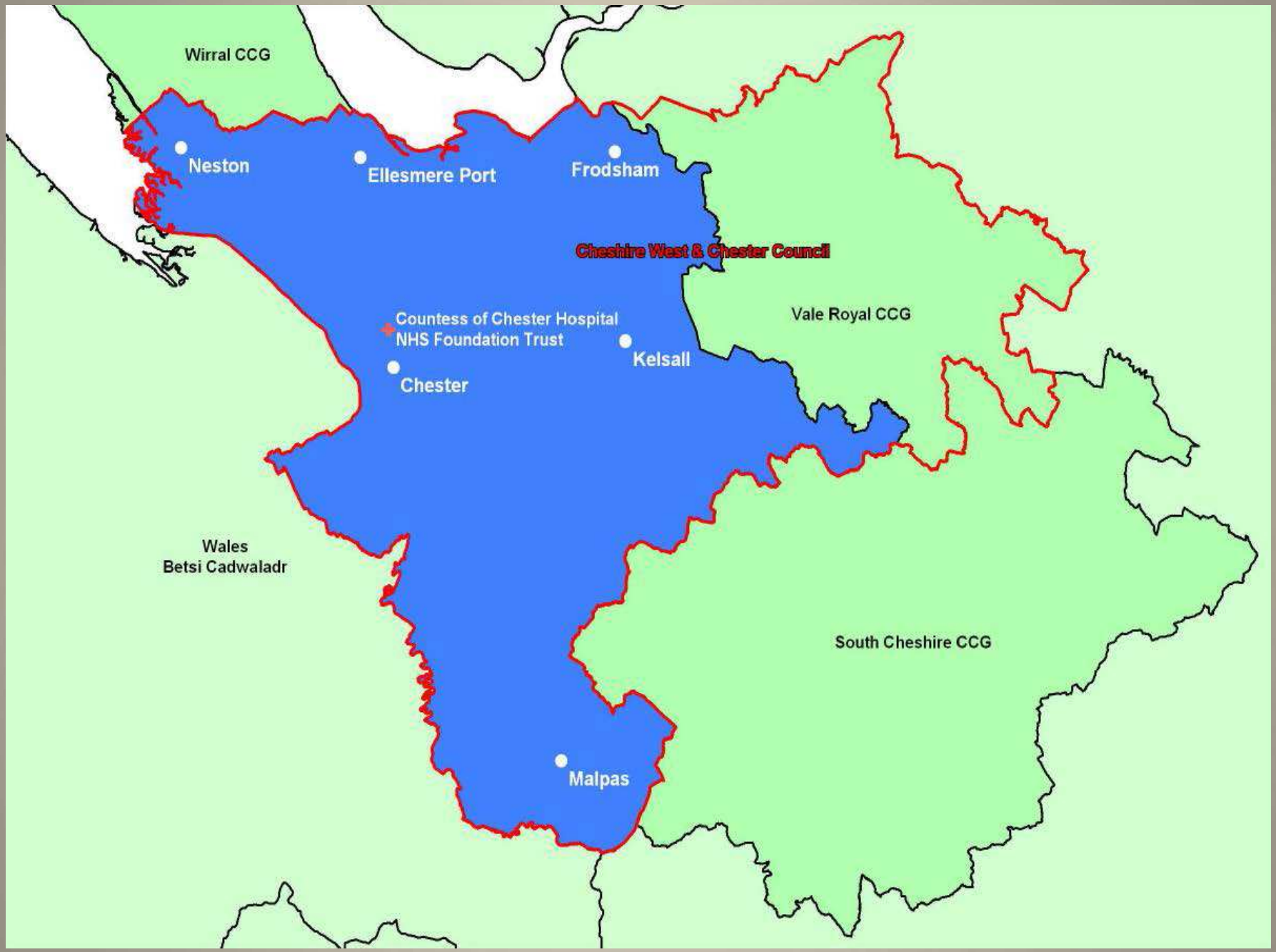
Have the New GP Contract and NICE guidelines improved the clinical care of patients with epilepsy?

