

Supporting Hospital ePrescribing

Creating opportunities for shared learning across the NHS

Professor Aziz Sheikh

ICC, Birmingham
27th March 2012



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Overview

- * Reasons underpinning drive to implement eHealth systems
- * Introduction of ePrescribing systems into the NHS
 - * Opportunities
 - * Challenges
 - * Our programme of work
- * Aims of this conference
- * Next steps...



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Challenges for healthcare systems internationally

- * Spiralling healthcare costs
- * Ageing populations
- * Increasing numbers of people living with long-term conditions
- * On-going concerns about the safety, quality and inefficiency of healthcare

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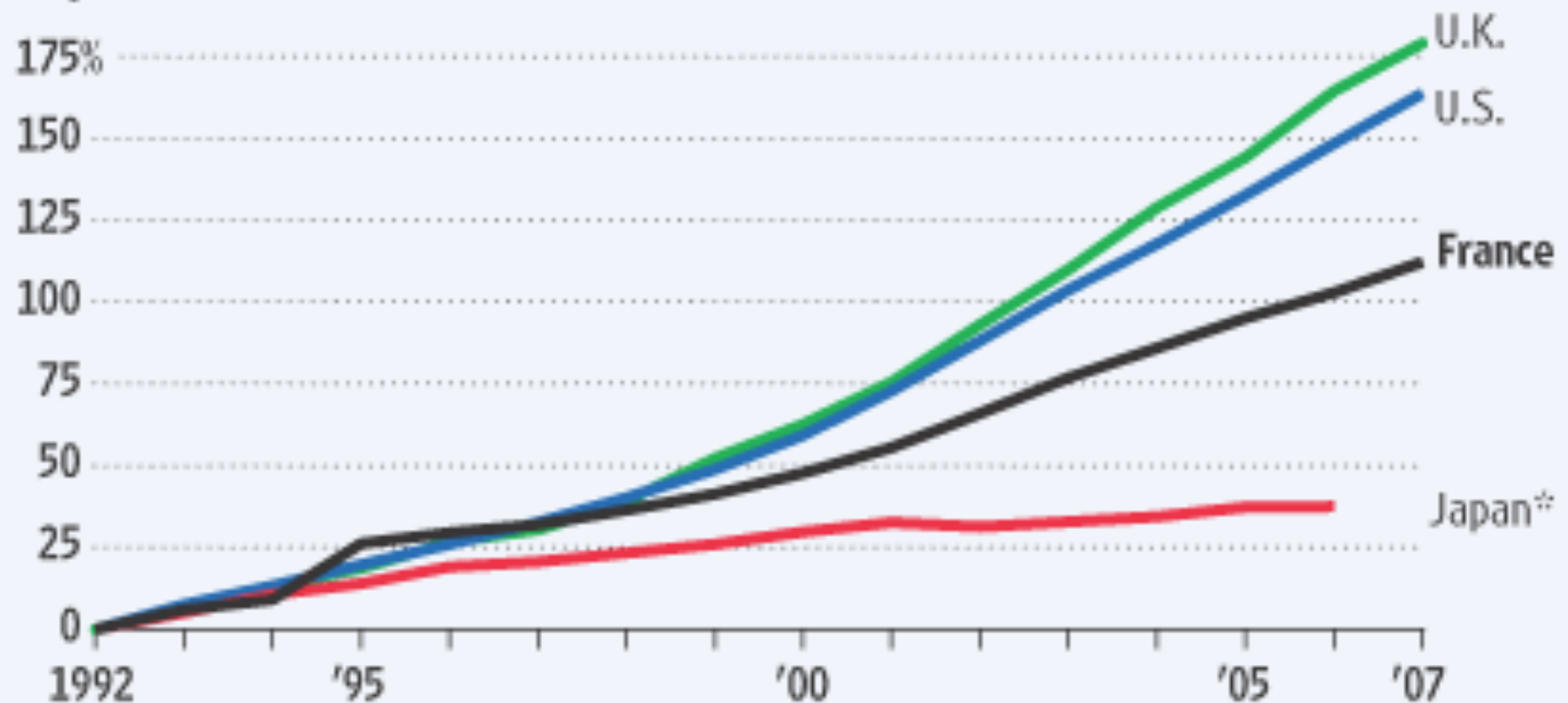


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Spiralling healthcare costs...

