

**The introduction of a quality improvement  
programme in the Emergency Medicine  
ward of a tertiary teaching hospital**

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# Historical background

- Evolved from the observation ward.
- Established in 1985. The first of its kind in HK.
- Restructured in end of 2006 and renamed Emergency Medicine (EM) ward.
- Reflects the specialization of EM and an expansion of the roles played by the A&E department.



# The EM ward

- 12 beds: 5M 7F
- Average monthly admission: 500
- Admission rate:
- *5.3% (A&E to EM ward)*
- *20% (EM ward to inpatient specialty)*
- No restriction on patient's age or types.
- Preferably discharge within 24 – 48 hrs.



# Objective

- To describe the process of introducing a quality improvement (QI) programme to the EM ward.

# Methodology

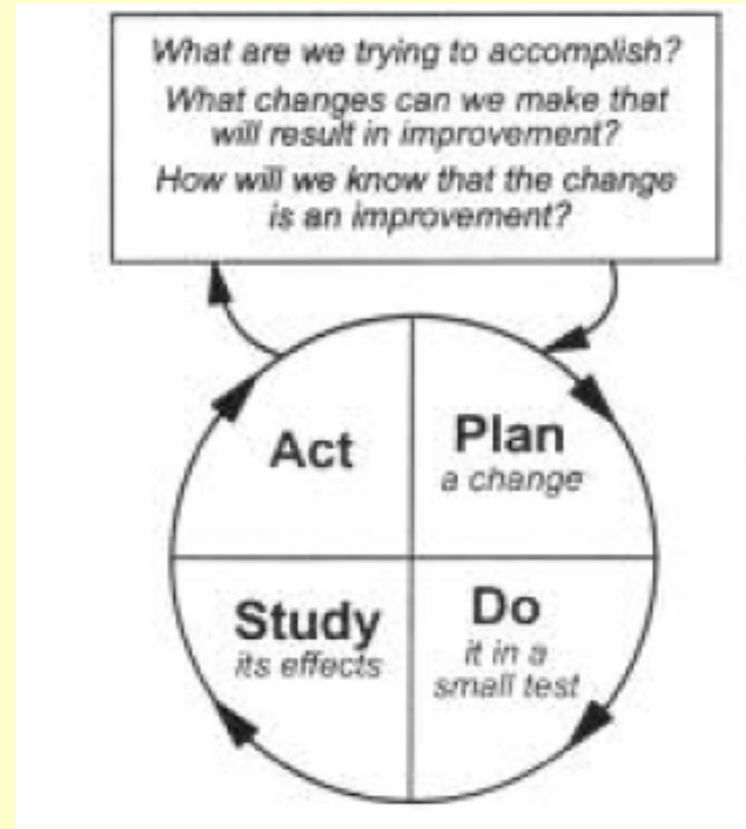
- To discuss the design and ways of implementing the QI programme in the EM ward.
- To identify the obstacles encountered and discuss their solutions.

# The QI programme: the team

- A QI team was formed in November 2006.
- Representatives from medical and nursing staff.
- Full support by Cons.

# The QI programme: approach

- PDSA approach:
- *Plan (a change)*
- *Do (it in a small test)*
- *Study (its effects)*
- *Act (in full scale)*



# What change? (1)

- To plan a change, we need to know:
- *1. what we are doing*
- *2. how we do it*
- *3. whether we do it right*

