

Patient Identification

Patient Safety Solutions

| volume 1, solution 2 | May 2007



► STATEMENT OF PROBLEM AND IMPACT:

Throughout the health-care industry, the failure to correctly identify patients continues to result in medication errors, transfusion errors, testing errors, wrong person procedures, and the discharge of infants to the wrong families. Between November 2003 and July 2005, the United Kingdom National Patient Safety Agency reported 236 incidents and near misses related to missing wristbands or wristbands with incorrect information (1). Patient misidentification was cited in more than 100 individual root cause analyses by the United States Department of Veterans Affairs (VA) National Center for Patient Safety from January 2000 to March 2003 (2). Fortunately, available interventions and strategies can significantly reduce the risk of patient misidentification.

► ASSOCIATED ISSUES:

The major areas where patient misidentification can occur include drug administration, phlebotomy, blood transfusions, and surgical interventions. The trend towards limiting working hours for clinical team members leads to an increased number of team members caring for each patient, thereby increasing the likelihood of hand-over and other communication problems (3). Because patient misidentification is identified as a root cause of many errors, the Joint Commission, in the United States of America, listed improving patient identification accuracy as the first of its National Patient Safety Goals introduced in 2003, and this continues to be an accreditation requirement (4). While in some countries wristbands are traditionally used for identifying hospitalized patients, missing bands or incorrect information limit the efficacy of this system. Colour coding of wristbands facilitates rapid visual recognition of specific issues, but the lack of a standardized coding system has led to errors by staff who provide care at multiple facilities (5).

There are newer technologies which can improve patient identification, for example, bar coding. Some of these have proved to be cost-effective (6-11).

Regardless of the technology or approach used for accurately identifying patients, careful planning for the processes of care will ensure proper patient identification prior to any medical intervention and provide safer care with significantly fewer errors.

► SUGGESTED ACTIONS:

The following strategies should be considered by WHO Member States.

1. Ensure that health-care organizations have systems in place that:
 - a. Emphasize the primary responsibility of health-care workers to check the identity of patients and match the correct patients with the correct care (e.g. laboratory results, specimens, procedures) before that care is administered.
 - b. Encourage the use of at least two identifiers (e.g. name and date of birth) to verify a patient's identity upon admission or transfer to another hospital or other care setting and prior to the administration of care. Neither of these identifiers should be the patient's room number.
 - c. Standardize the approaches to patient identification among different facilities within a health-care system. For example, use of white ID bands on which a standardized pattern or marker and specific information (e.g. name and date of birth) could be written, or implementation of biometric technologies.

- d. Provide clear protocols for identifying patients who lack identification and for distinguishing the identity of patients with the same name. Non-verbal approaches for identifying comatose or confused patients should be developed and used.
 - e. Encourage patients to participate in all stages of the process.
 - f. Encourage the labeling of containers used for blood and other specimens in the presence of the patient.
 - g. Provide clear protocols for maintaining patient sample identities throughout pre-analytical, analytical, and post-analytical processes.
 - h. Provide clear protocols for questioning laboratory results or other test findings when they are not consistent with the patient's clinical history.
 - i. Provide for repeated checking and review in order to prevent automated multiplication of a computer entry error.
2. Incorporate training on procedures for checking/verifying a patient's identity into the orientation and continuing professional development for health-care workers.
 3. Educate patients on the importance and relevance of correct patient identification in a positive fashion that also respects concerns for privacy.

▶ LOOKING FORWARD:

- ▶ Consider implementation of automated systems (e.g. electronic order entry, bar coding, radiofrequency identification, biometrics) to decrease the potential for identification errors, where feasible.

▶ STRENGTH OF EVIDENCE:

- ▶ Expert consensus and reports of significant error reduction from individual facilities after implementing revised patient identification processes.

▶ APPLICABILITY:

- ▶ In all health-care settings.

▶ OPPORTUNITIES FOR PATIENT AND FAMILY INVOLVEMENT:

- ▶ Educate patients about the risks related to patient misidentification.
- ▶ Ask patients or their family members to verify identifying information to confirm that it is correct.
- ▶ Ask patients to identify themselves before receiving any

medication and prior to any diagnostic or therapeutic interventions.

- ▶ Encourage patients and their families or surrogates to be active participants in identification, to express concerns about safety and potential errors, and to ask questions about the correctness of their care.