Cumulative percentage change in total expenditure on health



*Through 2006

Source: OECD Health Data 2009

The demographic time bomb: Forecasts for dependency ratios

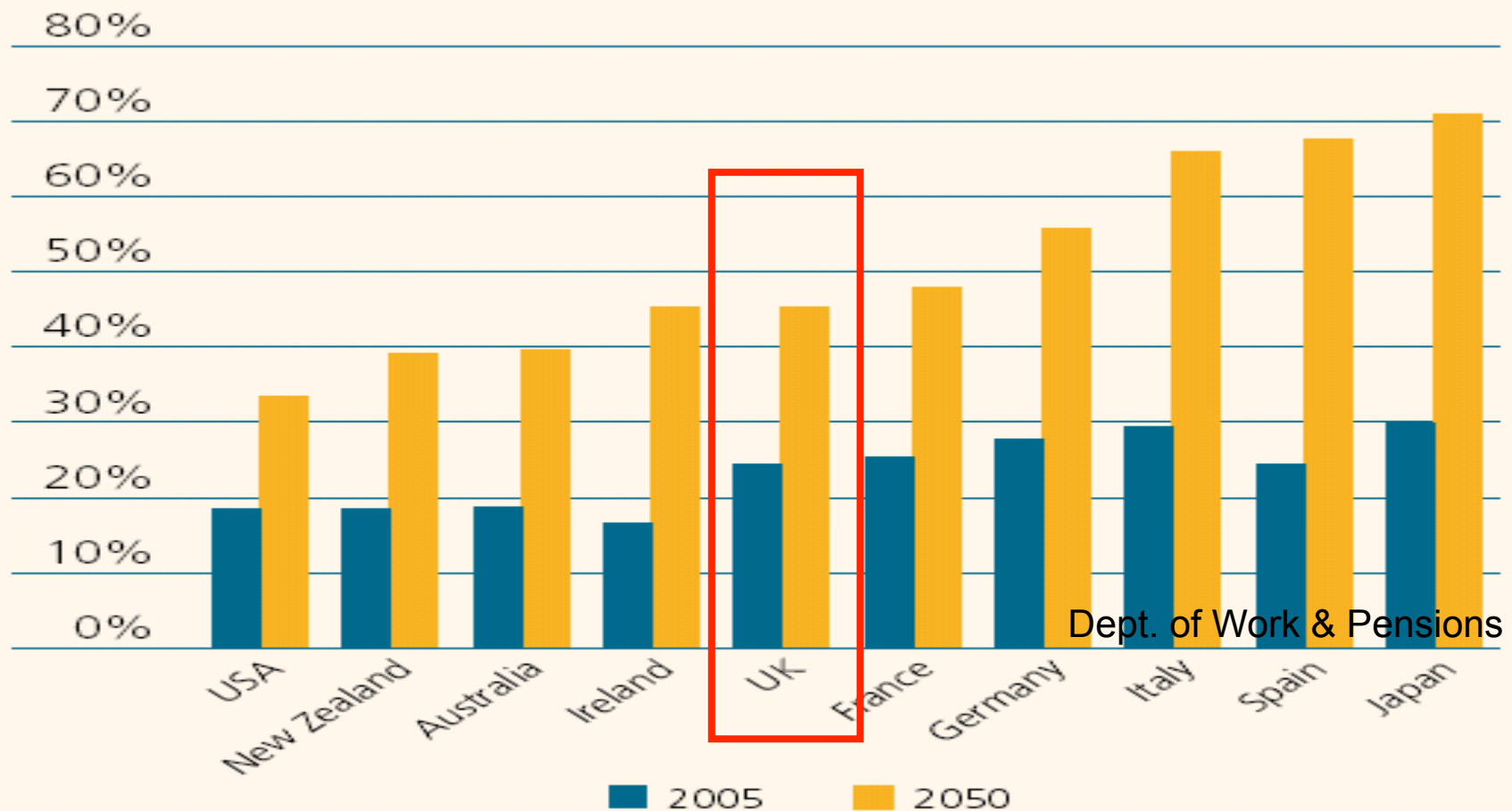
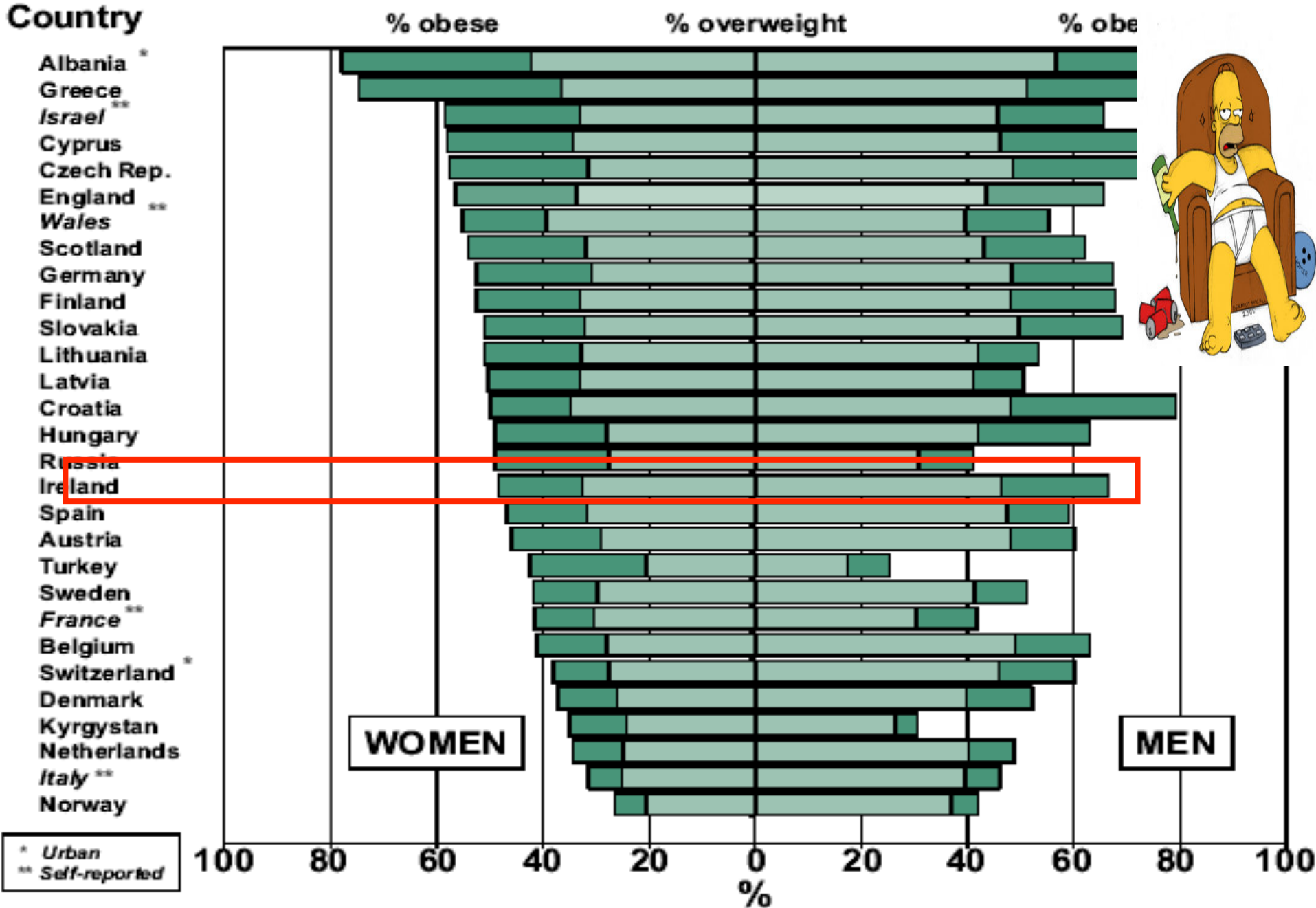


