# Design Guidance
## Sex and Current Gender Input and Display

**Thursday, 28 January 2010**
**Version 2.0.0.0**

*Prepared by*
**Microsoft**

**Microsoft**®

# PREFACE

### Documents replaced by this document

| Document Title | Version |
|---|---|
| Design Guidance – Gender and Sex Display | 1.0.0.0 |

### Documents to be read in conjunction with this document

| Document Title | Version |
|---|---|
| Design Guidance – Accessibility Principles | 1.0.0.0 |
| Design Guidance – Accessibility Checklist | 1.0.0.0 |

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Prepared by Microsoft, Version 2.0.0.0
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# 1    INTRODUCTION

This document describes the design guidance for the display and input of information about patient 'Sex' or 'Current Gender' status. It describes the area of focus, provides guidance and recommendations, and explains the rationale behind the guidance and recommendations.

The term 'Gender' is now considered too ambiguous to be desirable or safe because different locations and systems use it to mean different things. It is therefore desirable to use the two distinct terms 'Sex' and 'Current Gender'.

> **Note**
>
> Elements used within a software application are commonly referred to as a 'control'. These can take many forms but the types referred to in this document will either be 'input controls' that can receive input from a user, such as a button, text box, option button (radio button) or check box, or 'display controls' such as a label, which can only display information.

The Current Gender input controls are used to record the gender, according to how a patient currently describes themselves, whereas the Sex input controls records their *phenotypic* sex (see section 2.4 for more information).

This document outlines the design guidance for the display of these statuses. Figure 1 shows an example format of these statuses:
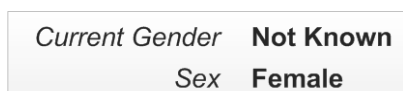


Figure 1: Example of the Format for Displaying Gender and Sex in Clinical Applications

> **Important**
>
> The visual representations used within this document to display guidance are illustrative only. Stylistic choices are not part of guidance and are therefore not mandatory requirements for compliance with the guidance in this document.

This document also outlines the design guidance for the input of these statuses; Figure 2 shows some examples of input design:



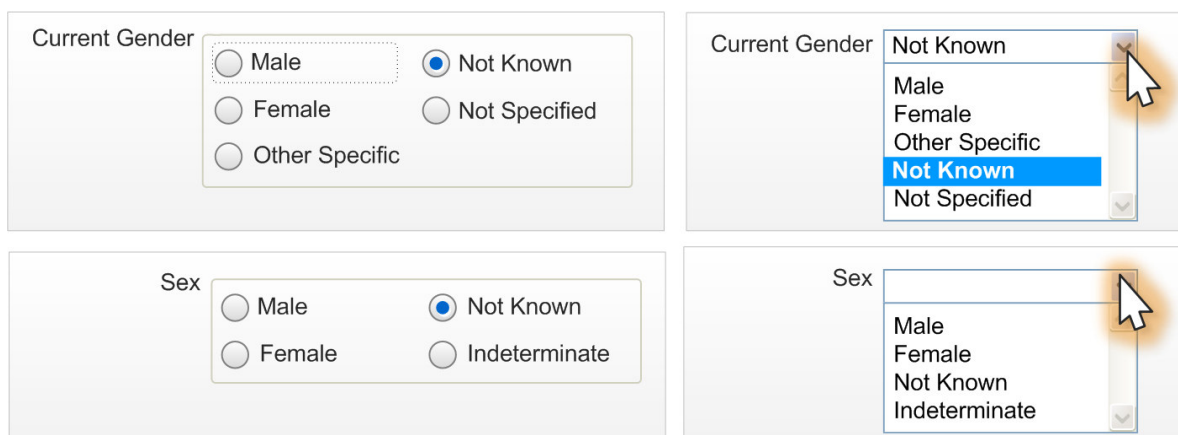Figure 2: Example Input Designs for Current Gender and Sex Statuses

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This document is intended for use by anyone whose role includes screen design, implementation, or assessment of a clinical application. This document can be used as guidance for the:

- Specification of an input and display control for the Sex and/or Current Gender statuses in a user interface

- Implementation of an input and display control for Sex and/or Current Gender within an application

- Assessment of an input and display control for Sex and/or Current Gender in the user interface for a clinical application

Table 1 describes the changes made since the previous version of this guidance (Baseline version 1.0.0.0 dated 05-Jul-2007):

| Change | IDs | Change Description |
|---|---|---|
| **Rewritten** | All | Document completely rewritten since previous version |

Table 1: Changes Since the Last Baseline Version

## 1.1   Customer Need

This section explains why the guidance has been created.

The UK Government Data Standards Catalogue (GDSC)[1] categorises a person's gender in two ways:

- **Person Gender Current**. Or 'Current Gender', which refers to a patient's current gender classification

- **Person Gender at Registration**. Or 'Sex', which refers to the record of a patient's gender classification at the point of birth registration

> **Note**
>
> For brevity and clarity, this document uses the term 'Sex' in place of Person Gender at Registration and 'Current Gender' in place of Person Gender Current.

Clinical applications input and display a patient's current gender or sex in various contexts. Users may confuse the terms current gender and sex, or assume that they are synonymous. Therefore, it is essential that all clinical applications display and explain current gender and sex terminology and values in a clear and consistent manner.

