

Scottish Medicines Consortium
Scottish Antimicrobial Prescribing Group



CDI HEAT Target (CEL April 2009)

Hospital-based Empirical Prescribing National Report

May 2010

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Executive Summary

Purpose of report

This report, produced by the Scottish Antimicrobial Prescribing Group (SAPG), provides feedback to Antimicrobial Management Teams (AMT) in NHS Boards and the Healthcare Associated Infection (HAI) Taskforce at Scottish Government.

This is the first report and subsequent reports will be produced every 3 months to show progress in achieving compliance against antimicrobial prescribing indicators outlined in the CDI HEAT target.

The report includes only the Hospital-based empirical prescribing indicator (see details below) and overall compliance is 75%.

Each NHS Board receives a report of the national level data, a summary of Board level data and an individual report at Board level showing temporal compliance with each of the measures.

CDI HEAT target

A letter issued to NHS Board Chief Executives (CEL 11 (2009))¹ in April 2009 announced a HEAT target for *Clostridium difficile* Infection (CDI) defined as:

“A reduction in the rate of CDI among people aged 65 years and above by at least 30% by 31 March 2011”

The Scottish Government and SAPG have agreed three supporting antimicrobial prescribing *indicators* to underpin this HEAT target:

Hospital-based empirical prescribing: antibiotic prescriptions are compliant with the local antimicrobial policy **and** the rationale for treatment is recorded in the clinical case note in $\geq 95\%$ of sampled cases

Surgical antibiotic prophylaxis: duration of surgical antibiotic prophylaxis is < 24 hours **and** compliant with local antimicrobial prescribing policy in $\geq 95\%$ of sampled cases ²

Primary care empirical prescribing: seasonal variation in quinolone use (summer months vs. winter months) is $\leq 5\%$ ³

SAPG Extranet

Data are entered onto the SAPG Extranet which is a password protected data store provided by the Institute for Healthcare Improvement⁴. Extranet reporting uses run charts to track compliance with measures.

¹ Chief Executive letter 11 (2009): A revised framework for national surveillance of healthcare associated infection and the introduction of new health efficiency and access to treatment (HEAT) target for *Clostridium difficile* associated disease (CDAD) for NHS Scotland www.sehd.scot.nhs.uk/mels/CEL2009_11.pdf

² Data analysis included in this report when all NHS Boards have commenced data collection

³ Reported from PRISMS data held by NHS Boards

⁴ <http://www.ihl.org>

SAPG Extranet measures

The SAPG Extranet is used to record data on the surgical antibiotic prophylaxis and hospital-based empirical prescribing indicators. To assess compliance with the Hospital-based empirical prescribing indicator the following *measures* have been created:

- Compliance with empirical prescribing policy
- Indication documented in the patient's notes
- Combined measure: Policy compliant **and** indication documented

Hospital-based empirical prescribing data

Data for the hospital-based empirical prescribing indicator included in this report cover the period January 2009 – March 2010. Approximately 4000 patients have been audited during this time and the overall compliance rate is 75%. Data collected is not formally quality assured in line with current practice within SPSP and other IHI quality improvement initiatives. However local Antimicrobial Management Teams are working with clinical staff to ensure the validity of the data.

Data were collected in acute admission units (medical and surgical) by sampling a recommended 20 patients per month per ward. Compliance against the empirical prescribing policy is measured against the first antibiotic prescribed for a condition listed in the policy.

Data analysis

The data report temporal compliance with the three empirical prescribing measures at national and Board level and the number of patients included in the sample each month. Median compliance and the target of 95% are shown. Data from each Board are also considered at ward level to identify any trends and/or shifts in the data. This information is included in individual Board reports. The analysis uses data for improvement for the purpose of monitoring performance against targets. In interpreting the data, reliability cannot be assured since this is a baseline report and the results are not reflective of other ward settings within Boards.

Trends and Shifts in Data

A **trend** is defined as 5 or more consecutive points constantly increasing or 5 or more consecutive points decreasing. If a trend is detected it indicates a non-random pattern in the data which should be investigated. This non-random pattern may be a sign of improvement or of process failure.

A run containing 6 or more consecutive data points all above or all below the median indicates a non-random **shift** in the data which should be investigated. This non-random pattern may be a sign of improvement or of process failure.