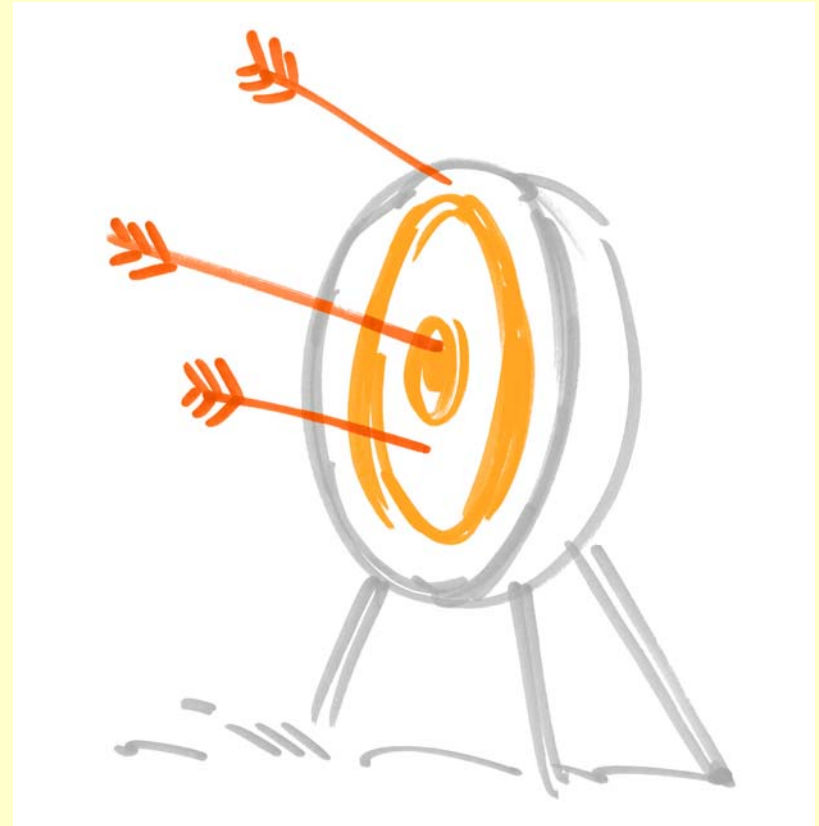


# What change? (2)

- Utilization review of EM ward
- Study on management of patients with abdominal pain in the EM ward
- Study on management of dizzy patients in the EM ward
- Patient satisfaction survey

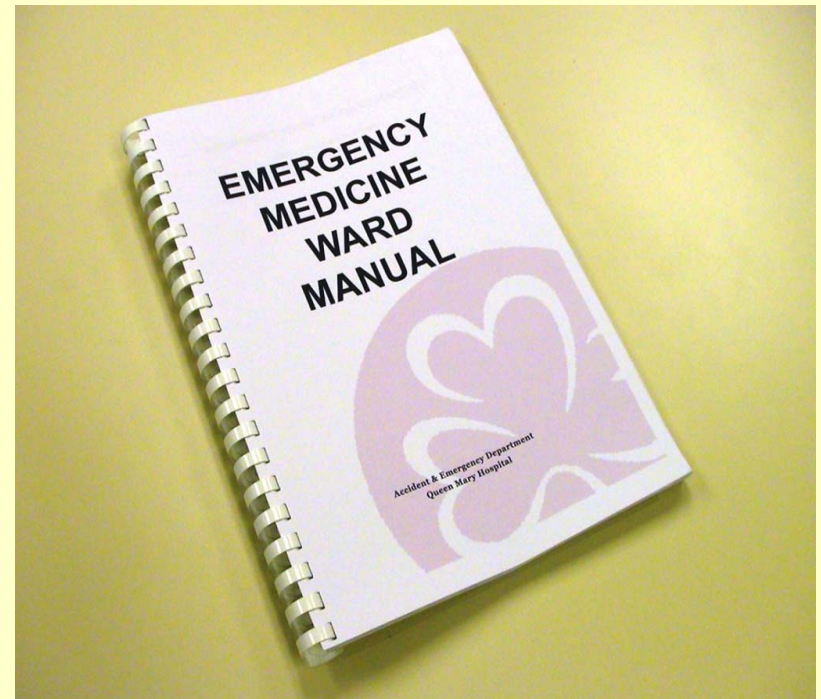
# Important findings: targets for change

- 1. high variability in clinical practice
- 2. a gap between ‘best’ and ‘actual’ practice in managing dizzy patients
- 3. no mechanism overseeing performance
- 4. inadequate discharge information to patients



# Setting the standard (1)

- An **EM ward manual** has been written.
- It covers 38 clinical conditions commonly seen in the EM ward.
- Evidence-based guidelines on patient selection for EM ward admission and management.



# Setting the standard (2)

- Educational **case studies** and **clinical updates**.
- Distributed by e-mail and as poster in a designated corner in the department.



# Filling the gap: dizziness project

- A **dizziness assessment form**, which contains the essentials on evaluating a dizzy patient, has been put in use.
- **Flow charts** on management were posted.
- **Videos** on how to perform positioning tests were prepared.
- **Educational talks** during departmental training session were arranged.