This document details the recommendations for entering and displaying current gender and sex in clinical applications. Clinical applications should use the Current Gender and Sex format to enhance readability, ensure consistency and to cover all possible variants of Current Gender and Sex. This recommendation provides the best display format because it decreases ambiguity through the clear presentation of data values, and intuitive, concise labelling of patient Current Gender and Sex. Additionally, this recommendation enables clinical applications to display a predefined, restricted set of unknown or unspecified Current Gender and Sex values. Figure 1 shows examples of how a clinical application might display Current Gender and Sex values.

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[1] UK Government Data Standards Catalogue – Person Sex **{R1}**:
http://www.govtalk.gov.uk/gdsc/html/noframes/PersonSex-1-0-Release.htm

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The aims of this guidance are to:

- Ensure patients are correctly identified and matched with their patient record by displaying data items consistently
- Allow the status of the patient to be entered and displayed in a legally compliant and patient-sensitive manner

Potential consequences of not adhering to these standards include:

1. The patient is given the wrong treatment as a result of a failure to identify the patient correctly

2. The patient is given the wrong treatment as a result of a failure to match the patient correctly with their artefacts (samples, letters, specimens, X-rays, and so on)

3. The patient is given the wrong treatment as a result of a failure in communication between staff, or staff not performing or checking procedures correctly

4. The patient is categorised with a value that cannot be utilised by any other systems

5. The patient is categorised incorrectly from a legal perspective

6. The patient is categorised incorrectly from their perspective

This guidance is concerned with each of the errors identified above, but particularly points 1 and 2.

## 1.2    Scope

This section defines the scope of this guidance document.

### 1.2.1    In Scope

This guidance is applicable primarily to electronic user interfaces such as those displayed on desktop, laptop, and Personal Digital Assistant (PDA) computers. However, many of the principles can also be applied to paper form design. It is assumed that these computers are capable of displaying Graphical User Interface (GUI) elements (such as buttons) and have a keyboard and pointing device. The following items are in scope:

- Defining the valid values for current gender and sex
- Labelling of information, including:
  - Definition of the terms Current Gender and Sex
  - Definition of the values
  - How items of information are to be labelled; this will cover the label text, positioning and any elements of styling required to differentiate labels visually from data
- Control layout and structure, in order to achieve:
  - Optimal visibility of the values
  - Easy recognition of the values in the context of the wider clinical application
  - Easy recognition of the data type requested for input
  - Reduction of invalid entries

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## 1.2.2    Out of Scope

This section defines areas that are not covered in this guidance. Although there may be specific risks associated with these areas that are not addressed in this guidance, it is likely that the principles in this guidance will extend to the input and display of sex and current gender in many of the areas listed below.

The following items are out of scope:

- **Data storage** – This guidance does not prescribe the format for storing data that is input or displayed

- **Terms of use** – This guidance does not define when an input field or display should be presented within a system or when Current Gender should be used instead of Sex, and vice versa

- **Form design** – This guidance does not prescribe the correct layout for a form or the navigation around a form

**Note**

Listing an item as out of scope does not classify it as unimportant. Project time and resource constraints inevitably restrict what can be in scope for a particular release. It is possible that items out of scope for this release may be considered for a future release.

## 1.3    Key Principles

The following key principles have shaped the guidance in this document:

- Display information according to existing standards

- Minimise opportunities for human error

- Display sufficient instructional information to support data quality

- Promote consistency across the mix of users, clinical applications and care settings

- Ensure reliable and accurate identification of an individual patient record

- Minimise opportunities where patient-clinician relationships may be compromised

# 2 RECOMMENDATIONS AND GUIDANCE

The guidance provided in this document is based on a programme of user research, including:

- The evaluation of the following key standards:
    - UK NHS Data Model and Dictionary[2]
    - UK Government Data Standards Catalogue**{R1}**
- A desk-based research project looking at a range of information entry Web pages and clinical applications
- A Web-based survey of 41 respondents from the following groups:
    - Clinicians
    - Healthcare administrative staff
    - Independent Software Vendors (ISVs)
    - Community pharmacists
- A patient safety assessment

## 2.1 Current Gender Values

Any Current Gender input or display control is restricted to the predefined set of valid values shown in Table 1.

> **Important**
>
> The values defined in this document are based upon the current proposed changes to the NHS Data Model and Dictionary. Should future changes be made to this document, amendments to this guidance will be required.