The Western Cheshire Audit Project

An Audit Evolution


Lancashire
Greater Manchester
Merseyside
Cheshire
Wales
Staffordshire


Wirral CCG
Neston
Ellesmere Port
Frodsham
Cheshire West & Chester Council
Countess of Chester Hospital
NHS Foundation Trust
Chester
Kelsall
Vale Royal CCG
Wales
Betsi Cadwaladr
South Cheshire CCG
Malpas

Once upon a time in Chester

- First audit focused on the process of care rather than clinical quality
- 2001 – 2002
- Notes review of all patients including children
- 610 patients
- 13 practices population 99,924

Minshall & Smith 2006

Main findings

- 49% had not seen their GP in the previous year
- 16% annual review (116 in total, 35 in one practice)
- 53% with uncontrolled epilepsy were not under shared care
- 11% diagnostic uncertainty
- 29% in documented remission
- 14% non compliant with AEDs
- 109 Women of Child-bearing age of whom 37 (34%) were on SVP

Minshall & Smith 2006

Education, Education, Education

- Feedback from the audit, with an educational session lead by a Consultant Epileptologist, in all 13 individual practices
- Written feedback on individual patients, where specific issues were highlighted such as non-compliance and misdiagnosis

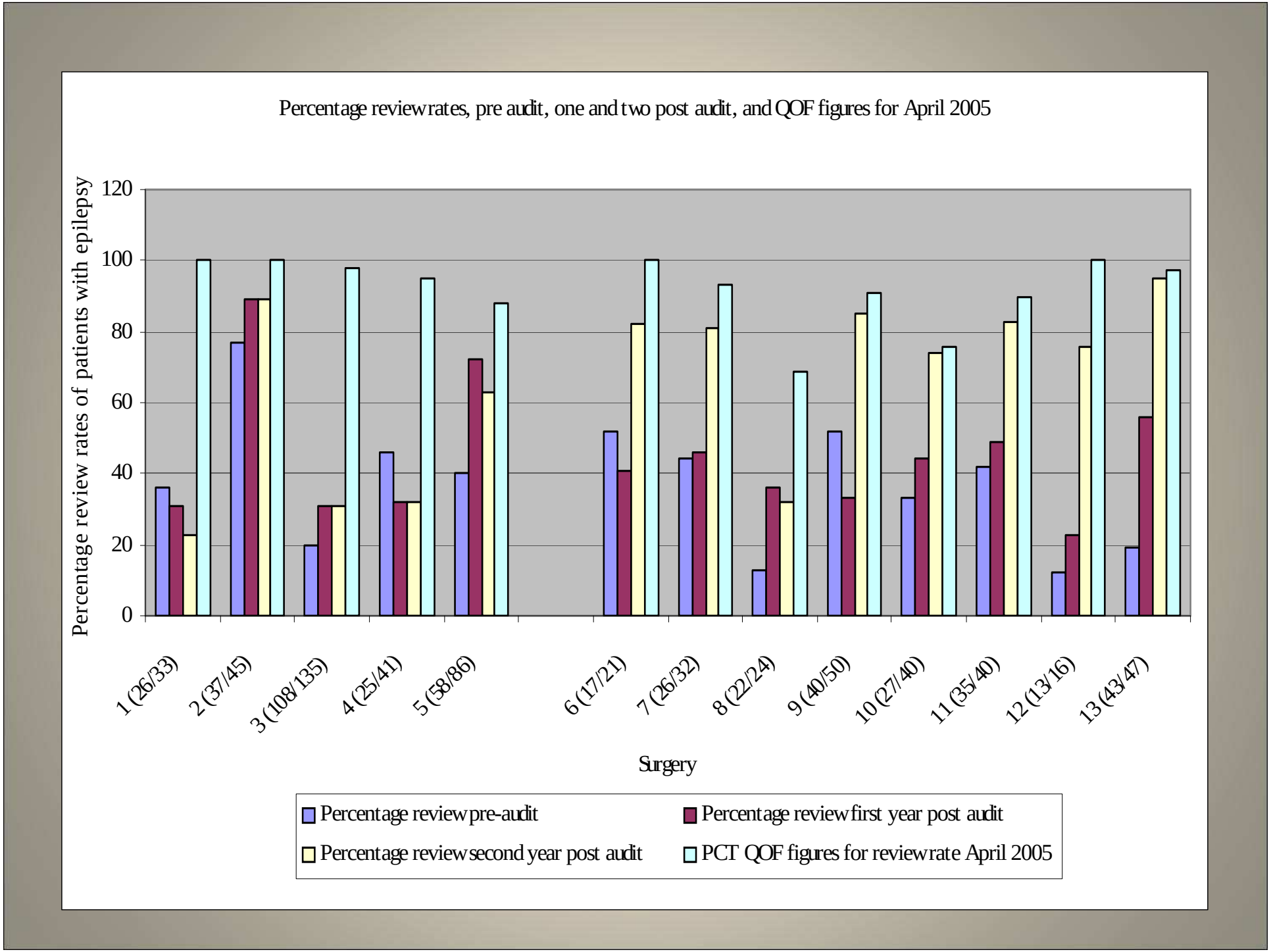
Re-audit

- Took place 2003-2004 two years after initial audit
- Review rate increased from 41 to 49% overall in first year ($p<0.0001$)
- Review rate increased to 63% overall in second year ($p<0.0001$)
- Documented remission increased from 29 to 43% ($p<0.0001$)
- 45% with poor control still not under shared care
- 62 (13%) patients had clear health gains from referral subject to the audit

Minshall & Smith, 2008

The New Contract

Indicator	Points	Maximum threshold
Records		
EPILEPSY1. The practice can produce a register of patients receiving drug treatment for epilepsy	2	
Ongoing management		
EPILEPSY 2. The percentage of patients age 16 and over on drug treatment for epilepsy who have a record of seizure frequency in the previous 15 months	4	90%
EPILEPSY 3. The percentage of patients age 16 and over on drug treatment for epilepsy who have a record of medication review in the previous 15 months	4	90%
EPILEPSY 4. The percentage of patients age 16 and over on drug treatment for epilepsy who have been convulsion -free for last 12 months recorded in last 15 months	6	70%


Percentage review rates, pre audit, one and two post audit, and QOF figures for April 2005