Figure 1: Obesity levels in Europe



Source: International Obesity Task Force

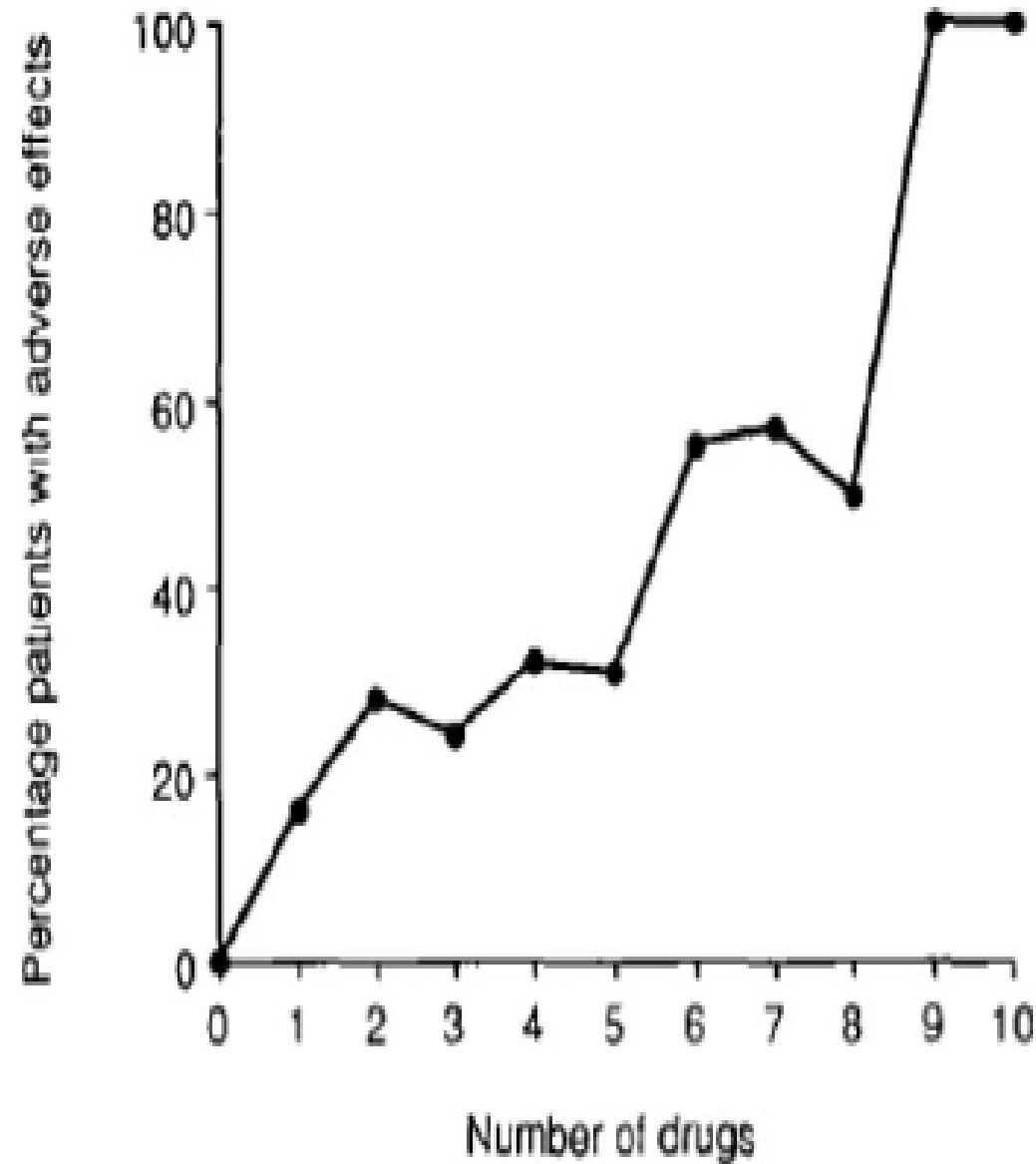


Fig. 1 The relationship between adverse drug reactions and polypharmacy. Reproduced with kind permission from Denham.⁵⁵

You are in: [Health](#)

Friday, 2 February, 2001, 18:43 GMT

Drug blunder patient dies



Wayne Jowett in a photo released by his family

A teenager has died after a cancer drug was injected into his spine by mistake at a Nottingham hospital.

The leukaemia treatment vincristine should have been injected into 18-year-old Wayne Jowett's vein.

Managers at Queen's Medical Centre launched an inquiry into the blunder. Two junior doctors have been suspended.

Wayne had been

“
My clients have been appalled to learn that so many other families have suffered as a result of similar mistakes
 ”

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See also:

- ▶ [24 Jan 01 | Health](#)
Ministers miss drug blunder deadline
- ▶ [24 Jan 01 | Health](#)
[Inquiry into cancer drug tragedy](#)