### 2.1.1 Guidance

| ID | Guideline | Status |
|---|---|---|
| CGS-0001 | Label the Current Gender input controls 'Current Gender'. | Mandatory |
| CGS-0002 | The Current Gender values are:<br>- Male<br>- Female<br>- Other Specific<br>- Not Known<br>- Not Specified | Mandatory |
| CGS-0003 | The Current Gender status is one the following values:<br>- Male<br>- Female<br>- Other Specific<br>- Not Known<br>- Not Specified | Mandatory |
| CGS-0004 | Make the definitions of the Current Gender status values accessible to the user. | Mandatory |

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[2] NHS Data Model and Dictionary **{R4}**: http://www.datadictionary.nhs.uk/index.asp

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| ID | Guideline | Status |
|---|---|---|
| CGS-0005 | Do not abbreviate Current Gender data values. | Mandatory |
| CGS-0006 | Do not display the underlying coded representation of the Current Gender data values. For example, the standard code for 'Male' may be the integer 1, but this number should not appear. | Mandatory |
| CGS-0007 | Label the Current Gender status display 'Current Gender'. | Recommended |
| CGS-0008 | Use 'Not Known' as the Current Gender default value. | Recommended |

Table 2: Guidance for Current Gender Data Values

## 2.1.2 Examples of Correct Usage

| Usage | Format | Examples | Comments |
|---|---|---|---|
| ✓ | Alphabetic string | Male<br>Female<br>Other Specific<br>Not Known<br>Not Specified | Use this format to display patient Current Gender within a clinical application. |

Table 3: Correct Gender Formatting Examples

## 2.1.3 Examples of Incorrect Usage

| Usage | Format | Examples | Comments |
|---|---|---|---|
| ✘ | Numeric code | 0<br>1<br>2<br>9<br>NK<br>M<br>F<br>NS | **Patient-Safety-Critical**<br>This example requires the user to understand and interpret the numeric codes or abbreviations. This representation is likely to cause recognition errors. |
| ✘ | Numeric code and text | 0 Not Known<br>1 Male<br>2 Female<br>9 Not Specified | **Lack of Readability**<br>This example lacks clarity and readability by displaying both number and textual values for Current Gender. The relative number values could also cause offence. |

Table 4: Incorrect Gender Formatting Examples

## 2.1.4 Rationale

The values defined here represent the current best conclusions from the healthcare industry on valid values for these statuses.

The use of an unambiguous alphabetical string is considered the most predictable and recognisable format for clinicians using the systems.

## 2.2 Sex Values

Any Sex input or display control is restricted to the predefined set of valid values shown in Table 5.

**Important**

The values defined in this document are based upon the current proposed changes to the NHS Data Model and Dictionary. Should future changes be made to this document, amendments to this guidance will be required.

### 2.2.1 Guidance

| ID | Guideline | Status |
|---|---|---|
| CGS-0009 | Label the Sex input controls 'Sex'. | Mandatory |
| CGS-0010 | The Sex values are:<br>■ Male<br>■ Female<br>■ Not Known<br>■ Indeterminate | Mandatory |
| CGS-0011 | The Sex status must only contain one the following values:<br>■ Male<br>■ Female<br>■ Not Known<br>■ Indeterminate | Mandatory |
| CGS-0012 | Sex data values must never be abbreviated. | Mandatory |
| CGS-0013 | The Sex default state is null. | Mandatory |
| CGS-0014 | The application must not display the underlying coded representation of the Sex data values. For example, the standard code for 'Male' may be the integer 1, but this number must not appear. | Mandatory |
| CGS-0015 | Make the definitions of the Sex status values accessible to the user. | Mandatory |
| CGS-0016 | Label the Sex status display 'Sex'. | Recommended |

Table 5: Guidance for Sex Data Values

### 2.2.2 Examples of Correct Usage

| Usage | Format | Examples | Comments |
|---|---|---|---|
| ✓ | Alphabetic string | Male<br>Female<br>Not Known<br>Indeterminate | Use this format to display patient Sex within a clinical application. |

Table 6: Correct Sex Formatting Examples

## 2.2.3      Examples of Incorrect Usage

| Usage | Format | Examples | Comments |
|---|---|---|---|
| ✘ | Numeric code | 1<br>2<br>9<br>M<br>F<br>NS | **Patient-Safety-Critical**<br>This example requires the user to understand and interpret the numeric codes or abbreviations. This representation is likely to cause recognition errors. |
| ✘ | Numeric code and text | 1 Male<br>2 Female<br>9 Not Specified | **Lack of Readability**<br>This example lacks clarity and readability by displaying both number and textual values for Sex. |

Table 7: Incorrect Sex Formatting Examples

## 2.2.4      Rationale

The values defined here represent the current best practice regarding the use of this data area.

The use of a discrete alphabetical string is considered the most predictable and recognisable format for clinicians using the systems.

## 2.3      Instructional Text

The Current Gender and Sex controls are potentially confusing to the user due to the terms Sex and Gender being used inconsistently between systems and locations. It is therefore very important to facilitate a user's understanding of a data item through the use of instructional text.

> **Important**
>
> This section is illustrated with examples using tooltips, however, instructional text can be provided in a variety of methods; which method is to be employed is not considered in this document as this is a system-wide issue rather than a specific one.