If a run chart has 50% or more of the data at 0 or at 100% the criteria for detecting a non-random statistical signal in the data cannot be applied.

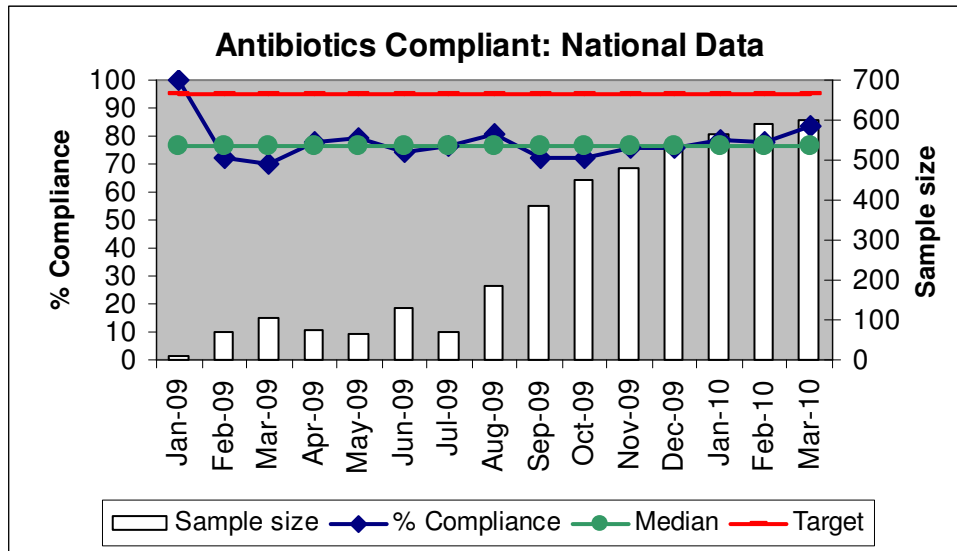
Good Practice

NHS Forth Valley, NHS Greater Glasgow and Clyde and NHS Tayside have shown either an increase in trend or a shift in their data at ward level. This has been achieved through audit and feedback of data to clinical teams.

Summary of National Data

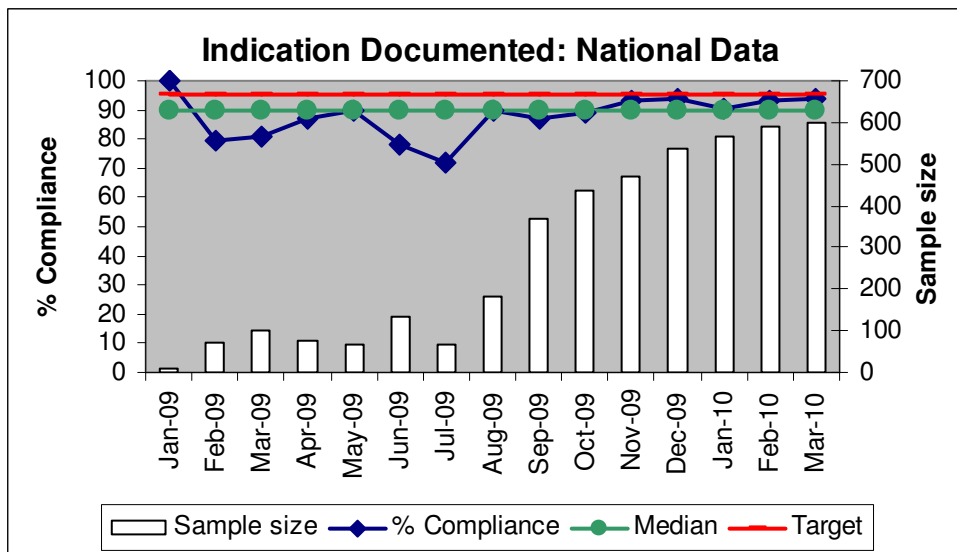
National data includes results from all NHS Boards.

