National Patient Safety Agency

# Your guide to implementing standard wristbands

This guidance to the NHS in England and Wales has been developed in consultation from NHS Purchasing and Supplies Agency and Welsh Health Supplies and has benefited from consultation with NHS staff and suppliers from the wristband industry

The wristband (also known as identity bands) design requirements in this document relate to:

1. Size
2. Comfort
3. Usability
4. Method for recording patient identifiers
5. Information presentation
6. Coloured wristbands
7. New technology

## 1. Size (see note 1)

Wristbands must fit the range of sizes of patients, from the smallest newborn babies through to the largest adults. Wristbands should therefore be:

1.1. Long enough to accommodate:
- bariatric patients
- patients with oedema (swelling)
- patients with IV lines and bandages

1.2. Small enough to be comfortable and secure for newborns, babies and children.

## 2. Comfort (see note 2)

2.1. Shape - There should be no sharp corners, profiling or edges that can irritate or rub the skin.

2.2. Edges – The edges of wristband material must be soft and smooth to ensure comfort over prolonged use. This includes any edges that are produced when cutting the wristband to size.

2.3. Fastenings – Fastenings should not press into the skin.

2.4. Material – Wristband material should be flexible, smooth, waterproof, cleanable, breathable and non-allergenic. (*see note 3)*

## 3. Usability

Wristbands should be:

3.1. Easy to clean

3.2. Waterproof and resistant to other fluids (soap, detergents, gels, sprays, rubs, alcohol cleaning products, blood and other bodily fluids)
3.3. Secure and not fall off
3.4. Designed to allow patients to wash
3.5. Quick and easy for all staff to use *(see note 4)*. This includes:
   i. Storage
   ii. Access from storage
   iii. Filling in patient identifiers
   iv. Changing or updating information
   v. Reading and checking information
   vi. Putting on patients (including selecting the correct size or adjusting to correct length)
   vii. Fastening
   viii. Removal
3.6. The wristband should not catch on clothing, equipment or devices including IV lines. Special attention should be paid to fastenings and free ends.
3.7. The NPSA recommends that patients wear one wristband only. If there is a circumstance where it is essential to use more than one wristband, all the bands should satisfy all of the above requirements.

## 4. Method for recording patient identifiers

The NPSA Alert 'Standardising wristbands improves patient safety' states that within two years all NHS organisations where wristbands are used in England and Wales should generate and print all patient wristbands from the hospital demographic system (e.g. PAS). Regardless of the method used to generate the identifiers, the information should be:

4.1. Easy to read
4.2. Durable and not wear off throughout the patient's stay.
4.3. Easy to read if exposed to water, soap and detergents, gels, sprays, rubs, alcohol cleaning products, blood and other bodily fluids any other fluids or preparations that the wristband may come into contact with.

Suggestions for achieving these requirements include:

4.4. Ensure pre-printed labels fit the available space on the wristband – if labels are too big they may wrap over the wristband and information will be hidden.
4.5. Inserts should be sealed to ensure they are durable, waterproof, secure and tamperproof.
4.6. Write-on wristbands should be durable so that information cannot wear off.
4.7. Write-on wristbands should not require special pens.

## 5. Information presentation (patient identifiers)

5.1. The space available for patient data should be adequate for the patient identifiers to be recorded clearly and unambiguously.

5.2. The same layout, order of information and information style should be used on all wristbands across the organisation to encourage standardisation. This helps make wristbands easier to read and avoid errors.

5.3. Pre-defined spaces for each identifier or a pre-printed format can help encourage standardization e.g. consider using a title or box for each identifier (see figure 1), but without reducing the space available for the patient identifiers.

5.4. If pre-defined spaces are not used, pre-printed lines can be used to help make information easy to read. This is particularly useful for write-on wristbands.