## 2.3.1      Current Gender Instructional Text

At this time, the term 'Current Gender' is not in widespread use and, as a result, could be confusing to the user. Therefore, the control label must provide the following definition:

Current Gender, as assigned by the individual to themselves

One method of achieving this is using a tooltip, as displayed in Figure 3:
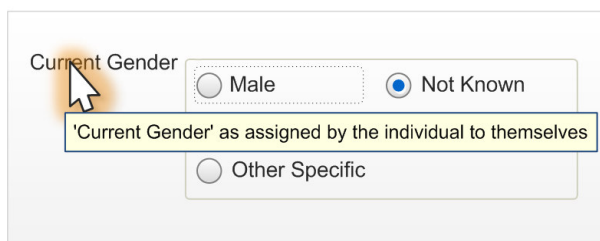


Figure 3: Brief Tooltip Definition of Current Gender from Control Label

ISVs need to take responsibility for informing the user about this control by providing the following instructional text in the format required by their application:

Current Gender is a statement by the individual about the gender they currently identify themselves to be (that is, self-assigned). The valid values are:

- **Male**
- **Female**
- **Other Specific** – when the person has a clear idea of what their gender is, but it is neither discretely male nor female, for example, 'Intersex', 'transgender', 'third gender'
- **Not Known** – used when no information on this subject is known
- **Not Specified** – when the person is unable to specify their current gender or does not have a clear idea of their current gender

## 2.3.2    Sex Instructional Text

The control must provide the following definition:

Sex, as recorded at birth or on issue of a full gender recognition certificate

A tooltip display method for instructional text is shown in Figure 4:
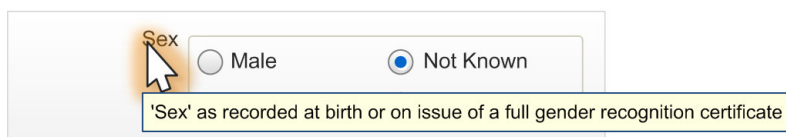


Figure 4: Brief Tooltip Definition of Sex from Control Label

ISVs need to take responsibility for informing the user about this control by using the following instructional text in the format appropriate to their application:

Sex is the phenotypic sex of the person as recorded by the Registrar on the Register of Births, or other initial registration, or on issue of a full gender recognition certificate under the Gender Recognition Act. Valid values are:

- **Male**
- **Female**
- **Not Known** – used when no information on this subject is known
- **Indeterminate** – used when the person is unable to be classified as either male or female

## 2.3.3    Data Values Instructional Text

In addition to having instructional text for the control label, instructional text for the data values should be provided. These could be added in a variety of methods, such as a tooltip, as demonstrated in Figure 5:
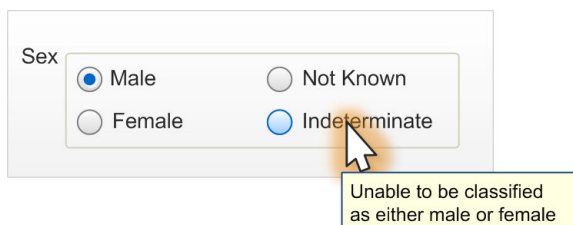


Figure 5: Tooltip Definition of Data Value from Value Label

### 2.3.4 Guidance

| ID | Guideline | Status |
|---|---|---|
| CGS-0017 | Provide definitions for input controls. | Mandatory |
| CGS-0018 | Provide access to definitions of the valid values. | Mandatory |
| CGS-0019 | Provide a shortened version of the definitions. | Recommended |

Table 8: Guidance for Instructional Text

### 2.3.5 Examples of Correct Usage

| Usage | Format | Examples | Comments |
|---|---|---|---|
| ✓ | Alphabetic string | Current Gender is a statement by the individual about the gender they currently identify themselves to be (that is, self-assigned). The valid values are:<br><br>▪ Male<br>▪ Female<br>▪ Other Specific – when the person has a clear idea of what their gender is, but it is neither discretely male nor female, for example, 'Intersex', 'transgender', 'third gender'<br>▪ Not Known – used when no information on this subject is known<br>▪ Not Specified – when the person is unable to specify their current gender or does not have a clear idea of their current gender | Use this format to define Current Gender within a clinical application. |
| ✓ | Alphabetic string | Sex is the phenotypic sex of the person as recorded by the Registrar on the Register of Births, or other initial registration, or on issue of a full gender recognition certificate under the Gender Recognition Act. Valid values are:<br><br>▪ Male<br>▪ Female<br>▪ Not Known – used when no information on this subject is known<br>▪ Indeterminate – used when the person is unable to be classified as either male or female | Use this format to define Sex within a clinical application. |
| ✓ | Alphabetic string | Current Gender, as assigned by the individual to themselves | Use this text as a shortened definition of Current Gender within a clinical application, especially in cases where brevity is paramount. |
| ✓ | Alphabetic string | Sex, as recorded at birth or on issue of a full gender recognition certificate | Use this text as a shortened definition of Sex within a clinical application, especially in cases where brevity is paramount, such as in a tooltip design. |

Table 9: Correct Examples of Instructional Text for Status Type and Data Value Definitions

### 2.3.6 Rationale

Shortened definitions are to be used where the full instructional text is not required or desirable, for example, when a tooltip is placed on a control label. Whilst tooltips can contain as many as 150 characters, they should ideally contain only a brief description in order to allow the user to read it. Additionally, certain technologies only allow a restricted amount of data to be contained in them (for example, the Mozilla® Firefox® Web browser truncates after about 90 characters).

## 2.4 Control Layout and Structure

The input controls should be constructed in a manner that supports only the input of a predefined set of values. Therefore, both an 'Option Button Group' (also known as a 'Radio Button Group') and a 'Drop-down List Box' design have been considered.

The option button group design is considered to occupy more screen space but provides better instruction to the user.

