25th February 2014

David Brill
Clinical News Editor
Cirrus Media
Level 3
475 Victoria Avenue
Chatswood NSW 2067

Dear Mr Brill

The Allergy and Adverse reaction checking in Best Practice has been designed to work at three levels:

- **Drug Class level** (this is the default), alerting all products containing any ingredient in the class, like Cephalosporins, Sulfonamides and Penicillins.
- **Ingredient level**, alerting all products containing the nominated ingredient, like Cephalothin, Cephalexin, Phenoxymethylpenicillin and Amoxycillin.
- **Product name level**, alerting products having the specific brand name that has been entered, like Keflex, Ibilex, Amoxil and Moxacin.

This multiple level approach is documented in our help file.

Having these three increasingly specific levels allows the practitioner who is entering the details of the adverse reaction to specify the appropriate warning level. That is, it allows the GP to narrow down the level of the warning if they feel that it is clinically appropriate to only warn at the ingredient or brand name level. For example, if a patient develops nausea when taking Erythromycin, but can take Roxithromycin and Clarithromycin without this side effect, the reaction can be recorded to Erythromycin specifically, avoiding unnecessary prompts when prescribing other members of the macrolide class. This helps reduce the incidence of "prompt fatigue" where users receive so many warnings that they fail to read them anymore.

If a patient has had an allergic reaction to Cephalothin, the GP who is recording the adverse reaction will decide if this is a specific reaction to the drug that was taken, or whether it's likely to be a reaction to all drugs in that class (that is, all Cephalosporins). If the GP determines that it's likely to be a reaction to all Cephalosporins, then the adverse reaction should be entered as a class reaction to Cephalosporins. **Importantly, this is and remains the default level of warning in *Bp***. Alternatively, if the GP has determined that it's likely to be a reaction only to that specific drug, then the adverse reaction can be added as a drug specific adverse reaction to Cephalothin. Having made this decision as a qualified and experienced medical practitioner, specific user action is then required to change the warning level from "Drug class" level to "Product" level. By making this change to the warning level, the practitioner has specifically instructed the software not to warn about all Cephalosporins, but only about Cephalothin. To me, it does not seem logical to expect that changing the reaction from "Drug class – Cephalosporins" to "Ingredient – Cephalothin" should generate the same set of warnings.

The article states that "concern has emerged that GPs could overlook this step, entering the allergy only to an individual drug or ingredient.", but there is no extra step required to add the reaction at the Class level and in fact, an extra step is only required if the reaction is to be recorded at the Product or Ingredient level rather than at the Class level. The software has been deliberately designed so that it is easier to add a class level warning than a drug level warning. For instance, in order to enter an allergy to the class of Cephalosporins, the user simply opens the allergy window, types the 2 letters "CE" and clicks on the Save button. To enter an allergy specifically to Cephalothin, the user must open the allergy window, use the mouse to change the radio button from "Drug class" to "Ingredient", type the 3 letters "CEP" and then use the mouse again to highlight Cephalothin in the list, then press the Save button – requiring two extra actions and an extra keystroke.

The GP featured states in reference to logging reactions as a class effect that "the majority of doctors wouldn't do that routinely". This is not our experience at all. I question why a doctor wouldn't log an allergy as a class effect when:

a. This is the most logical way to do it. If you are allergic to penicillin, enter the allergy to penicillin, not to *Amoxycillin*;
b. This is the software default; and
c. This way is easier and has less steps, keystrokes and mouse movements.

The article states "It is unclear whether the issue extends to other software". We have been informed that our major competing product has a two-level system of checking, "Drug" and "Class", and that entering Cephalothin as a "Drug" allergy in their current software did not produce a warning when Cephalexin was subsequently prescribed. This behaviour is identical to that of *Bp*. Since our two products have supplied over 80% of the Australian GP software market for the last 20 years, most Australian GPs are familiar with the concept of multiple levels of adverse reaction checking and are appropriately using the software.

What has been demonstrated in this article is purely and simply user error. The software is working as it has been designed to. The user does not understand how it works and is using it incorrectly. It is inherent on the user of any computer software to learn how the program works before using it. If a doctor cannot understand how the multi-level warning system works, then he should not be using the software to prescribe drugs to patients.

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