

How to identify same-name patients to improve safety

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It is important to have warnings in place for patients with the same or similar names in order to improve prescribing safety. Here, the author describes a method for identifying patients with the same name and generating a warning for when their record is accessed.

An embarrassing cause of prescribing errors in general practice is to select the wrong patient when prescribing. Not only is it upsetting for patients to find that they have been given a prescription with another person's details on it, but it can also lead to hazardous prescribing – if you are dealing with the wrong patient's record, the correct alerts will not be in place.

In any GP practice it is likely there will be a proportion of patients on the list who have identical or similar names. You may have four John Smiths, for example, or a Catherine Taylor and Kathryn Tailor. While it is good practice to check further details (such as date of birth or address) to ensure that you are dealing with the right patient, it is also helpful for the clinical system to warn the person viewing the medical record at the point of accessing it if there are patients with similar names.

The simplest form of warning is an electronic message that appears on screen when the patient's record is opened (see Figure 1). Most clinical screens have some functionality that will do this. For example, Emis Web has 'Patient Warnings', Emis LV has 'Major Alerts' and SystmOne has 'Reminders'.

When the patient's record is accessed, either a message appears

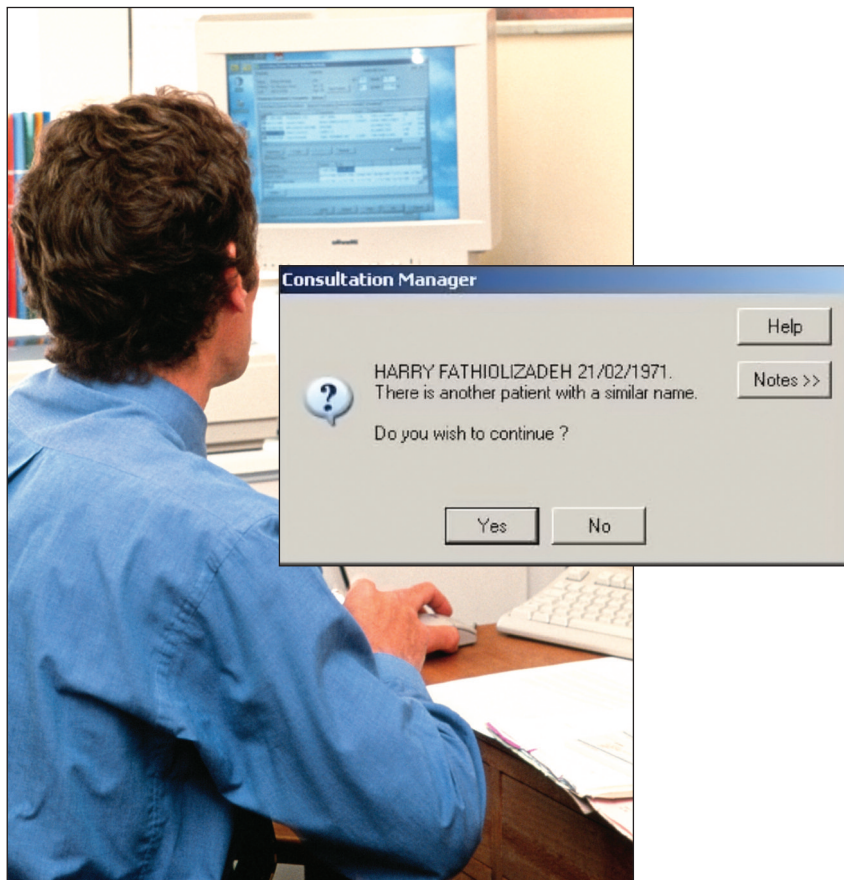


Figure 1. In any GP practice a proportion of patients will have the same or similar names; it is therefore helpful for the clinical system to warn the user when accessing the records of such patients

clearly in the middle of the screen or on the patient home screen. It is prudent to make the message simple and consistent across all medical records, such as: 'Caution similar name!'

INPS Vision is different in that it has additional functionality that means you may not need to use the advice that follows: Vision proactively identifies patients with similar names (or close matches). The system presents a dialogue box to the user to warn them that there are other patients with a similar

| | A | B | C | D | E | F |
|---|---------|----------|-------------|---|---|---|
| 1 | Surname | Forename | Merged | | | |
| 2 | John | Smith | John Smith | | | |
| 3 | Joe | Bloggs | Joe Bloggs | | | |
| 4 | Mary | Taylor | Mary Taylor | | | |

Figure 2. Forename and surname can be easily merged into the same cell using the CONCATENATE function

name and asks them to confirm that they have the right patient before selection.

Opportunistic identification

In our practice, until recently we took an opportunistic approach to flagging similar names. This relied either on staff who knew the list population well remembering if someone has that same name when processing new registrations, or other staff spotting it during their daily work and adding the warning *ad hoc* (if they had the time).

However, in a recent audit we established that of 513 patients with identical forename and surname (from a list size of 13 250), only 79 had some sort of warning in their record and for many of these the warning only applied to one of the patients. It was evident that opportunistic identification of duplicate names is ineffective.

So it is clear that a practice may need to be proactive in the pursuit of a solution. In order to do this, firstly we need to find as many of these 'name twin' patients as we can so that we are then able to add the warning.

How do we find these patients?