Antibiotics compliant with empirical prescribing policy



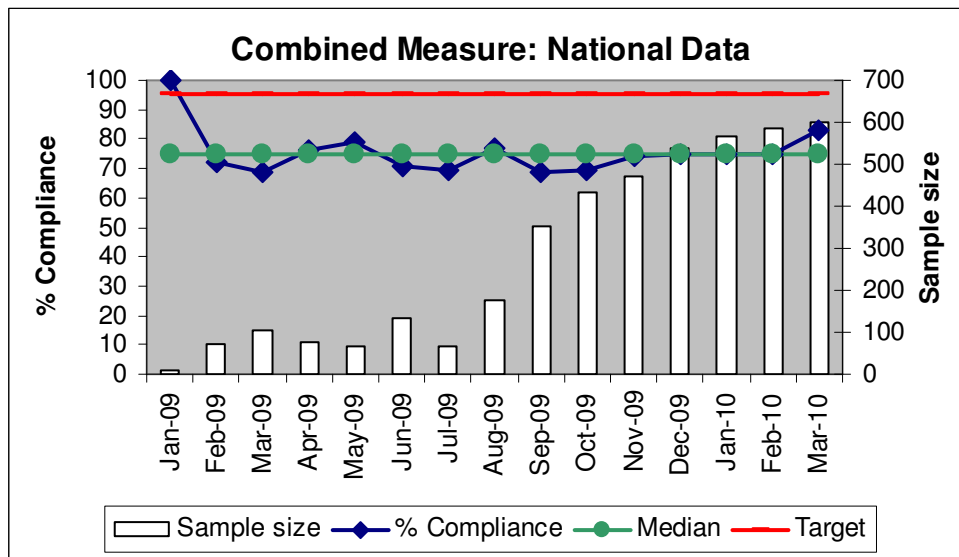
Median compliance is **76%**. Target is $\geq 95\%$.

Indication for antibiotic treatment recorded in notes



Median compliance is **90%**. Target is $\geq 95\%$.

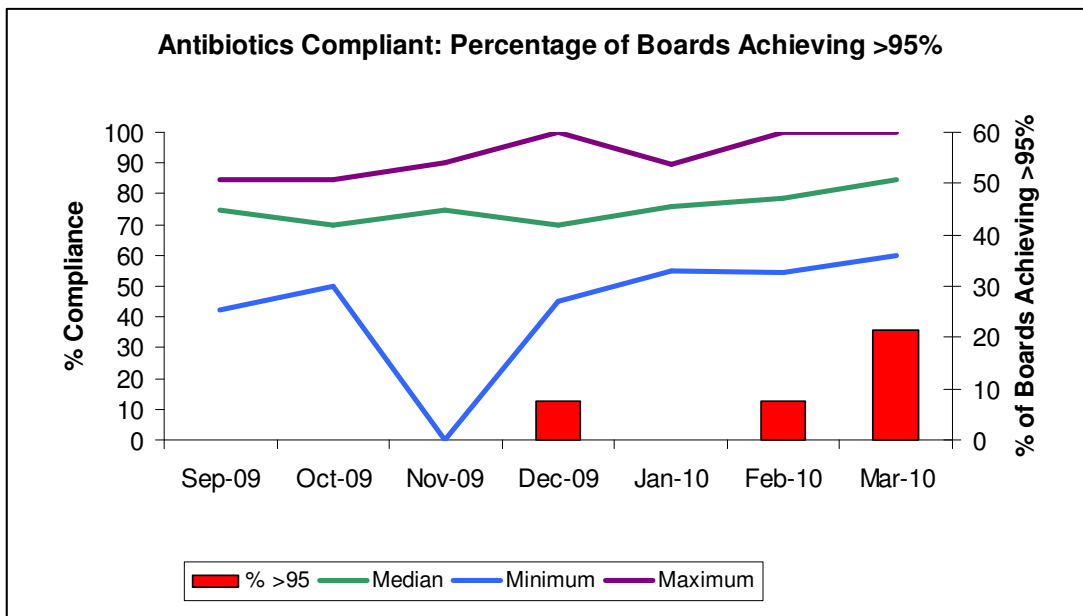
Combined measure: policy compliant and indication documented