- ▶ [22 Nov 99 | Medical notes](#)
Leukaemia: Medical notes
- ▶ [13 Dec 00 | Health](#)
Millions for drug overdose girl
- ▶ [30 Jul 98 | Health](#)
Brain damaged child wins £1.5m

Internet links:

- ▶ [Queen's Medical Centre, Nottingham](#)
- ▶ [Cancer Research Campaign](#)

The BBC is not responsible

▶ **The BBC's Daniel Sandford**

"The incorrect use of the drug vincristine has killed before"

real **56k**

▶ **The BBC's Chris Mills**

"There have been a number of these incidents over the past ten years"

ePrescribing systems



“The utilisation of electronic systems to facilitate and enhance the communication of a prescription or medicine order, aiding the choice, administration and supply of a medicine through knowledge and decision support and providing a robust audit trail for the entire medicines use process” (NHS Connecting for Health)

Anticipated benefits: patient safety, clinician benefits, service benefits

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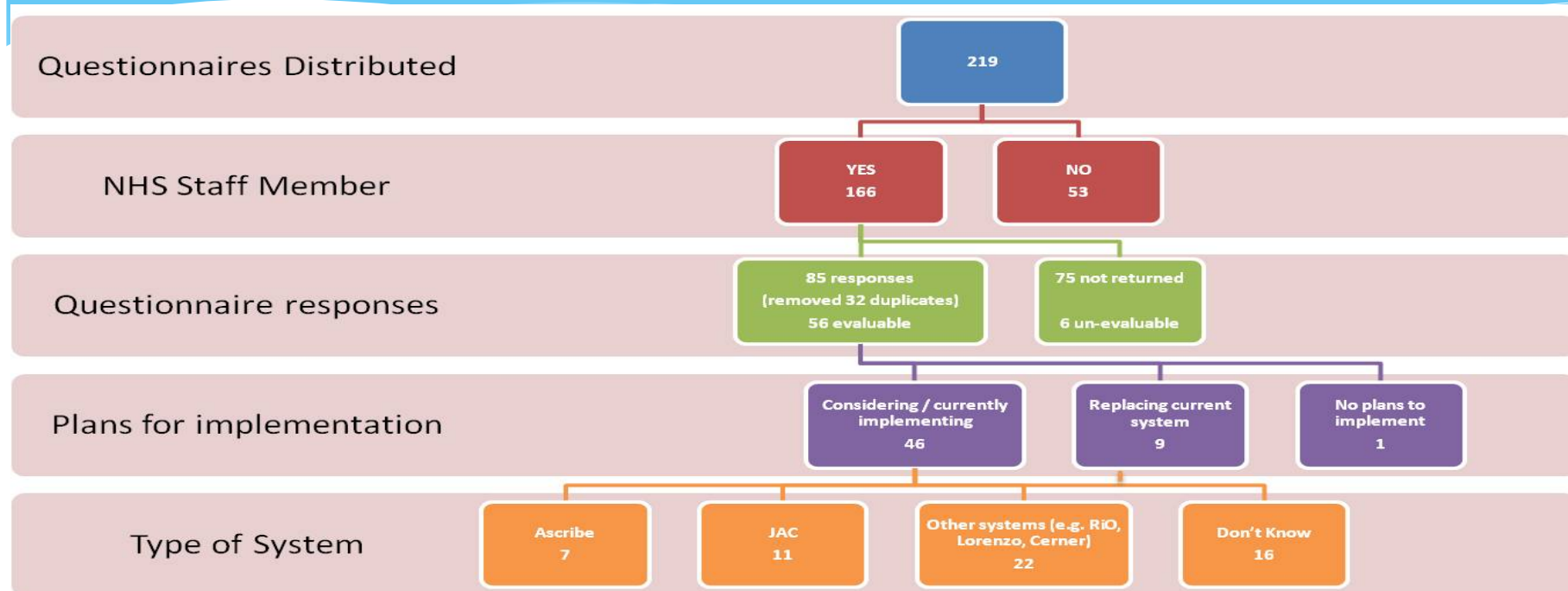