▶ POTENTIAL BARRIERS:

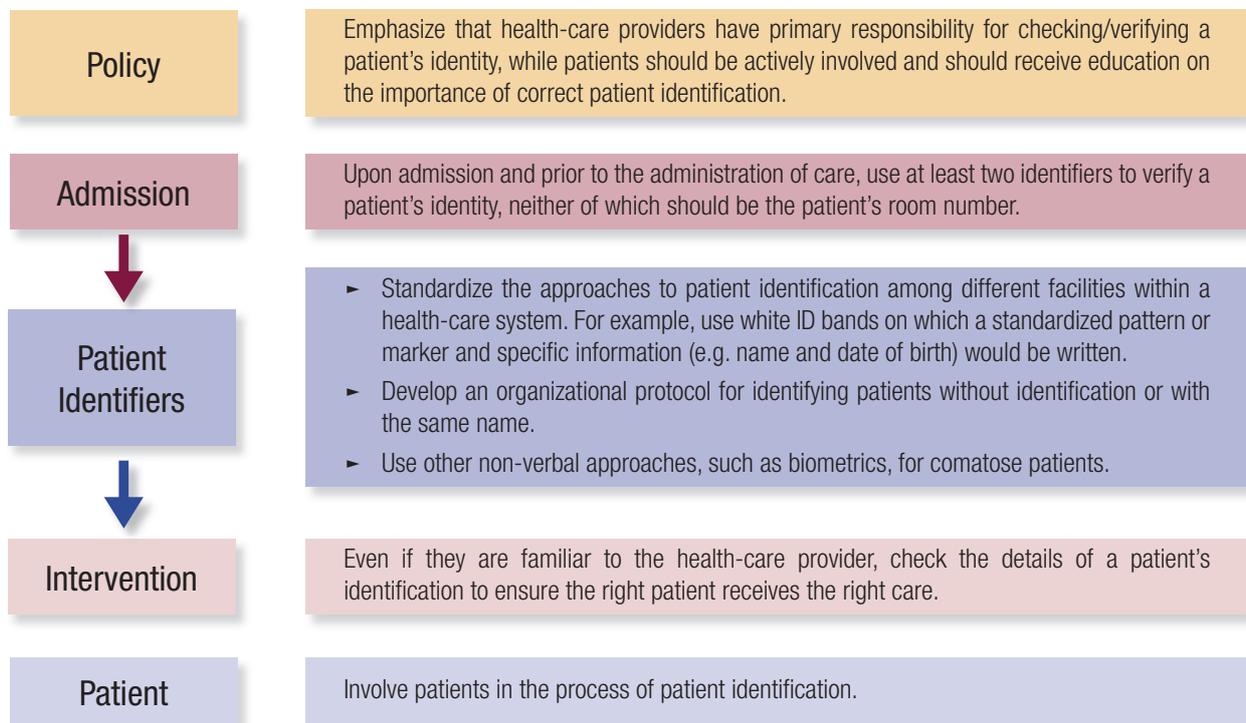
- ▶ Difficulty in achieving individual behaviour change to comply with recommendations, including the use of short cuts and workarounds.
- ▶ Process variation among organizations within a geographic area.
- ▶ Process variation where there may be regional facilities staffed by the same practitioners (for example, colour-coded wrist bands with different meanings in different organizations).
- ▶ Costs associated with potential technical solutions.
- ▶ Integration of technology within and across organizations.
- ▶ Perception by health-care providers that relationship with the patient is compromised by repeated verification of patient identity.
- ▶ Technological solutions that fail to consider the reality of clinical care settings.
- ▶ Increase in staff workload and time spent away from patient care.
- ▶ Typing and entry errors when registering patients on computerized systems.
- ▶ Cultural issues, including:
 - ▶ *Stigma associated with wearing an identification band.*
 - ▶ *High risk of patient misidentification due to name structure, close similarity of names, and inaccuracies in birth dates for elderly patients.*
 - ▶ *Patients using health cards belonging to other individuals, in order to access services.*
 - ▶ *Clothing that conceals identity.*
 - ▶ *Lack of familiarity with local names for increasing number of foreign health-care workers.*
- ▶ Insufficient generally accepted research, data, and economic rationale regarding cost-benefit analysis or return on investment (ROI) for implementing these recommendations.