### 2.4.1 Current Gender Option Button Group

This control will be used when a user needs to enter the Current Gender that the patient has assigned to themselves. It consists of a group of five standard option buttons within a control group, as displayed in Figure 6. It should be used whenever the developer has room in their form design.
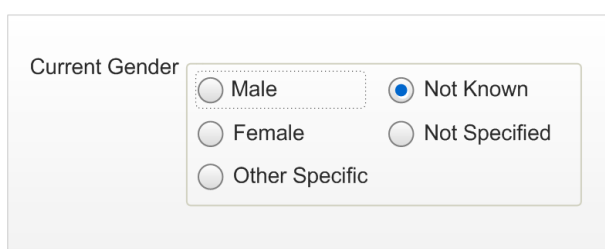
Figure 6: Current Gender Option Button Design (Focus on Male)

An alternative layout is displayed in Figure 7, which may be desirable when the layout is more suited to the available screen space:
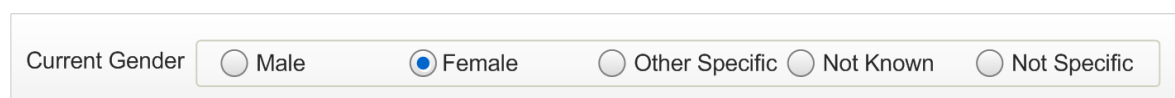
Figure 7: Inline Option Button Design

#### 2.4.1.1 Guidance

| ID | Guideline | Status |
|---|---|---|
| CGS-0020 | Current Gender option button group input controls must consist of five option buttons. | Mandatory |
| CGS-0021 | Current Gender option button group labels are in the following order (top to bottom first, followed by left to right):<br>1. Male<br>2. Female<br>3. Other Specific<br>4. Not Known<br>5. Not Specified | Mandatory |
| CGS-0022 | The Current Gender tab order is:<br>1. Male<br>2. Female<br>3. Other Specific<br>4. Not Known<br>5. Not Specified | Recommended |

Table 10: Guidance for Current Gender Option Button Design

## 2.4.1.2    Examples of Correct Usage
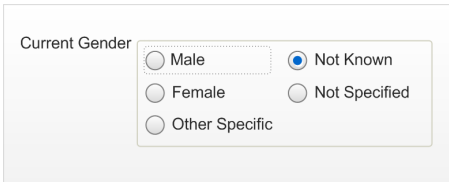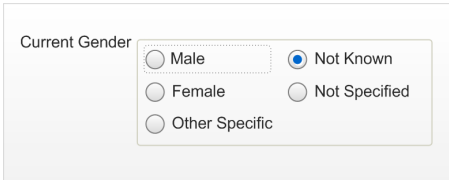
| Usage | Format | Examples | Comments |
|---|---|---|---|
| ✓ | Five option button group |  | Use these five discrete controls with only one selection possible at one time. |
| ✓ | 'Not Known' is the default status |  | Use 'Not Known' as the default for Current Gender. |

Table 11: Correct Current Gender Option Button Design Formatting Examples
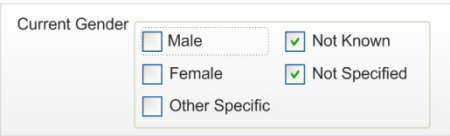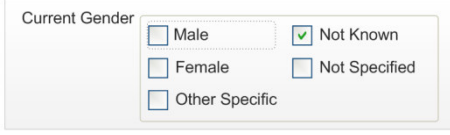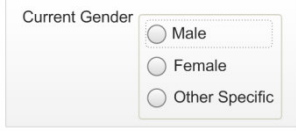
## 2.4.1.3    Examples of Incorrect Usage

| Usage | Format | Examples | Comments |
|---|---|---|---|
| ✘ | Incorrect functionality (non-discrete choices) |  | **Data quality**<br>This example allows a user to select multiple data values when only one should be assigned. |
| ✘ | Incorrect input convention |  | **User experience**<br>This example uses checkboxes, suggesting to users that multiple selections are possible. |
| ✘ | Incorrect value labelling |  | **Data quality**<br>This example allows a user to select a value that does not adhere to standards. |
| ✘ | Too few options (less than five option buttons) |  | **Data quality**<br>This example does not allow a user to enter all the possible valid values for this status. |
| ✘ | Too many options (more than five option buttons) |  | **Data quality**<br>This example allows a user to select a data value that is not valid. |
| ✘ | Incorrect control labelling |  | **Data quality**<br>This example shows a control label that could be misinterpreted as a phenotypic sex status. |

Table 12: Incorrect Current Gender Option Button Design Formatting Examples

### 2.4.1.4    Rationale

The option button group design is considered to be the safest and most accessible design. It instantly displays the valid options to the user for them to assess the correct value. The option buttons are a known medium for selecting a single value from a predefined list and so the user knows what is expected. Additionally, invalid values cannot be entered and, therefore, that type of entry error is precluded.

This design minimises user effort by placing the most obvious choices first. The design also has a default of 'Not Known' to encourage users to select an option only when appropriate.

This design uses controls that are recognised by assistive technologies (for example, screen readers) and allow for easy implementation of instructional text through tooltips.