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The number of hospitals implementing ePrescribing systems is increasing...



Source: Crowe S et al. Planned implementations of ePrescribing systems in NHS hospitals in England: A questionnaire study. JRSM Short Reports 2010; 1(4): 33.

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No.30754. Mr Penicillin Allergy, 50 Town Street Horsforth Leeds Age 15 years MB

MR

Clinical Records

[WL=0]



A Add	X All non-values	C Consultations	P Problems	J IOS Claims
V Values	I Immunisations	M Medications	N Investigations	L Patient Notes
H Health	T Templates	F Forms & Admin	B Allergies	Q More

Active Problems : -----

Significant past : -----

Allergies/reaction: to Penicillins

Reg Claim Done?	:	-	-	-
Ethnic group	:	-	-	-
Systolic BP	:	-	-	-
Height	:	-	-	-
Weight	:	-	-	-
Body Mass Index	:	-	-	-
Smoking	:	-	-	-

End of Summary

Select Option, <F4> find code, <Tab> group problem list :■

o.30754. Mr Penicillin Allergy, 50 Town Street Horsforth Leeds Age 15 years MB

Enter
Yes No

F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12

sF1 sF2 sF3 sF4 sF5 sF6 sF7 sF8 sF9 sF10 sF11 sF12

Network link

NUM

SCRL

Tue 15 Jul 2003 09:12

PRI-DR PRIMIS PRIMIS



No.30754. Mr Penicillin Allergy, 50 Town Street Horsforth Leeds Age 15 years MB

PR

Prescriptions

IWL=01



PATIENT HAS AN ADVERSE REACTION TO PENICILLINS
Press Any Key :

B
D
E
F
G
H
I
J
K
L
M
N
O
P
R
T
U
V
W
X
Y
Z

Tariff prices :28 tablet(s) :1.78

Name : Penicillin V
Form : Tablets
Strength : 250 mg
Dose :
Days/Quant :
Rx Type R/C/U :

A Dispensing patient

<F2> for info

o.30754. Mr Penicillin Allergy, 50 Town Street Horsforth Leeds Age 15 years MB

Enter
Yes No
◀ ▶ ▲ ▼

F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12

sF1 sF2 sF3 sF4 sF5 sF6 sF7 sF8 sF9 sF10 sF11 sF12

Network link

NUM

SCRL

Tue 15 Jul 2003 09:12

PRI-DR PRIMIS PRIMIS

No.30755. Miss Low Renal, 50 Town Street Horsforth Leeds

Prescriptions



Contra-Indications : :

TETRACYCLINES ARE CONTRA-INDICATED IN PATIENTS WITH RENAL FAILURE▼

F1=Exit

Tariff prices :28 tablet(s) :.8100

Name : Oxytetracycline
Form : Tablets
Strength : 250 mg

No.30762. Mr Angina Interact, 50 Town Street Horsforth Leeds

Age

Prescriptions

[WL

BNF Interaction Message :

Viagra and Isosorbide Mononitrate

HAZARD !!!

Hypotensive effect significantly enhanced (avoid concomitant use)