The easiest way to find patients with identical names involves running a simple clinical system search that exports your entire patient list sorted by name to a spreadsheet, then adding a little wizardry

| | A | B | C | D | E | F | G | H | I |
|----|---------|-----------|----------------|---|---|---|---|---|---|
| 1 | Surname | Forename | Merged | | | | | | |
| 2 | John | Smith | John Smith | | | | | | |
| 3 | Joe | Bloggs | Joe Bloggs | | | | | | |
| 4 | Mary | Taylor | Mary Taylor | | | | | | |
| 5 | John | Smith | John Smith | | | | | | |
| 6 | Fred | Smith | Fred Smith | | | | | | |
| 7 | Jean | Jefferies | Jean Jefferies | | | | | | |
| 8 | Fred | Salmon | Fred Salmon | | | | | | |
| 9 | Chris | King | Chris King | | | | | | |
| 10 | John | Tomac | John Tomac | | | | | | |
| 11 | Dave | Yates | Dave Yates | | | | | | |
| 12 | John | Smith | John Smith | | | | | | |
| 13 | Chris | King | Chris King | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |

Figure 3. Using the 'COUNTIF' formula in the conditional formatting function will identify duplicate names and highlight them in a colour of your choice

in the form of 'conditional formatting' to highlight the duplicates.

Conditional formatting is a function within spreadsheet programs such as Microsoft Excel that will allow you to identify duplicate values/text by changing the colour of the text automatically according to a formula that you insert. Remember that, from an information governance perspective, when saving this spreadsheet it is a good idea to password protect it and/or simply delete it as soon as you have used it.

To keep the conditional formatting simple but effective, when you export your patient list into a spreadsheet you need to ensure the surname and forename are in the same cell. If they are not already, then you can do this using the 'CONCATENATE' function. In the example in Figure 2, simply type into cell C2 =CONCATENATE(A2," ",B2), then copy cell C2

and paste into all the subsequent cells in that column to apply it to the rest of the names.

Then you need to apply the conditional formatting. The formula you insert is the same irrespective of which version of Microsoft Excel you use, although how you access conditional formatting will vary. The help menu of your spreadsheet program or a search engine, such as Google, should provide the advice you need. The example below is from Excel 2010.

Assuming your 'Surname Forename' is in column C and there is a header row with a title (eg 'Merged') as above, type the following formula =COUNTIF(C:C, C2)>1 into the appropriate field within conditional formatting for cell C2 (where the first name is), then click on 'Format' and choose the colour red for the text from the format options presented (see Figure 3).



Letters

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| | A | B | C |
|----|---------|-----------|----------------|
| 1 | Surname | Forename | Merged |
| 2 | John | Smith | John Smith |
| 3 | Joe | Bloggs | Joe Bloggs |
| 4 | Mary | Taylor | Mary Taylor |
| 5 | John | Smith | John Smith |
| 6 | Fred | Smith | Fred Smith |
| 7 | Jean | Jefferies | Jean Jefferies |
| 8 | Fred | Salmon | Fred Salmon |
| 9 | Chris | King | Chris King |
| 10 | John | Tomac | John Tomac |
| 11 | Dave | Yates | Dave Yates |
| 12 | John | Smith | John Smith |
| 13 | Chris | King | Chris King |

Figure 4. Following the example in Figure 3, patient names that have a duplicate should now be highlighted in red; you can now generate warnings in your prescribing software for each of these names

Then click on cell C3, hold the shift key, scroll to the bottom of your list and click on the bottom-most cell with a name in it so that all names are highlighted. Then right click on the shaded area and from the 'Paste Special' option select 'Formats'. This will apply the formula in cell C2 to all the remaining cells in that column.

As if by magic you will find that all names that appear more than once will now be highlighted in red and thus easily identified as you scroll down (see Figure 4).

There is a feature in Excel 2010 that allows you to sort by text colour, which will allow you to bring all these names to the top of the list, but this is not strictly necessary as you could sort alphabetically instead.

Patient warnings

Now you have your list of identical names that you can apply warnings to. In some clinical systems you can 'batch add' patient warnings. In Emis Web, for example, if you create a manual search list you can add a patient warning to everyone on that list. They can all be given the same warning of 'Caution similar name!'

Some clinical systems may help you in the process further by allowing you to eliminate those who already have a patient warning. For example, in Emis

Web, when producing an output format for your entire patient list in the first instance you can add a column for 'patient warning' that will show any message against the patient's name.

Then when you have highlighted in red those with duplicate names by the method above, you will be able to scan across and see if they already have an alert. At this point you can put them in a manual list and select 'Batch Add -> Patient Warning'.

Dealing with nonidentical but similar names (Catherine Taylor, Kathryn Tailor) is more problematic. The only simple way is to produce a spreadsheet of all the patients and sort alphabetically and scan the list by eye. This need not take a lot of time, especially if you look out for the more commonly occurring similar names such as 'Jon' and 'John', 'Catherine' and 'Kathryn', etc.

Conclusion

It is important from a prescribing safety point of view that your system helps you to avoid issuing medication to the wrong patient. The use of conditional formatting described in this article allows for the identification of patients with identical names.

Finding patients with similar (but not identical) names is more challenging. Nevertheless, by taking a systematic approach it is possible to identify most of these patients as well.

It is then important to ensure that, when opening up a patient record, an alert is generated if there is another patient with an identical or similar name.

For new patients registering with the practice, it is worth checking at the outset whether there are patients with similar names. It will also be helpful to repeat the procedures described in this article on a periodic basis to pick up any patients with similar names who may have slipped through the net.

Declaration of interests

None to declare.

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