## 2.4.2    Sex Option Button Group

This control will be used when a user needs to enter information about the Sex value that the patient has assigned to themselves. It consists of a group of four standard option buttons within a control group, as displayed in Figure 8:



Figure 8: Sex Option Button Design with a Value Selected

This layout should be used whenever the developer has room in their form design. Figure 9 displays the control in its default 'null' state (unlike the Current Gender control, which has a default value):



Figure 9: Sex Option Button Design in Default 'Null' State

An alternative layout is displayed in Figure 10, which may be desirable when the layout is more suited to the available screen space:



Figure 10: Inline Option Button Design

### 2.4.2.1    Guidance

| ID | Guideline | Status |
|---|---|---|
| CGS-0023 | Sex option button group input controls must consist of four option buttons. | Mandatory |
| CGS-0024 | Sex option button group labels are in the following order (top to bottom first followed by left to right):<br>1. Male<br>2. Female<br>3. Not Known<br>4. Indeterminate | Recommended |

Table 13: Guidance for Sex Option Button Group Design

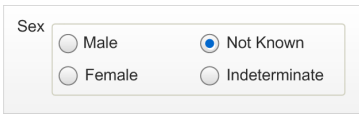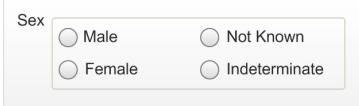## 2.4.2.2    *Examples of Correct Usage*

| Usage | Format | Examples | Comments |
|-------|--------|----------|----------|
| ✓ | Four option button group |  | Use these four discrete controls with only one selection possible at one time. |
| ✓ | 'Null' default state |  | This control must have nothing selected for the null default state. |

Table 14: Correct Sex Option Button Grouping Examples
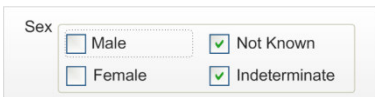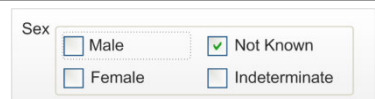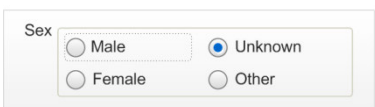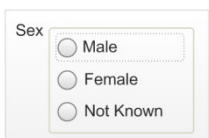
## 2.4.2.3    *Examples of Incorrect Usage*
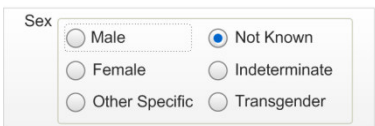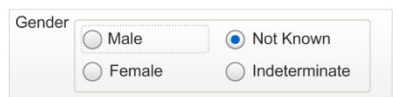
| Usage | Format | Examples | Comments |
|-------|--------|----------|----------|
| ✗ | Incorrect functionality (non-discrete choices) |  | **Data quality**<br>This example allows a user to select multiple data values when only one should be assigned. |
| ✗ | Incorrect input convention |  | **User experience**<br>This example uses checkboxes, suggesting to users that multiple selections are possible. |
| ✗ | Incorrect value labelling |  | **Data quality**<br>This example allows a user to select a value that does not adhere to standards. |
| ✗ | Too few options (less than four option buttons) |  | **Data quality**<br>This example does not allow a user to enter all the possible valid values for this status. |
| ✗ | Too many options (more than five radio buttons) |  | **Data quality**<br>This example allows a user to select a data value that is not valid. |
| ✗ | Incorrect control labelling |  | **Data quality**<br>This example shows a control label that could be misinterpreted as a Current Gender status. |

Table 15: Incorrect Sex Option Button Grouping Examples

## 2.4.2.4    *Rationale*

The option button group design is considered to be the safest and most accessible design. It instantly displays the valid options to the user for them to assess the correct value. The option buttons are a known medium for selecting a single value from a predefined list and so the user knows what is expected. Additionally, invalid values cannot be entered and, therefore, that type of entry error is precluded.

This design minimises user effort by placing the most obvious choices first and has a default of null or blank (for example, ""). Patient safety assessments have revealed that this data is too important to leave in a default value, which could be misinterpreted as actual input. It was felt that if there is a

default value, a user might be encouraged to tab through the input control, without attempting to select an option. Users will need to interact with a default state input control, in order to select a valid value. Once this control has a valid value, it will not be possible for a user to set it back to the default null state.

This design uses controls that are recognised by assistive technologies (for example, screen readers) and allow for easy implementation of instructional text through tooltips.

## 2.4.3    Current Gender Drop-Down List Box

The drop-down list box design is considered desirable for developers who want to save space on a form or where many drop-down list boxes are already implemented in their design. Figure 11 displays an example of the control in a default state, which is to have 'Not Known' selected:
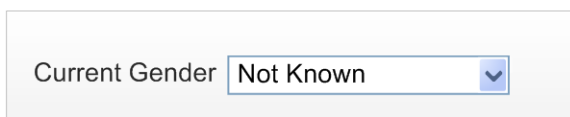
Figure 11: Current Gender Drop-Down List Box Design Default State

