation-Wide Suicide Prevention Project in Stress-Care Units

*Source: Tokunaga Y (personal communication)
Nosocomial Infection in Patients with Mental Disorders

1. Vulnerability to nosocomial infection
   - Poor self-care
   - Closed environment
   - Older age

2. Potential transmitter of nosocomial infection
   - Delayed diagnosis
   - Uncooperative attitudes

Hayato Yamauchi, MD. (Saiki Hoyoin Hospital)
Infection Control Initiative by the Infection Control Association for Psychiatry (ICAP)*

- Various training programs on Infection Control
  - Tuberculosis and scabies**
  - Appropriate use of antibiotics
  - Controlling the spread of infections

- Outcomes
  - Improved prevention of nosocomial infection
  - More infection control rounds

45 members from 36 hospitals

*Professor Noriaki Nukanobu (Hiroshima International University), et al. IHI, 2016
**Others include HBV, HCV, HIV (acute patients) , influenza, norovirus, and O157 (long-term care patients)
Feedback system of quality of mental health care: Concept

Feedback using eCODO system (seclusion/restraint and other quality indicators) NCNP: National Center of Neurology and Psychiatry

Data input at hospital
Secondary analysis of “anonymized” data
Feedback to hospital
Goal setting at hospital

Seclusion/Restraint, etc.
Your hospital
Controlled range
Benchmark (international)

Every 3 months

Diagnosis, Functioning level (eg. GAF), etc.

Your hospital
Average

Time

*Feedback using eCODO system (seclusion/restraint and other quality indicators) NCNP: National Center of Neurology and Psychiatry
A ten-year activity using electronic Coercive measures Database for Optimization (eCODO)

- Start of the project (2006)
- eCODO edge server (ver.1)
- NCNP introduced eCODO system (October 2009)
- eCODO edge server (ver.2.0)
- 2008
- Training program (June)
- eCODO edge server (ver.2.1)
- 2009
- International exchange (Finland)
- Multi-center peer review (February 2010)
- 2010
- eCODO edge server (ver.3.1)
- 2011
- regional exchange in Osaka (November 2012)
- 2012 (3 hospitals)
- 2013 (6 hospitals)
- 2014 (6 hospitals)
- 2015
- Psychiatric Electronic Clinical Observation (PECO)

NCNP introduced eCODO system (October 2009)
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## Tools for Standardization - Clinical Pathway for inpatient -

<table>
<thead>
<tr>
<th></th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<tr>
<td>Outcome</td>
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<td>Pharmacological intervention</td>
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<td>Psycho-social intervention</td>
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<td>Preparation for discharge</td>
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“Chain model” clinical pathway

Clinical Pathway for inpatient

Phase 1  Phase 2  Phase 3

Clinical Pathway for early stage after discharge

Clinical Pathway for maintenance stage

Overview pathway
"comorbidity” concept

Index condition

Comorbidity

Hip fracture...

Comorbidity

Ex. complications (nephropathy, neuropathy, retinopathy)

Comorbidity

Cancer, Stroke, Acute myocardial infarction, or Diabetes

Comorbidity

Depression

Comorbidity

Dementia
Multimorbidity in ageing society

Combinations of 3 diseases*

[Total] 1,361,400

1 disease: 11.7%
2 diseases: 78.0%
3 diseases: 10.3%

*Japan Patient Survey (2008)

“Clinical care is often fragmented, involving both primary care and multiple secondary care specialists who may not be communicating effectively” with each other, and “there is a clear need for integrated care of multiple conditions” [1, 2-5].

“Web model” needed for integrated care*

Ex. multimorbidity
Change from ‘time’–task matrix into a ‘goal’–task matrix

Web model: Personalized Notebook for patients with multimorbidity*

Initially registered as

<Dementia>
<Depression>
<Diabetes>
<Heart disease>
<Schizophrenia>
<Stroke>
<...>

*Developed in collaboration with <Six national centers>
NCC: National Cancer Center
NCNP: National Center of Neurology and Psychiatry
NCCHD: National Center for Child Health and Development
NCCV: National Cerebral and Cardiovascular Center
NCGM: National Center for Global Health and Medicine
NCGG: National Center for Geriatrics and Gerontology

Depression and other chronic diseases (meta-analysis)*

Unhealthy lifestyle → Diabetes → Depression → Vascular diseases

- Hypertension
  - Stroke
    - Lacunar infarction
    - Myocardial infarction
    - Atrial fibrillation
    - Decline of renal function

- Death
  - Dementia
    - Alzheimer type

1.34 [1.25-1.32] [14]
1.29 [1.17-1.54] [13]
1.15 (2008) [10]
1.24 (2010) [12]
1.29 (2013) [13]
1.38 [1.22-1.56] [6]
1.39 [1.15-1.68] [20]

2.52 [7]
1.65 [7]
1.38 [1.53-2.15] [16]
1.34 [1.17-1.56] [14]
1.29 [1.25-1.32] [14]
1.15 [1.34-1.92] [17]
1.29 [1.60-2.08] [8]
2.38 [1.79-3.18] [1]
1.59 [1.29-1.95] [2]

Not significant [5]

1.59 [1.29-1.95] [2]

Not significant [5]

Adherence/ exercise/ diet/ alcohol consumption/ sleep/ other lifestyles

*Meta analysis/systematic review.
Fishbone (or Ishikawa*) diagram

Physician

Insufficient supervision
Insufficient time to assess patients
Insufficient physician
Attitudes not to follow guidelines

Nurse

Fear of relapse
Reluctant to change medications

Patient

Reluctant to change
Chronic disease

System

Limited alternatives
Limited incentives

Method

Rotation of physicians
No practical guideline how to decrease number of antipsychotics

Polypharmacy of Antipsychotics


*Kaoru Ishikawa, PhD. (1915 - 1989)
Professor, Faculty of Engineering
The University of Tokyo
Quality Management Innovations
Unit transition of 10 inpatients*

Case [1]: Unit A1 → A2 → I2 → A2 → A5
[2]: A1 → A2 → I1 → A2 → I1 → I4 → A2 → A4 → A5
[3]: A1 → I2 → I3 → I2 → I3 → I4 → I3 → I4 → A2 → A5
[4]: A1 → I3 → I4 → I3 → I2 → I4 → A2 → A5
[5]: A1 → I2 → I3 → I4 → A2 → I2 → I4 → A2 → A5
[6]: A1 → I2 → I3 → I4 → I3 → I4 → A2 → A4 → A5
[7]: A1 → I2 → I1 → I2 → I4 → A2 → A3 → A5
[8]: A1 → I2 → I1 → I2 → I3 → I4 → A2 → A5
[9]: A1 → I3 → I4 → I3 → I4 → A2 → A3 → A4 → A5
[10]: A1 → I2 → I3 → I4 → I3 → I4 → A2 → A4 → A5

A: Main rout
I: Sub rout
(seclusion/restraint)

*Satoko Tsuru (University of Tokyo)
Conclusions

• Quality issues: multi-dimensional

• Quality improvement stages
  1. In-hospital quality improvement
  2. Multi-centre activities
  3. International platform