Dizziness  
Duration: \_\_\_\_\_

Patient's gum label

Objective	ED consultation	Decision-making
Define dizziness	<input type="checkbox"/> <b>Vertigo</b> <i>I'm tilting or rocking.</i> <i>The room is spinning.</i>	Suggest vestibular disorders, central or peripheral
	<input type="checkbox"/> <b>Presyncope</b> <i>I might faint.</i> <i>I'm giddy.</i> <i>I'm light-headed.</i>	Suggest cardiovascular disorders.
	<input type="checkbox"/> <b>Disequilibrium</b> <i>I might fall.</i>	Suggest non-vestibular neurological disorders
	<input type="checkbox"/> <b>Ill-defined</b> <i>I'm just dizzy.</i>	Suggest psychological disorders (only a diagnosis of exclusion)
Look for important symptoms	Precipitated by: <input type="checkbox"/> postural change <input type="checkbox"/> head rotation	Suggest Orthostatic hypotension Peripheral vestibular disorders
	<input type="checkbox"/> nausea and vomiting <input type="checkbox"/> tinnitus, hearing loss <input type="checkbox"/> headache <input type="checkbox"/> head injury <input type="checkbox"/> recent URI	Suggest vestibular or non-vestibular neurological disorders
	<input type="checkbox"/> chest pain/discomfort <input type="checkbox"/> palpitation <input type="checkbox"/> tarry stool	Suggest cardiovascular disorders

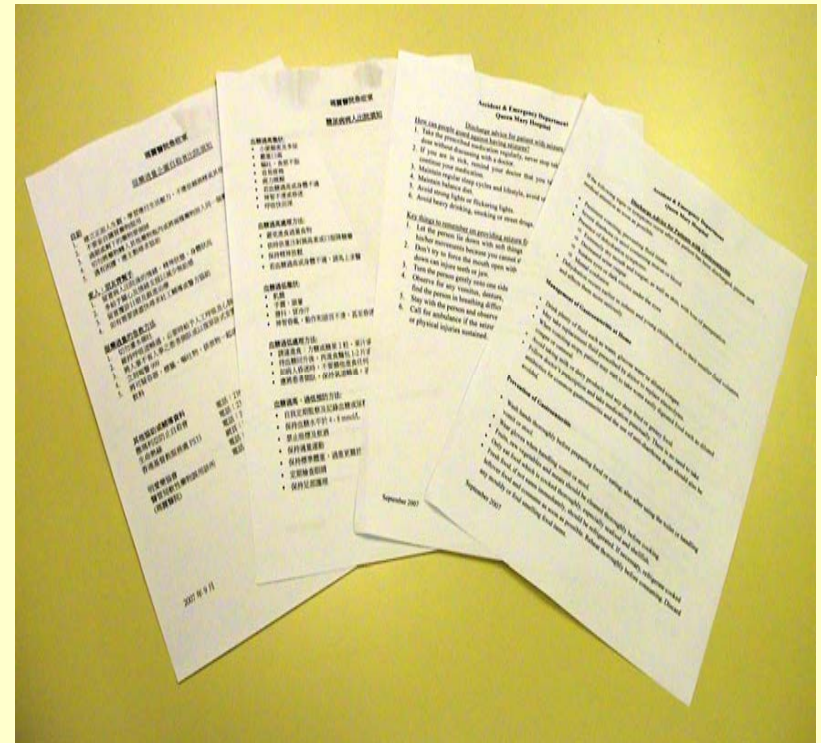
DM     HT     IHD     Others:  
 Drugs:  
 LMP:  
 Supplementary history: \_\_\_\_\_

# Monitoring the performance

- 1. Monthly statistics
- 2. Annual utilization review
- 3. Regular M&M audits

# Patient information

- Education pamphlets specifically designed for EM ward patients have been written.
- EM ward nurses are encouraged to provide more health education and discharge information to patients.