Figure 12 is an example of an interaction with the control:
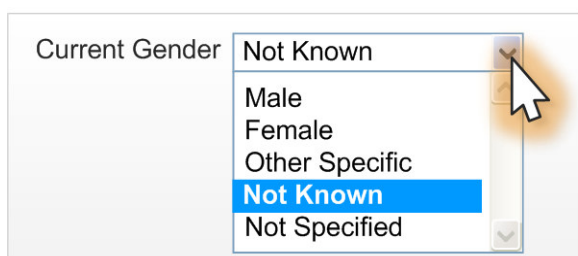
Figure 12: Current Gender Drop-Down List Box with Focus Shadow

### 2.4.3.1    Guidance

| ID | Guideline | Status |
|---|---|---|
| CGS-0025 | Current Gender drop-down list box options are in the following order (top to bottom):<br>1. Male<br>2. Female<br>3. Other Specific<br>4. Not Known<br>5. Not Specified | Mandatory |
| CGS-0026 | Use a single drop-down list box for the Current Gender control. | Mandatory |
| CGS-0027 | Do not use a prompt for the Current Gender control, due to its default value of 'Not Known'. | Mandatory |

Table 16: Guidance for Current Gender Drop-Down List Box Design
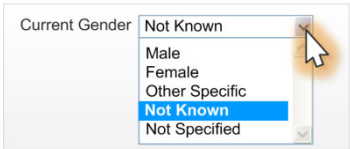
## 2.4.3.2    Examples of Correct Usage

| Usage | Format | Examples | Comments |
|:---:|---|---|---|
| ✓ | Drop-down list box with five possible values | | A single drop-down list box that can be set to one option from the five available. |
| ✓ | 'Not Known' is the default status | | Use 'Not Known' as the default for Current Gender. |

Table 17: Correct Current Gender Drop-Down List Box Examples
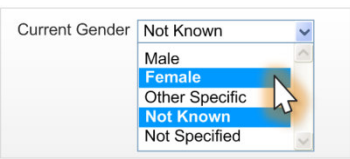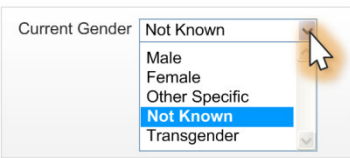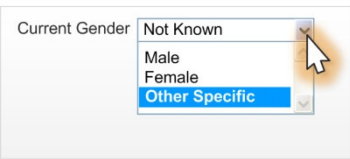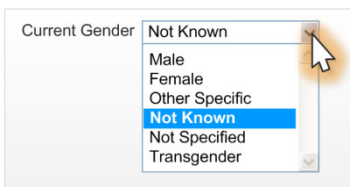
## 2.4.3.3    Examples of Incorrect Usage

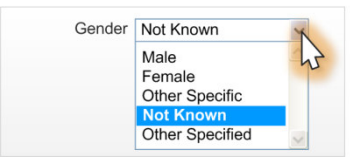| Usage | Format | Examples | Comments |
|:---:|---|---|---|
| ✗ | Incorrect functionality (non-discrete choices) | | **Data quality**<br>This example allows a user to select multiple values when only one should be assigned. |
| ✗ | Incorrect value labelling | | **Data quality**<br>This example allows a user to select a value that does not adhere to standards. |
| ✗ | Too few options (less than five options) | | **Data quality**<br>This example does not allow a user to enter all the possible valid values for this status. |
| ✗ | Too many options (more than five options) | | **Data quality**<br>This example allows a user to select a data value that is not valid. |
| ✗ | Incorrect control labelling | | **Data quality**<br>This example shows a control label that could be misinterpreted as a phenotypic sex status. |
| ✗ | Incorrect default value | | **Data quality**<br>This example shows a control with an incorrect default value (Male). |

Table 18: Incorrect Current Gender Drop-Down List Box Examples

### 2.4.3.4    Rationale

The drop-down list box design increases data quality by allowing users to only enter discrete values whilst conserving screen space.

This design minimises user effort by placing the most obvious choices first in the list order. The design also has a default of 'Not Known' to encourage users to select an option only when appropriate.

## 2.4.4    Sex Drop-Down List Box

The drop-down list box design is considered desirable for developers who want to save space on a form or where many drop-down list boxes are already implemented in their design. Figure 13 displays an example of the control in a default state, which is to be in a null state with nothing selected:
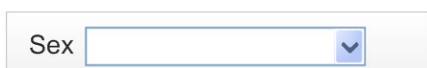


Figure 13: Default Sex Input Drop-Down List Box

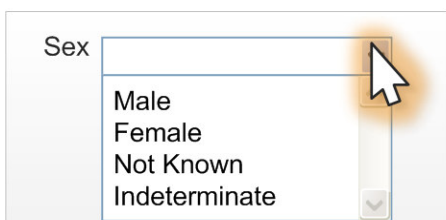Figure 14 is an example of an interaction with the control:



Figure 14: Sex Drop-Down List Box

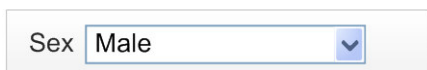Figure 15 shows the resulting data value displayed:



Figure 15: Static State of Control After Data Input

### 2.4.4.1    Guidance

| ID | Guideline | Status |
|---|---|---|
| CGS-0028 | Ensure that Sex controls have no value selected by default and no method of returning to this 'null' state. | Mandatory |
| CGS-0029 | Use a single control for the Sex drop-down list box. | Mandatory |
| CGS-0030 | Ensure that the Sex drop-down list box is blank by default and does not contain a prompt. | Recommended |