► RISKS FOR UNINTENDED CONSEQUENCES:

- Not assessing the basic processes for care while becoming preoccupied with technical and non-technical devices or solutions.
- Reliance on technical solutions without adapting the workflow process related to the new support systems.
- Reliance on imperfect technical solutions as if they were perfect.

- Elimination of human checking processes when automated systems are implemented.
- Rapid replication of errors in linked computer systems masking patient identification errors.
- Possible compromising of patient confidentiality and privacy by standardized identification systems.

EXAMPLE OF Patient Identification



This example is not necessarily appropriate for all health-care settings.

► REFERENCES:

1. Wristbands for hospital inpatients improves safety. National Patient Safety Agency, Safer practice notice 11, 22 November 2005. http://www.npsa.nhs.uk/site/media/documents/1440_Safer_Patient_Identification_SPN.pdf
2. Mannos D. NCPS patient misidentification study: a summary of root cause analyses. VA NCPS Topics in Patient Safety. Washington, DC, United States Department of Veterans Affairs, June–July 2003 (http://www.va.gov/ncps/TIPS/Docs/TIPS_Jul03.doc, accessed 11 June 2006).
3. Thomas P, Evans C. An identity crisis? Aspects of patient misidentification. *Clinical Risk*, 2004, 10:18–22.
4. 2006 National Patient Safety Goals. Oakbrook Terrace, IL; Joint Commission, 2006 (<http://www.jcpatientsafety.org/show.asp?durki=10293&site=164&return=10289>, accessed 11 June 2006).
5. Use of color-coded patient wristbands creates unnecessary risk. Patient Safety Advisory Supplement, Vol. 2, Sup. 2. Harrisburg, Pennsylvania Patient Safety Authority, 14 December 2005 (http://www.psa.state.pa.us/psa/lib/psa/advisories/v2_s2_sup__advisory_dec_14_2005.pdf, accessed 11 June 2006).
6. Edozien L. Correct patient, correct site, correct procedure. *Safer Health Care*, 27 July 2005. http://www.saferhealthcare.org.uk/NR/rdonlyres/6D89DBA8-4414-4092-9CF0-62BEBB80F8D8/0/shc_patientidentification.pdf.
7. Right patient—right care. Improving patient safety through better manual and technology-based systems for identification and matching of patients and their care. London, National Patient Safety Agency, 2004 (http://www.npsa.nhs.uk/site/media/documents/781_Right%20patient%20right%20care%20final%20report.pdf, accessed 11 June 2006).
8. Dighe A et al. Massachusetts General Hospital—bar coded patient wristband initiative: a CPM initiative. IHI National Forum storyboard presentation, December 2004; Safety Improvement Reports. *saferhealthcare*, 2005 (<http://www.saferhealthcare.org.uk/IHI/Topics/IntheRealWorld/PatientIdentification/ImprovementReports/MassachusettsGeneralHospital.htm>, accessed 1 April 2007).
9. Wright AA et al. Bar coding for patient safety. *New England Journal of Medicine*, 2005, 354:329–331.
10. Emerging technology: hospitals turn to RFID. *HealthLeaders*, August 2005 http://www.healthleaders-media.com/print.cfm?content_id=71598&parent=106.
11. Secure identification: the smart card revolution in health care. *The Silicon Trust*, 4 June 2003 (http://www.silicon-trust.com/trends/tr_healthcare.html, accessed 1 April 2007).

► OTHER SELECTED RESOURCES:

1. Greenly M: *Helping Hippocrates: a cross-functional approach to patient identification*. *Joint Commission Journal on Quality and Patient Safety*, 32:463–469, August 2006.
2. McDonald CJ. Computerization can create safety hazards: a bar-coding near miss. *Annals of Internal Medicine*, 2006, 144:510–516.
3. National Quality Forum (NQF) Safe Practices for Better Health Care: http://www.qualityforum.org/projects/completed/safe_practices/
4. Poon EG et al. Medication dispensing errors and potential adverse drug events before and after. *Annals of Internal Medicine*, 2006, 145:426–434.

© World Health Organization 2007

All rights reserved. Publications of the World Health Organization can be obtained from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – should be addressed to WHO Press, at the above address (fax: +41 22 791 4806; e-mail: permissions@who.int).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

This publication contains the collective views of the WHO Collaborating Centre for Patient Safety Solutions and its International Steering Committee and does not necessarily represent the decisions or the stated policy of the World Health Organization.