How to Build a Corporate e-Pain Form and Pain Terminology?

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Abstract and Objective

Pain has become the universal disorder and around 10,000 pain patients are treated in Hong Kong (HK) public hospitals annually. Pain management data are along scattered or manually captured and difficult to be studied. This paper describes how to develop a patient-event based problem-oriented electronic pain management form to improve data collection, clinical documentation and information sharing through electronic patient record (ePR) system in Hong Kong. A working group with multi-disciplines is set up to address the various and complex requirements. The framework of the pain form is confined to 5 major components: 1) pain survey by patient, 2) pain site & intensity, 3) pain diagnosis, 4) psychological and functional assessments and 5) progress notes. 1,096 pain terms are modified from International Association for the Study of Pain (IASP) chronic pain terminologies and then incorporated into a standardized Hospital Authority Clinical Vocabulary Table (HACVT) for pain diagnosis.

Keywords:

Chronic, Pain, Terminology, Standards, Electronic form

Introduction

Today, pain has become the universal disorder, a serious and costly public health issue. Annually, around 10,000 patients are treated in 8 public hospitals in HK. Pain management data are captured manually leading to difficulty in data analysis or monitor the outcome of treatment. For year 09/10 annual plan, it was approved to develop a patient based problem-oriented electronic pain management form for all HK public hospitals.

Methods

1. To set up a working group with composition of pain specialists, psychiatrist, allied health professionals, information technology expects and health informaticians.

2. To standardize the requirements for all the concerned parties and to confine the framework of the form.

3. With reference to IASP pain term, pain aetiology is modified and incorporated into HACVT diagnosis with mapping to ICD9CM, ICD 10 and SNOMED CT.

Results

To standardize the data requirement for the pain management form is the most difficult task due to complex flows (including patient, data and communication) among pain clinic, allied health and psychiatrist consultation in a hospital. Each discipline has to clearly review and confine the required data. The form is finally built as a patient-event based record and shared through the ePR system in HK public hospitals. It contains 5 major components and is designed with 9 tab pages:

1. Tab page 1-5: Pain intake (survey) form - 34 questions on patient's demographic and pain related information
2. Tab page 6: Pain diagram - indicate pain site and intensity
3. Tab page 7: Pain aetiology (diagnosis) and pain problem
4. Tab page 8: Psychological and functional assessments
5. Tab page 9: Progress - document patient progress notes

A good medical terminology should be concept orientation. In reviewing 1,017 IASP pain terms, 59 terms were identified with multiple aetiologies/problems. After modification, 1,096 terms are incorporated into the standardized HACVT for diagnosis following the medical terminology principles.

Conclusion

A well design form facilitates collection of right content meeting organization needs and right medical vocabularies to encode clinical findings and knowledge. To ensure building a right pain management form, multi-disciplines joint effort approach is essential to achieve towards a success.

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