Percentage review rates of patients with epilepsy
120
100
80
60
40
20
0
1 (26/33)
2 (37/45)
3 (108/135)
4 (25/41)
5 (58/86)
6 (17/21)
7 (26/32)
8 (22/24)
9 (40/50)
10 (27/40)
11 (35/40)
12 (13/16)
13 (43/47)
Surgery
Percentage review pre-audit
Percentage review first year post audit
Percentage review second year post audit
PCT QOF figures for review rate April 2005

Audit of Rural practices 2003

- Comparable to Chester Practice audit, focus on clinical review rather than quality
- 2003, 388 adult patients, population 68,240
- One large educational session with Consultant Epileptologist for all practices, March 2004
- New GP contract started April 2004
- Feedback from the audit findings in general, each practice getting a written report on individual patients
- Re-audit in 2008, comparing care with two years before the audit ie 2002-2004

Minshall & Smith 2012

Main findings

- 276 patients completed the audit
- Annual review increased from 16 to 69%
- Patients reviewed in previous year increased from34 to 81%
- Shared care fell from 22 to 16%
- Refractory epilepsy not under shared care 46% (estimated), at re-audit was 49%
- Documented remission increased from 41 to 71%
- 39 positive outcomes from practice interventions or referrals
- One epilepsy death in a poorly controlled patient not under shared care and not seen regularly by the GP

Minshall and Smith 2012

Finally ‘The Port’

- We can safely conclude the New Contract improved review rates and documentation of seizures, and had a greater effect than the educational process
- But was there any improvement in the quality of care beyond the simple questions asked?

- 540 adult patients had their notes reviewed in 2009, five years post New Contract by a GPwSI epilepsy.
- Running my own clinic since 2005, having taken a MSc module in epilepsy care through Liverpool University and 46 clinical sessions of training
- Population 70,177

Main measurements

- (a) with poor control not receiving shared care
- (b) with an uncertain diagnosis
- (c) women of childbearing age not having been counselled
- (d) patients non compliant with prescription collection
- (e) patients with uncontrolled idiopathic epilepsy not on valproate
- (f) patients with uncontrolled partial epilepsy on valproate
- (g) other prescribing anomalies
- (h) prescriptions effecting bone health were identified.