NHS prices :4 tablet(s) :19.3400 8 tablet(s) :38.6700

Name : Viagra

Form : Tablets

Strength : 50 mg

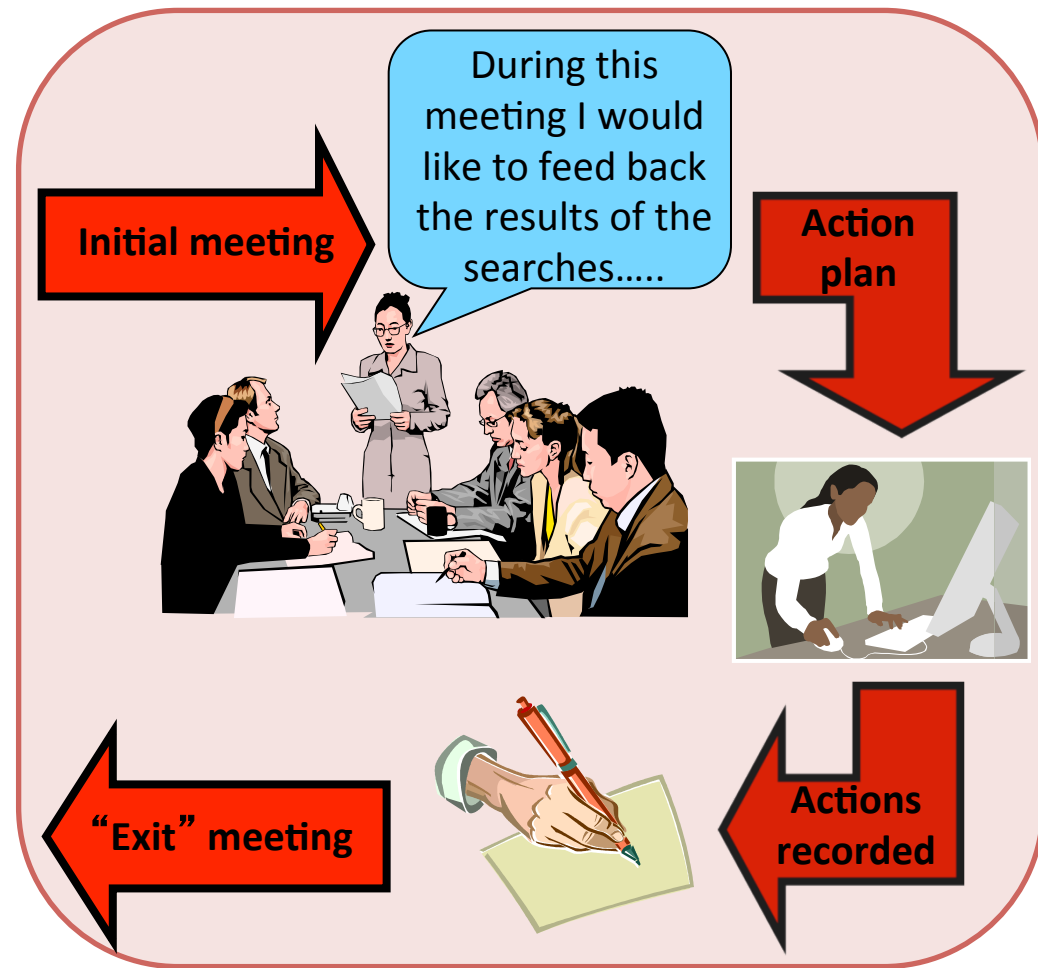
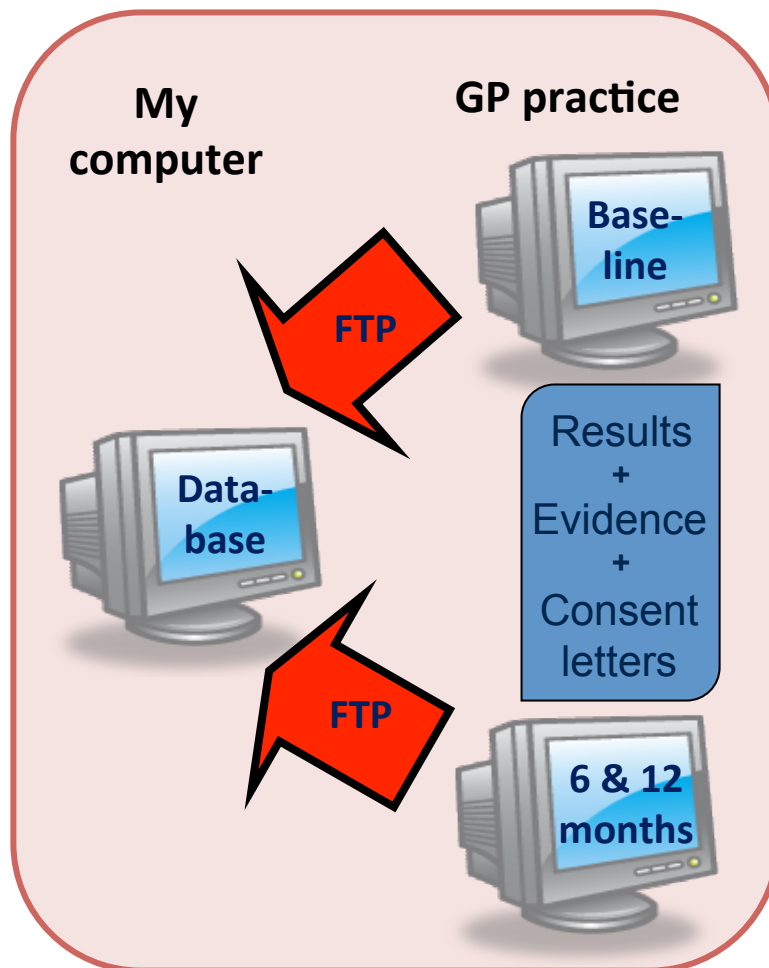
PINCER TRIAL