5.5. Date of birth should be recorded in the short format, in the style recommended by the NHS Connecting for Health Common User Interface Design Guide as follows:

DD-Mmm-YYYY e.g. 07-Jun-2005
Where DD is the two-digit day
Mmm is the abbreviated month name (e.g. Feb)
YYYY is the four-digit year

Day values less than 10 should appear with a zero in the first position e.g. 08

Month names should abbreviate to the first three letters
Day, month and year separators should be hyphens

5.6. Priority should be given to the patient name.

5.7. First and last name should be clearly differentiated by using lower case letters for first name (with upper case first letter) and UPPER CASE for last name, and should be presented in the order: LAST NAME, First name [2] e.g.

SMITH, John

5.8. There should be enough space to include long names, multiple names and hyphenated.

5.9. Identifiers should be in a font size and style that is easy to read. Avoid italic, simulated handwriting and ornate typefaces[2]. Use a common sans-serif typeface like Arial, Helvetica or Frutiger Roman [3 5]. Use a minimum font size of between 12 and 14 point (equivalent to a height of 2-2.3mm) [3, 4, 5].

5.10. Black text on a white background should be used to ensure the wristband is clearly legible in reduced lighting conditions (such as wards at night) and by those with visual impairments [3, 4].

5.11. The NHS Number consists of 10 digits – the first nine digits constitute the identifier and the tenth is a check digit that ensures its validity. The format of the NHS Number in NHS systems must be 3-3-4, because this format aids accurate reading and reduces the risk of transposing digits when information is taken from a screen[6].

1. NHS Connecting for Health Common User Interface Design Guide Date Display (www.cui.nhs.uk)

2. This is to conform with the NHS Connecting for Health Common User Interface Design Guide Entry - Patient Name 5 December 2006 Version 0.0.0.2 Draft (www.cui.nhs.uk)
3. The Royal National Institute for the Blind guide ‘Clear print guidelines’ http://www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public_printdesign.hcsp
4. Making your information accessible for customers with sight problems. European Blind Union, 58, Avenue Bosquet, 75007 Paris France www.euroblind.org
5. NHS toolkit for producing patient information. 2003 Department of Health 33952 3AP NOV03 (MUL)
6. The NHS Number – a key to greater patient safety. Patient Safety Alert issued jointly by the NPSA, NHS Connecting for Health and Informing Healthcare

## 6. Coloured wristbands

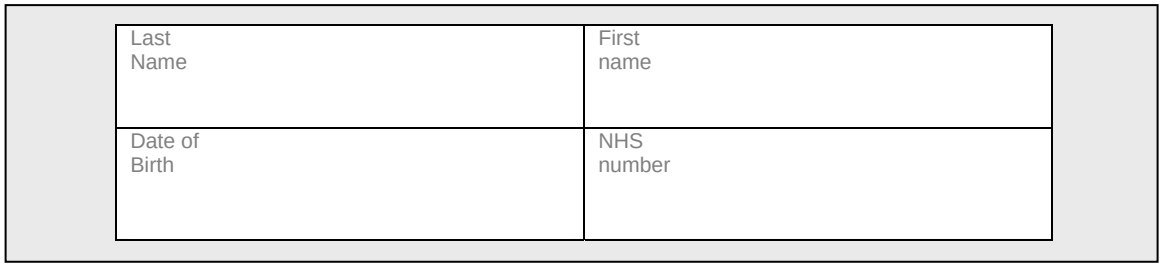
6.1 Where a red wristband is used to indicate a known patient risk no other wristband will be used, so this should allow the patient identifiers to be presented in black text on a white panel on the wristband. If labels are used these must comply with requirement 4 and in particular be durable for throughout the patient’s stay.

## 7. New technology

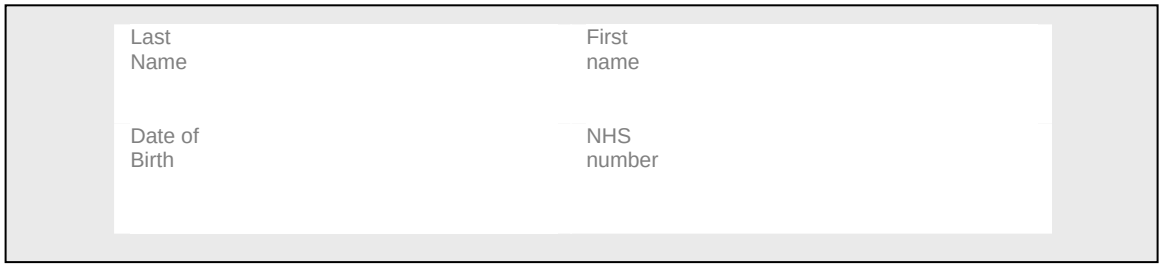
7.1 Wristbands should allow the incorporation of new technologies that may be used to assist patient identification e.g. RFID tags or barcode technologies, whilst still fulfilling all of the above requirements.