Interventions

- The only influence on this cohort was that of the introduction of the New Contract and NICE guidelines
- No formal educational session

Main findings

- Ave yearly review rate was 95% in previous two years
- Refractory epilepsy not under shared care 41%
- 26 patients had diagnostic doubt (15 NEAD, 5 syncope based on EEG, 4 based on EEG, 1 temper outbursts, 1 unwitnessed blackouts), non of these cases had been reviewed by the GP**, in fact there was no evidence any patient had their original diagnosis reviewed**
- 118 in remission > 10 years, withdrawal discussed with 7
- 98 wcba, 21 had not been counselled re risk of conception, 61 not taking folic acid regularly (a NICE recommendation)

Prescribing

- 7% non compliant with prescription collection
- There were 3 patients with a history consistent with uncontrolled IGE who had never been prescribed SVP.
- Twelve patients were being prescribed SVP alone for uncontrolled partial epilepsy.

Prescribing

- 74 patients had prescription anomalies mainly multi-dosing and daily medication which were not true once daily preparations (42 on tds regimes and 11 on qds)
- One patient on vigabatrin was not under ophthalmological care
- *Three hundred and eighty two (71%) had been prescribed an AED (Anti-Epilepsy Drug) affecting bone metabolism for ten years or longer*

So has the New Contract improved the care of patients with epilepsy?

- Patients with epilepsy now have a yearly review.....
- It is not being demonstrated that the quality of clinical care has improved since the last audit
- Epilepsy is the most difficult of the chronic diseases introduced in QOF for the GP to manage, constituting a relatively small number of patients who have complex needs

Proposed (My) New QOF statement for epilepsy

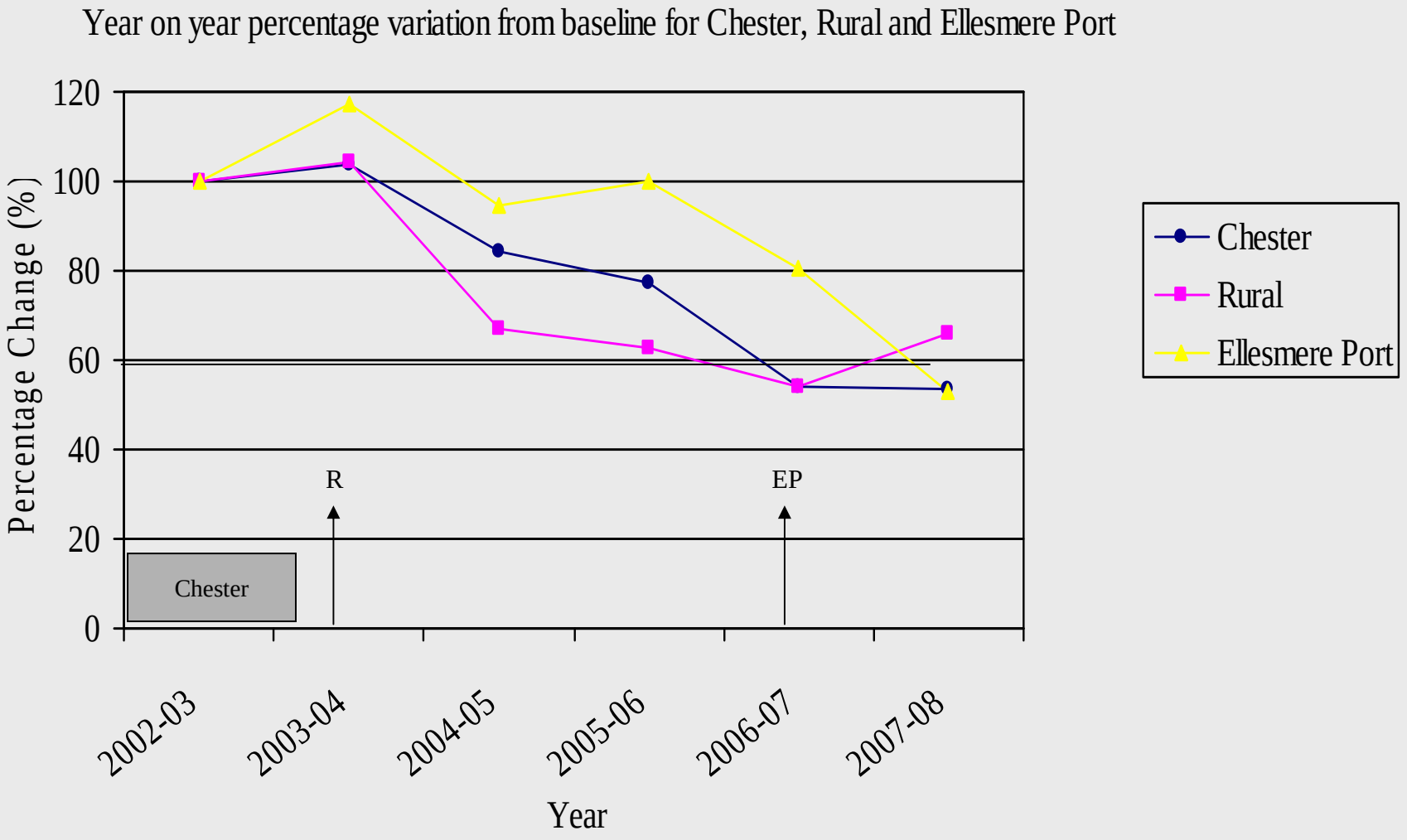
- *'Review the diagnosis of epilepsy, offer referral to secondary care if not controlled. Discuss long term remission, review medication focussing on compliance, side effects, issues for women of childbearing age, and bone metabolism'*. - 14 points