Simple feedback



Pharmacist intervention

(2 days per week for 12 weeks)



Outcome measure	Simple feedback	Pharmacist intervention	Odds ratio (95% CI)	P-value
Patients aged ≥ 18 with a history of peptic ulcer prescribed an NSAID	86/2014 (4.3%)	51/1852 (2.8%)	0.58 (0.38, 0.89)	0.01
Patients ≥ 18 with asthma prescribed a beta blocker	658/22224 (3.0%)	499/20312 (2.5%)	0.73 (0.58, 0.91)	0.006
Patients ≥ 75 on long-term ACE inhibitors or loop diuretics with no U&E in the previous 15 months	436/5329 (8.2%)	255/4851 (5.3%)	0.51 (0.34, 0.78)	0.003

But implementing technology into the NHS is not straightforward...

- * Complex changes to organisation functioning and individual work practices
- * Often highly political as public money
- * Importance of evaluations

Daily Mail COMMENT

VASTLY expensive, utterly unfit for purpose, the NHS computer scheme will go down in history as the most egregious of countless examples of the last Labour Government's incompetence and waste.

It was only our money, after all.

How bitterly telling it is that the £12billion ministers squandered on this vanity

project is exactly the size of the black hole identified this week in the Chancellor's deficit reduction plan.

And how starkly this saga underlines yesterday's rare moment of insight from Nick Clegg, when he told delegates at the Lib Dem conference: 'Never, ever, trust Labour with our economy again.'

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Our national evaluation of the NHS Care Records Service

*“Implementation of the NHS Care Records Service in “early adopter” sites proved **time consuming and challenging**, with as yet **limited discernible benefits** for clinicians and no clear advantages for patients....The move to **increased local decision making** that we advocated based on our interim analysis has been pursued and welcomed by the NHS, but it is important that policymakers do not lose sight of the overall goal of an **integrated interoperable solution**. ”*

Source: Sheikh A et al. Implementation and adoption of nationwide electronic health records in secondary care in England: final qualitative results from a prospective national evaluation in "early adopter" hospitals. BMJ 2011;343:d6054

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Name : PENI

Form :

Strength :

Dose :

Days/Quant :

Rx Type R/C/U :

Prescriptions

Item

1 Penicillamine Tablets 125 mg

2 Penicillamine Tablets 250 mg

3 Penicillin V Elixir 125 mg/5 ml

4 Penicillin V Elixir 250 mg/5 ml

5 Penicillin V Tablets 250 mg

℥

Add Medication

02/07/2003 MB Seen in GP's surgery

! Unlinked

Read Code or
Search text:

MICROGYNON 30 tablets

Dose:

take one daily

Advice:

☐ Repeat

☒ Mark for issue

Applies from: 02/07/2003

Supply:

63 tab

Packs: *21 tab £0.86*

☐ Problem

☐ Note

☐ Sensitivity

☒ Treatment

☐ In summary

Discontinue

Less <<

Author

Encounter

Info

Repeats

Legal

Reminders

Sickle cell anaemia
Undiagnosed abnormal genital tract bleeding
Disorders of lipid metabolism
History of deterioration of otosclerosis in pregnancy
Severe diabetes with vascular changes
Mammary or endometrial carcinoma or a history of these conditions
History of herpes gestationis
Risk factors for venous thromboembolism
Prothrombotic coagulation abnormality
Hypersensitivity to ingredients
Hypersensitivity to excipients
Severe or multiple risk factors for arterial disease
Thrombosis





No.30765. Miss Incorrect Message, 50 Town Street Horsforth Leed Age 50 years MB

PR

Prescriptions

[WL=0]



BNF Interaction Message :

Amlodipine Besylate and Atenolol

HAZARD !!!

Severe hypotension and heart failure occasionally with nifedipine and possibly other dihydropyridines

Amlodipine Besylate and Atenolol

Enhanced hypotensive effect

Tariff prices :28 tablet(s) :11.8500

Name : Amlodipine Besylate
Form : Tablets
Strength : 5 mg
Dose :
Days/Quant :
Rx Type R/C/U :

A Dispensing patient

<F2> for info

o.30757. Mr Serum Creatinine, 50 Town Street Horsforth Leeds Age 65 years MB

Enter
Yes No

F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12

sF1 sF2 sF3 sF4 sF5 sF6 sF7 sF8 sF9 sF10 sF11 sF12

Network link

NUM

SCRL

Tue 15 Jul 2003 09:30

PRI-DR PRIMIS PRIMIS





Investigating the implementation of ePrescribing systems into NHS hospitals

Aims:

- * To describe and understand the procurement, implementation, adoption and maintenance processes involved with introducing ePrescribing systems.
- * To estimate their effectiveness and cost-effectiveness.
- * To develop best practice recommendations and a toolkit for their successful integration into NHS hospitals.