Figure 1: Suggested layouts for patient identifiers

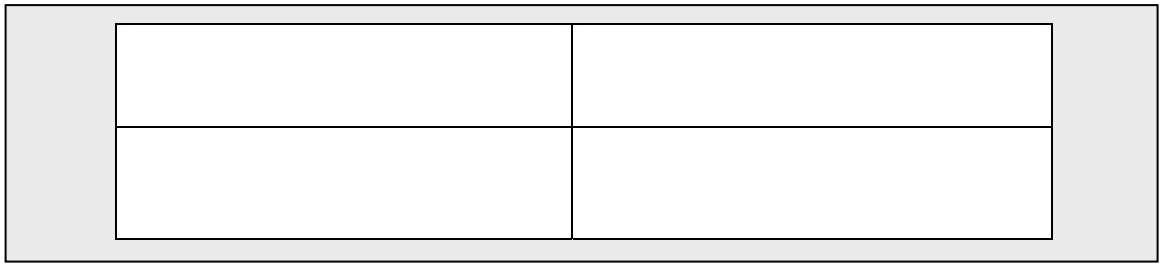
1a




1b




1c



Notes:

1. NPSA consultations with staff and patients identified concerns about the 'fit' of wristbands, that they can be either too tight or too loose. Accommodating the range of patients could be achieved by:
   a) Increase the maximum length available (current maximum appears to be 250-300mm). However, if excess length has to be cut from the wristband staff should be able to do this safely, preferably without the use of scissors. Cut ends should not be sharp.
   b) Make wristbands available in a variety of sizes

2 Patients complain about wristbands being scratchy, itchy, sweaty and hot and this can contribute to wristbands being removed. In particular, wristbands can cause skin damage to newborn babies and to people with delicate or vulnerable skin.

3 Patients are concerned that wristbands may be a potential source of infection and should be easy to clean.

4 All staff, from nurses to administration staff and with a range of training and experience, will issue wristbands and the wristband should be easy to use by all staff.

## 8. Considerations in the design and testing of wristbands

Designing and testing wristbands must account for the range of users (patients and staff) and the range of working conditions and clinical conditions under which wristbands will be used.

Users:

a. Smaller wristbands (width and length) are needed for neonates, babies and children so that they are comfortable and secure.
b. Patients will have clinical conditions which will affect how wristbands fit and how comfortable they are, and these may change during their stay. Interventions and treatments will be carried out which may be difficult with the wristband in place. All of these factors will contribute to the likelihood of the wristband being removed and should be considered in the design of wristbands.
c. Wristbands are worn continuously, including during sleep, and over prolonged time periods. Materials, shapes and edges that feel soft on initial touch may therefore prove uncomfortable over prolonged use. Assessment of wristband designs must be based on how they will feel to the most vulnerable users and over prolonged use.
d. Wristbands are issued by all staff including all levels of nursing staff, HCAs and administration staff. Therefore training will not be available for all staff and the use of wristbands should be intuitive, including where and how to fill in patient identifiers, checking of information, fastening and removal.
e. Representatives of the whole range of users should be consulted during the design and testing of wristbands. If access to users is limited ensure that the sample includes representatives of the most at-risk users (both patients and staff).

Working and clinical conditions:

f. Testing should be contextual and representative. This means that the range of working environments, length of stay, clinical specialties and treatments should be represented in the testing. Think about how the wristband would be used in high risk situations such as low-lighting, staff shortages, shortage of supplies, patient with multiple interventions etc.