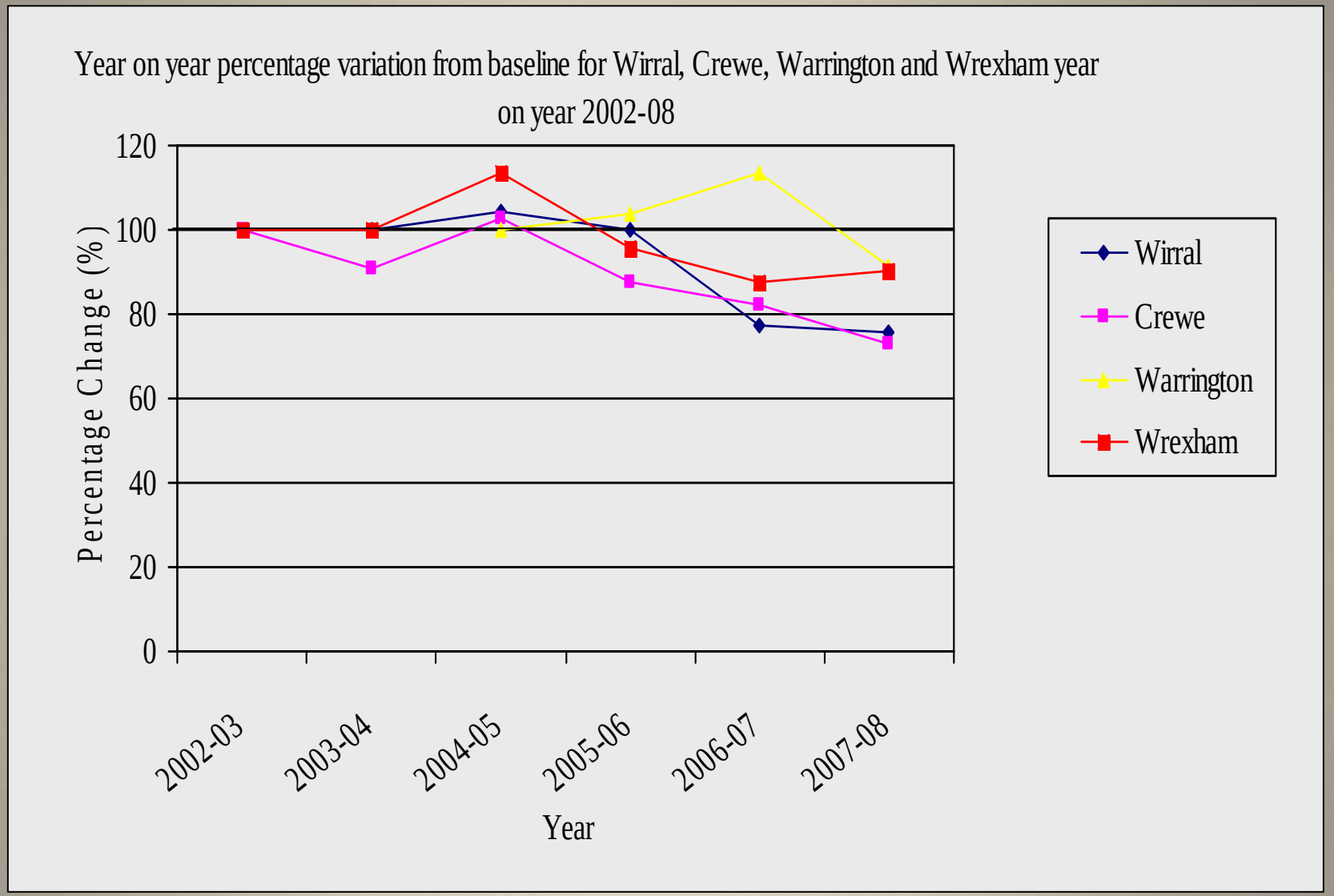
What about the education?