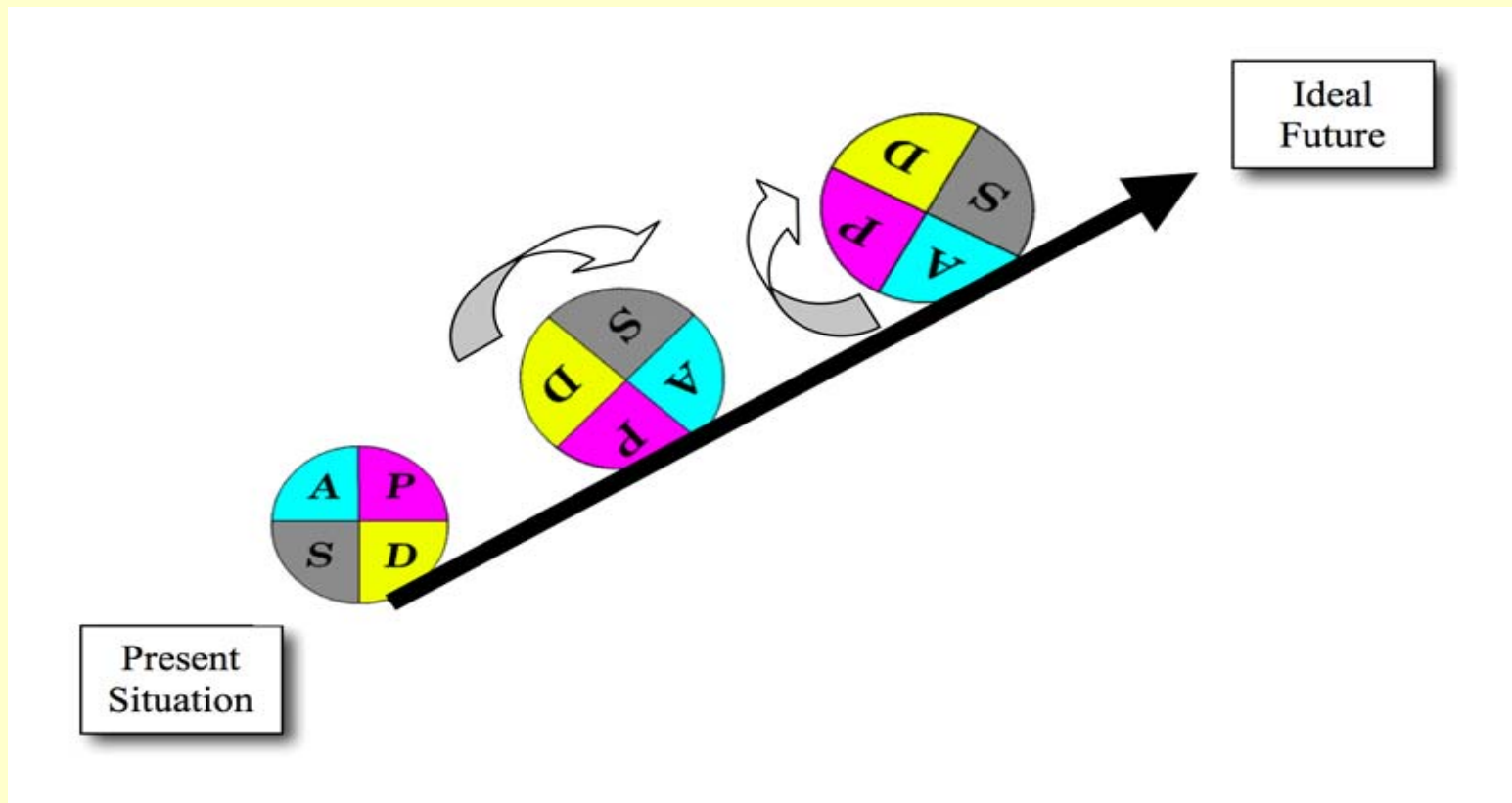


# Evaluation of results

- 1. Has improvement occurred?
- 2. Was the QI programme the cause?
- 3. Is the QI programme generalizable?



# Evaluation: an ongoing process



# Example: dizziness

- Improved documentation of essential history and physical examination findings from 40% of cases to nearly 100%.
- Transfer to inpatient specialty was reduced from 20% to 10%.
- A specific diagnosis was made in over 60% of cases compared to 52% before intervention.

# Example: gross hematuria

- An evidence based guideline (EM ward manual) on management of patients with gross hematuria has been produced.
- Patient selection for EM ward admission and management.
- *Between 12.2007 and 1.2008*
- *88 patients*
- *Direct admission: 34 (38.5%)*
- *In the past, admitted almost all*

# Generalizable?

Our QI programme	The external environment
Target-oriented Project-based Collaboration	EM ward setting Case mix Expertise

Obstacles	solutions
Constraint in resource and time	Careful planning Prioritization Team work Support by management
Resistance to change	Evidence of necessity Feedback Building a new culture

# Our missions

- **To develop a model of EM ward service that can**
- *1. ensure safe and quality clinical service to patients*
- *2. allow effective and efficient utilization of hospital and departmental resources*
- *3. act as a platform for staff education and research*

United, we strive.

