

Vision Prescribing Decision Support

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Decision Support



Mostly about:

- Interactions
 - This drug interacts with that drug
 - Drug to Drug
- Contraindications
 - This drug is not good in this condition
 - Drug to Condition
- Doubling
 - This drug is the same or similar to that drug
- Adverse Reactions
 - Allergies
 - Side effects

Why do I see so much of this?

Drug Check Results



The following information may be relevant to prescribing Ketoconazole 2% shampoo to this patient.

Drug-Drug Interactions I Drug Check Results 🚝 Seretide 250 Evoh potentially SEVERI shampoo causing i Manufacturer advis information see BN interaction is consi datasheet. Simvastatin 40mg (reaction with Keto of myopathy, conc SPC/other referend significant accordi Contraindications for Ke Ketoconazole hype

Do you still wish to p

The following information may be relevant to prescribing Ketoconazole 2% shampoo to this patient.

X

P ...

X

- Drug-Drug Interactions for Ketoconazole 2% shampoo
 - Seretide 250 Evohaler (GlaxoSmithKline UK Ltd) has a potentially SEVERE reaction with Ketoconazole 2% shampoo causing increased risk of side effects. Manufacturer advises avoid concomitant use. For further information see BNF, SPC or other reference source. This interaction is considered significant according to the datasheet.
 - Simvastatin 40mg tablets has a potentially SEVERE reaction with Ketoconazole 2% shampoo increasing the risk of mucrathy concentrations (CONTRAINDICATED - see

And keep being asked to do this???!!!!

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Proceed Do Not Proceed Help View >>	

User Options (ALTCOS)

Consultation Manager Setup			
Consultation Startup Data Entry Patient Record Drug Check Management The	erapy <u>G</u> eneral		
Therapy Data For Drug Checks And New Sensitivity Checks	ок		
From Last (date offset): 70 days	Cancel		
	<u>H</u> elp		
Automatic Besults Display On			
Interactions			
Patient Specific Image: Contraindications:			
Precautions: Dou <u>bling</u> :			
What do all those options do?!?			
what do all these option	5 UU ! !	::	
Drug Warnings			
High and Medium			
Show Setup Form at Startup			

An Approach

- When does decision support checking happen?
- What does decision support actually check for?
- What are Interaction levels
- What are "Warnings"
- How do "doubling" checks work
- How can you make it more meaningful
- And less intrusive!

Events that trigger it:

Acts on

- Add new Acute
- Add new Repeat Master
- Re-Activate a Repeat Master
- Add new Adverse Reaction

Does NOT act on

- Re-authorise
- Discontinue
- Delete
- Adding a new diagnosis

Interactions

• 'Drug to Drug'

• The drug you are *adding* interacts with a drug the patient is *currently* prescribed

• Vision checks the patients:

- Active Repeat Masters
- Issues in time period (*Currently)

Time Period?

Consultation Manager Setup				
<u>Consultation</u> Startup Data Entry Patient Record Drug Check Management	Therapy <u>G</u> eneral			
Therapy Data For Drug Checks And New Sensitivity Checks From Last (date offset): 70 days	OK Cancel <u>H</u> elp			
Automatic Results Display On Contraindications: Patient Specific Precautions: Precautions: Never Doubling: Any Same Ingredients Drug Warnings				
Override <u>C</u> onfirmation Required High and Medium ▼ Show Setup Form at Startup				

Checks How Far Back:

- Vision checks therapy records for:
 - Interactions
 - Drug Doubling
- And when you add an allergy
- And controls Acute Therapy items shown in Current tab

Recommended Value

Therapy Data for Drug Checks

All therapy data is checked for drug-to-drug interactions and drug doubling..

In From Last (date offset), you can specify the date offset in days, weeks, months or years (eg 7D, 6W, 6M, 1Y):

- Only Therapy added within the period specified is checked.
- The date offset here also determines which acute therapies are listed on the Current tab of Therapy it only shows acut

Non-Scottish practices - A value of around 20 days (20D) is recommended so that you avoid getting drug doubling messa of days which the drug and sensitivity offset date can be set is 7 days for non-Scottish practices. After receipt of DLM 260, a days were automatically changed to the minimum 30 days offset but this can now be changed to 7 days.

Scottish practices - the minimum number of days which can be entered is 30 days.

For new users, the default is one year.

- Minimum is
 - 20 days in E, W and NI
 - 30 days in Scotland (SEF)
- INPS suggest 20 days
- CAB RFC for 2 dates

Level 3 Interaction Warning

- Might kill or serious harm!
- "Life threatening"
- You want to see these!

Drug Check Results



X

Level 2 Interaction Warning

- "Serious"
- I like to see them

Drug Check Results

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The following information may be relevant to prescribing Warfarin 1mg/ml oral suspension sugar free to this patient.