AED level monitoring

- Routine monitoring of patients with epilepsy historically involved a yearly AED blood level. In the educational sessions, routine monitoring was discouraged except in certain circumstances (NICE also gave this message)
- We studied AED monitoring after the educational sessions and compared numbers of assays with other local hospitals

Minshall and Berry 2011


Year on year percentage variation from baseline for Chester, Rural and Ellesmere Port
Percentage Change (%)
120
100
80
60
40
20
0
R
EP
Chester
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
Year
Chester
Rural
Ellesmere Port


Year on year percentage variation from baseline for Wirral, Crewe, Warrington and Wrexham year on year 2002-08
120
100
80
60
40
20
0
Percentage Change (%)
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
Year
Wirral
Crewe
Warrington
Wrexham

	Year on year comparison				
	02/03 v 03/04	03/04 v 04/05	04/05 v 05/06	05/06 v 06/07	06/07 v 07/08
Chester/Rural	1	0.15	0.84	0.25	0.27
Chester/Ellesmere Port	0.35	0.14	0.33	0.36	**0.016**
Rural/Ellesmere Port	0.46	0.15	0.48	0.71	**0.001**
Chester/Crewe	0.19	**0.0018**	0.49	**0.017**	0.42
Chester/Wirral		**0.026**	0.72	0.43	0.72
Chester/Warrington			0.25	**0.0002**	0.107
Chester/Wrexham	0.8	**0.007**	0.26	0.058	0.76

Bone Health

- Most AEDs effect bone health. As part of the Ellesmere Port audit, patients at risk were 'labelled' to be considered for vit D and calcium supplementation and possible DEXA
- At the same time a Scriptswitch message was added across all three areas (Chester, Rural and Ellesmere Port) to encourage prescription
- Both took place in 2009

Minshall et al 2013

A marked improvement in supplementation

	Number of patients	2004/05	2006/07	2008/09	2010/11
Ellesmere Port and Neston (Written recommendation and computer message)	414	22	27 (ns)	32 (ns)	**134 (p<0.0001)**
Chester and Rural (Computer message only)	627	22	36 (ns)	53 (ns)	**125 (p<0.0001)**

- The increase in Ellesmere Port and Neston (audit and computer message) was significantly greater ($p=0.0009$) than the other areas with the computer message alone

So where next ?
The extended role of the GPwSIe, the 'CCG GP with responsibility for epilepsy'

- Run two clinics a week for new referrals, emergencies, A&E attendees, and follow ups
- Review all patients in the CCG with the GP in organised clinics. 'Hand back' stable patients needing no change
- Follow up in the clinics for those above and for patients currently attending overloaded neurology clinics, with a structured plan of care
- Pregnancy service
- Women's service
- See the children yearly, not take over their care, get to know them, facilitating a seamless transition to adult care
- Midazolam training
- Liaise with Learning Difficulty, Psychiatric and Psychological services
- A ENS would be the icing on the cake
- **Research and audits galore**

In summary

- Education probably improved review rates and seizure documentation
- The New Contract certainly improved review rates and seizure documentation
- There is a question mark over whether the quality of those reviews
- Education has measurably improved two aspects of the care of patients with epilepsy, separate to QOF