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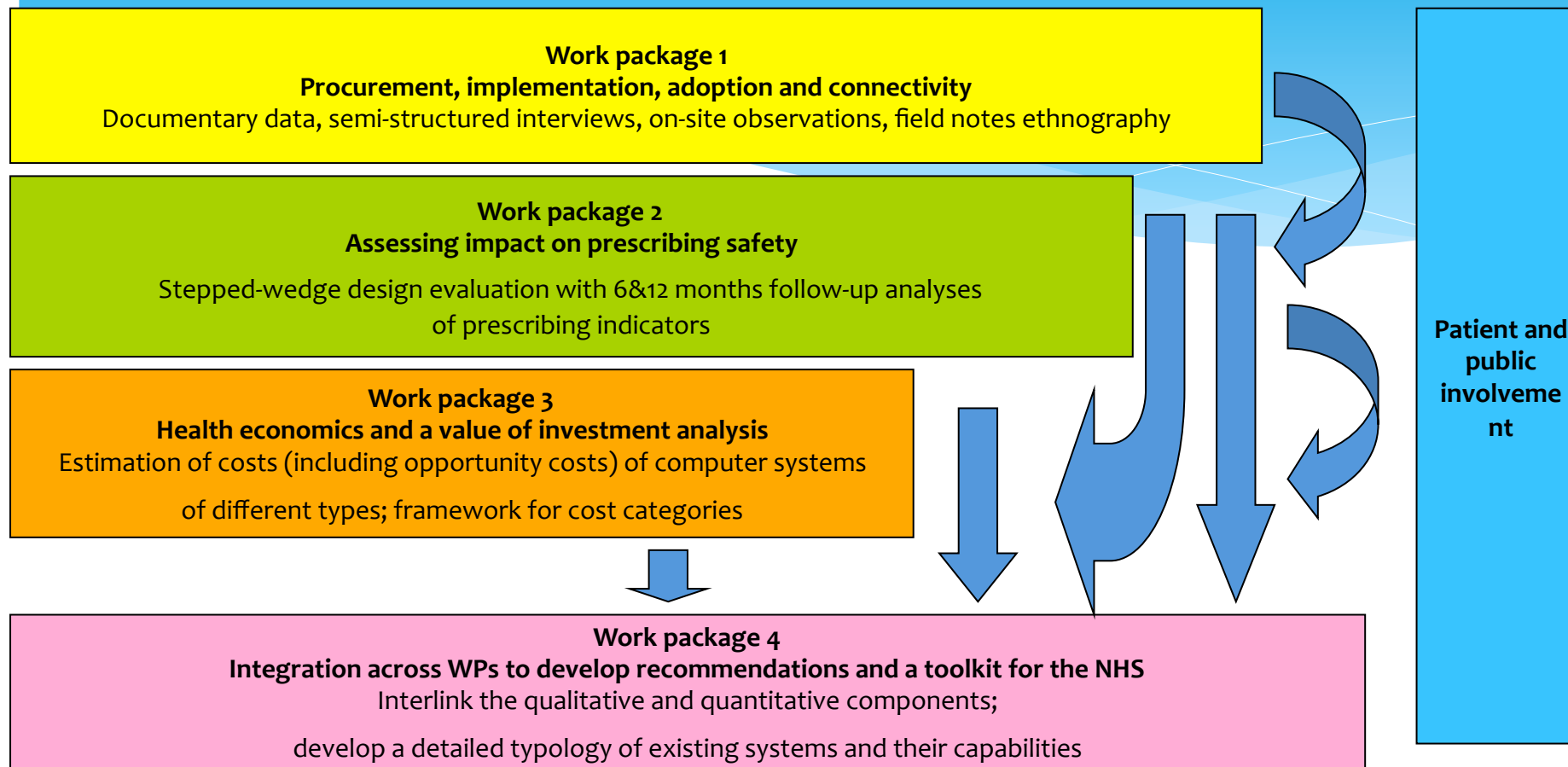
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Four Work Packages (WPs)



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Key aims for the day

Above all – networking and sharing experiences

- *For planned/new implementation – what to choose, how do you use it, why do you want it?**
- *For those with existing ePrescribing systems – what can you learn from or share with others?**
- *For the NHS – how can the benefits be maximised and the risks minimised?**

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Opportunities for networking...



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Further sources of information and support...

Our website:

www.crfr.ac.uk/events/eprescribing/index.html

For copies of presentations, events and updates



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- **Got any questions about procurement and/or implementation?**
- **Need advice on any ePrescribing-related problem?**
- **Want to network or chat with anyone who has done it already?**

then get in touch with our helpdesk!

eprescribingresearch@uhb.nhs.uk

Next steps

We want your ideas for

***Conferences**

***Workshops**

***Round table discussions...**



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ePrescribing multi-disciplinary workshops

24 September 2012

Procurement of ePrescribing systems

**Any other
suggestions
for topics of
interest?**

**Want to
attend?**

**Please let us know and email
Kathrin.Beyer@ed.ac.uk**



We need your help...

**Questionnaire about
plans to, and
experiences of,
implementing
ePrescribing systems
in your hospital**



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