Drug-Drug Interactions for Warfarin 1mg/ml oral suspension sugar free

- There is a potentially major reaction between Seretide 250 Evohaler (GlaxoSmithKline UK Ltd) and Warfarin 1mg/ml oral suspension sugar free causing changes in plasma concentrations For further information see BNF, SPC or other reference source.
- There is a potentially major reaction between Disulfiram 200mg tablets and Warfarin 1mg/ml oral suspension sugar free increasing the anticoagulant effect. Extra INR tests needed IF started/discontinued - check arranged Record med details/any request for patient to have INR test in pt notes

Close

Help

View >>

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Level 1 Interaction Warning

• (Mostly) Ok to ignore?

• "Mild"

Drug Check Results



The following information may be relevant to prescribing Warfarin 1mg/ml oral suspension sugar free to this patient. 23

- tablets possibly affecting anticoagulant levels. Extra INR tests needed IF started/discontinued - check arranged Record med details/any request for patient to have INR test in pt notes
- Warfarin 1mg/ml oral suspension sugar free has a possible interaction with Amoxicillin 500mg capsules Advise careful coagulant monitoring. For further information see BNF, SPC or other reference source.
- Paracetamol 500mg capsules has a possible interaction with Warfarin 1mg/ml oral suspension sugar free possibly enhancing the anticoagulant effect. For further information see BNF, SPC or other reference source.

Close Help View >>

User Options for Interaction Checks

Consultation Manager Setup		
Consultation Startup Data Entry Patient Record Drug Check Management Therapy General Therapy Data For Drug Checks And New Sensitivity Checks OK OK From Last (date offset): 70 days OK OK		
Automatic Results Display On Contraindications: Patient Specific Precautions: Precautions: Never Display Prescriber Warnings		
Drug Warnings Override Confirmation Required High and Medium		

User Options for Interaction Checks



Contraindications (drug-condition)

Contraindications:

Patient Specific

Precautions:

Never

Display Prescriber Warnings

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	y	Theosail 1% liquid		
	g	Trimethoprim 100mg tablets		
	g	Trimethoprim 200mg tablets		
		Trimovate cream (GlaxoSmithKline UK Ltd)		
	g	Trospium chloride 60mg modified-release capsules		
		TT380 Slimline intrauterine contraceptive device (Durbin PIc)		
		Uninhyllin Continue 200ma tablete (Nann Pharmaceuticale Ltd)		
Act	ive In	gredients		
Pos	ipient oloav	\$		
Cor	traind	lications		
Т	rimetho	oprim hypersensitivity		
l s	evere	renal impairment		
N	1egalot	plastic anaemia		
F	Pregnancy			
9	Severe disorder of hepatic function			
	Blood dyscrasia			
	Premature infant			
	Dialysed patients			
الم ل	Child under 1 month old			
	Precautions Development			
	Definienzy in felate			
	Elderlu patient			
	Breast feeding			
N N	Monitor haematological parameters			
Å	Acute porphyria			
Sid	Side Effects			
Lab	Label Warnings			
Uses				
Pre	scribe	r Warnings		
N	Monitor for signs of blood disorders. Stop immediately if blood dyscrasia is suspected.			
_ т	The age restriction in paediatric patient varies by brand			

Options

Contraindications:

Patient Specific

Display All

General

Patient Specific

Never

Display Prescriber Warnings

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Precautions - All

Drug Check Results M		
The following information may be relevant to prescribing Trimethoprim 200mg tablets to this patient.		
Contraindications for Trimethoprim 200mg tablets Severe renal impairment Precautions for Trimethoprim 200mg tablets Renal impairment Elderly patient Monitor haematological parameters Deficiency in folate Breast feeding Acute porphyria		
Do you still wish to prescribe this drug?		
Yes No Help View >>		

Precautions - General

Drug Check Results		
The following information may be relevant to prescribing Trimethoprim 200mg tablets to this patient.		
Contraindications for Trimethoprim 200mg tablets		
Precautions for Trimethoprim 200mg tablets Renal impairment Elderly patient		
Do you still wish to prescribe this drug?		
Yes No Help View>>		

Precautions – Patient Specific



Damp them down!



Prescriber Warnings



So I have:

Automatic Results Display On

Contraindications:

Patient Specific

Precautions:

Never

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Display Prescriber Warnings

Doubling

Dou<u>b</u>ling:

Any Same Ingredients

Same Drug Class Any Same Ingredients

Exactly Same Ingredients Suppress All • Same drug class

- Enalapril and Perindopril
- Any same ingredients
 - Co-codamol and Codydramol
- Exactly Same Ingredients
 - Propranolol & Inderal
- Suppress All

Set to?