Table 19: Guidance for Sex Drop-Down List Box Design
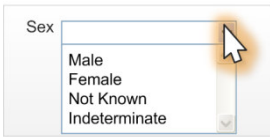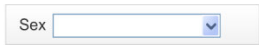
## 2.4.4.2 Examples of Correct Usage

| Usage | Format | Examples | Comments |
|-------|--------|----------|----------|
| ✓ | Four item drop-down list box |  | Use four discrete controls with only one selection possible at one time. |
| ✓ | 'Null' default state |  | Default state should be null, which will display to users as a blank. Once a selection has been made by a user, there is no means of returning to this state for that data item. |

Table 20: Correct Sex Drop-Down List Box Examples

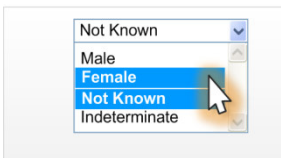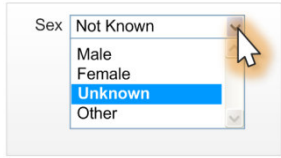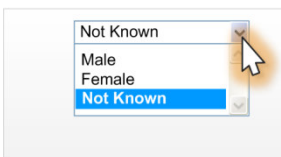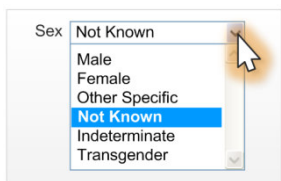## 2.4.4.3 Examples of Incorrect Usage

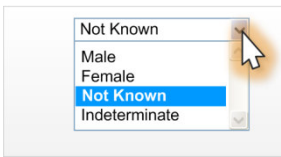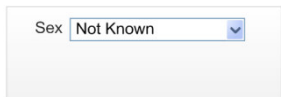| Usage | Format | Examples | Comments |
|-------|--------|----------|----------|
| ✖ | Incorrect functionality (non-discrete choices) |  | **Data quality**<br>This example allows a user to select multiple data values when only one should be assigned. |
| ✖ | Incorrect value labelling |  | **Data quality**<br>This example allows a user to select a value that does not adhere to standards. |
| ✖ | Too few options (less than four options) |  | **Data quality**<br>This example does not allow a user to enter all the possible valid values for this status. |
| ✖ | Too many options (more than four options) |  | **Data quality**<br>This example allows a user to select a data value that is not valid. |
| ✖ | Incorrect control labelling |  | **Data quality**<br>This example shows a control label that could be misinterpreted as a Current Gender status. |
| ✖ | Incorrect default value |  | **Data quality**<br>This example shows a control with an incorrect default value (Not Known). |

Table 21: Incorrect Sex Drop-Down List Box Examples

## *2.4.4.4    Rationale*

The drop-down list box design increases data quality by allowing users to only enter discrete values whilst conserving screen space.

This design minimises user effort by placing the most obvious choices first in the list order and has a default of null or blank (for example, ""). Patient safety assessments have revealed that this data is too important to leave in a default value, which could be misinterpreted as actual input. It was felt that if there is a default value, the user might be encouraged to tab through the control, without attempting to select an option. Users will need to interact with a default state control in order to give it a valid value. Once this control has a valid value, it will not be possible for a user to set it back to the default null state.

# 3 DOCUMENT INFORMATION

## 3.1 Terms and Abbreviations

| Abbreviation | Definition |
|---|---|
| CUI | Common User Interface |
| GDSC | Government Data Standards Catalogue |
| ISV | Independent Software Vendor |
| NHS | National Health Service |
| PDA | Personal Digital Assistants |
| GUI | Graphical User Interface |

Table 22: Terms and Abbreviations

## 3.2 Nomenclature

This section shows how to interpret the different styles used in this document to denote various types of information.

### 3.2.1 Body Text

| Text | Style |
|---|---|
| Code | `Monospace` |
| Script | |
| Other markup languages | |
| Interface dialog names | **Bold** |
| Field names | |
| Controls | |
| Folder names | Title Case |
| File names | |

Table 23: Body Text Styles

### 3.2.2 Cross References

| Reference | Style |
|---|---|
| Current document – sections | Section number only |
| Current document – figures/tables | Caption number only |
| Other project documents | *Italics* and possibly a footnote |
| Publicly available documents | *Italics* with a footnote |
| External Web-based content | *Italics* and a <u>hyperlinked footnote</u> |

Table 24: Cross Reference Styles

## 3.3    References

| Reference | Document | Version |
|---|---|---|
| **R1.** | UK Government Data Standards Catalogue – Person Sex:<br>http://www.govtalk.gov.uk/gdsc/html/noframes/PersonSex-1-0-Release.htm | |
| **R2.** | Design Guidance – Accessibility Checklist | 1.0.0.0 |
| **R3.** | Design Guidance – Accessibility Principles | 1.0.0.0 |
| **R4.** | NHS Data Model and Dictionary:<br>http://www.datadictionary.nhs.uk/index.asp | Version 3 |

Table 25: References

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Prepared by Microsoft, Version 2.0.0.0
Last modified on 28 January 2010