- Same Drug Class or Any Same Ingredients?
- Or Suppress All!
- Date Offset value
 - Maybe we want two values?
 - One for Doubling (short)
 - One for Interactions and Adverse Reactions (longer)

Automatic Display On...

Automatic Results Display On-	- Interactions
Contraindications: Patient Specific Precautions: Never Directory Dependence (consistency) (consistency)	Drug to Drug High ■ Doubling: Any Same Ingredients

It means show these in a window:



Automatically!

Drug Checks Always Happen

		100	gram	
DEPRESSION	1]	28	tablet	
NIGHT CRAM	PS]	56	tablet	
R BP]		56	tablet	
.MPS]		28	tablet	
OR THYROID;		56	tablet	
R THYROID]		56	tablet	
۲.		21	capsule	
NIGHT CRAMPS]		56	tablet	
A DAY WHEN REQUIRED PAIN		60	gram	
.MPS1		28	tablet	Ŧ
	B 00 - =	<u> </u> 	a 😼 🛛 Dr Pau	l Mill



Show consultation warnings



And for Conditions



Reason for override



Being asked this depends on:

Automatic Results Display On' settings

Automatic Results Display On			
Contraindications:	Interactions Drug to Drug		
Patient Specific 📃 💌	High		
Precautions:	Dou <u>bling:</u>		
Display Prescriber Warnings			

Drug Warnings

Override Confirmation Required

High and Medium

'Override Confirmation Required' setting





Drug Warnings

Override Confirmation Required

High and Medium

High and Medium

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Drug Warnings:

High

Override Confirmation Required

High and Medium

High and Medium

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High and Medium

- Interactions
 - 3 red bar
 - 2 red bar
- Patient Specific
 - Contraindications
 - Precautions
- Prescriber Warnings
 - Context?

- General
 - Contraindications
 - Precautions
- Drug Doubling
 - Any same ingredient (2 blue)
 - Exactly same ingredients (3 blue)

High

- Interactions
 - 3 red bar
- Patient Specific
 - Contraindications
 - Precautions
- ? Prescriber Warnings
- Drug Doubling
 - Exactly Same Ingredient (3 blue)

"Override Confirmation Required" Settings

> Only applies to 'Automatic Results Display'

Passive alerts will not trigger override warning

Thus



Managing the Reason

- Is not mandatory
- Is one extra click
- OR 'Alt+P' OR 'Tab, Tab, Return'
- ALT+Y, ALT+P
- CTRL+K, CTRL+K!



Show the trigger



Change the results



Drug Check in Drug Search



Allergy and Intolerance Warnings

🛃 Drug Allergy and Intolerance 📃 Yellow Card 📔	Notes 💭 Recall 🔚 Edit 🛛 🗙 Close 🦿 Help
Date of Recording: Clinician: 20 December 2013 Miller, Dr Paul	✓ In Practice
Read Term for Allergy:	
Drug: *	
Amoxicillin 250mg capsules	
Read Term for Reaction: *	Reaction Type: <u>S</u> everity:
2227.00 U/E - rash present	Allergy Moderate
Possible Send Yellow Card	

- Allergy record must have been added
- Checks on a drug ('causative agent)
- NOT a Read Code

Always Considered 'High'
Will always ask for a Reason to Proceed
Cannot be turned off

At Prescribing Events

Acut	Drug Sensitivities Mrs CARENET TEST 345 686 8675	<u>7 H</u> elp
Date Pres	This patient has the following sensitivities which may be relevant to the prescription of	Dispensed
Drug:	Amoxiciliin Zoonig capsules.	 Print Script
Amoxicillir	20/12/2013 H/O: drug allergy Possible Moderate Allergy to Amoxicillin 250mg capsules causing	
Quantity: 21		-
D <u>o</u> sage:		
TAKE ON	Do you still wish to prescribe this drug?	
Drug <u>C</u> las: Prood op		
Patient No intol No adve		* *
	Yes No Help	

At 'Allergy Add'

ſ	Sensitivity Warning	
🛃 Date	The sensitivity you have just added conflicts with the patient's active repeat Close therapy shown below. Please review and inactivate the repeat medication if necessary.	Help
15 !	Repeat Prozac 20mg capsules (Eli Lilly and Company Ltd)	
Rea 14L		-
Rea 22J]
Cert Cer	The sensitivity you have just added conflicts with the following medication prescribed within the last 70 days. Please review.	
	04/09/2015 issue 8 Prozac 20mg capsules (Eli Lilly and Company Ltd) Supply: (30) capsule 1	
	07/09/2015 issue 9 Prozac 20mg capsules (Eli Lilly and Company Ltd) Supply: (30) capsule 1	

That's all folks!

- Lots of functions!
- Reduce alerts using OPTIONS
- Understand what they mean
- Never black and white
- Analogue interface required...