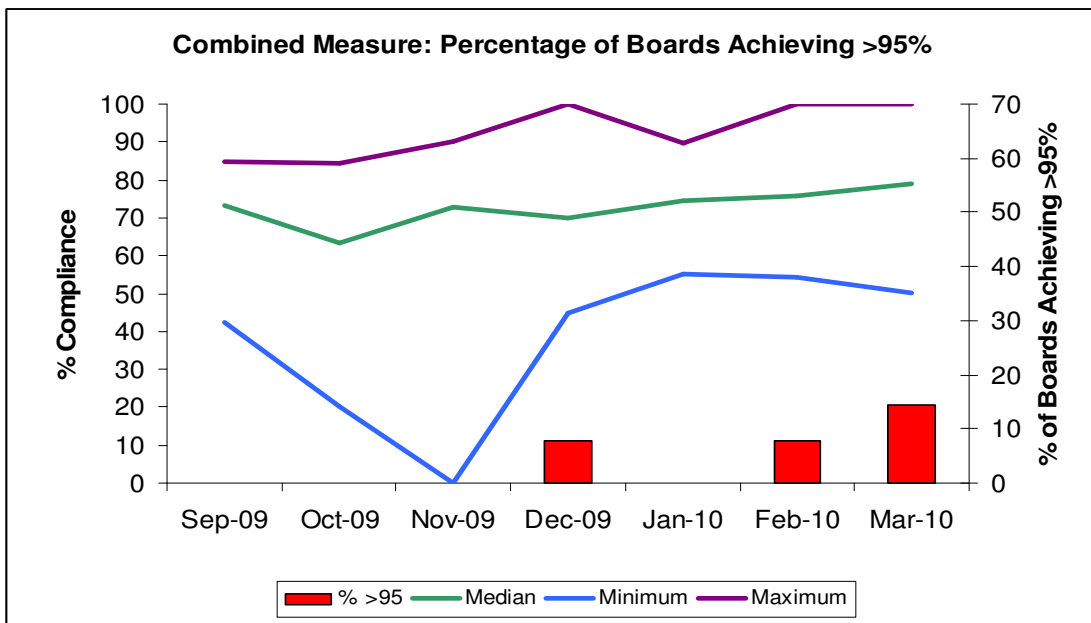
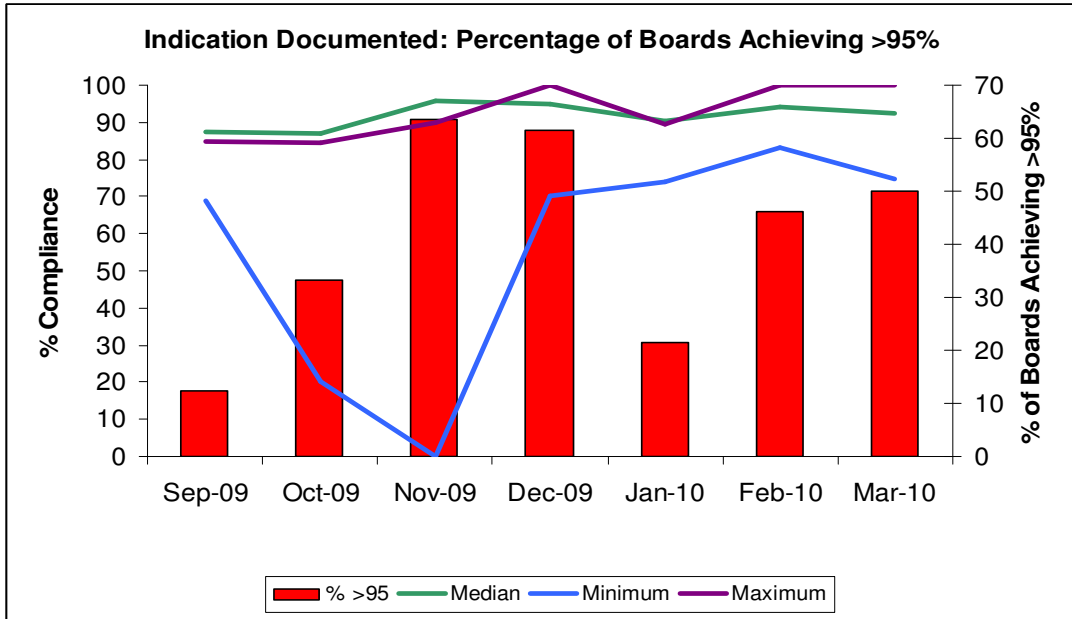


Median compliance is **75%**. Target is $\geq 95\%$.

Achievement of Target

The charts show the percentage of Boards that have achieved $>95\%$ compliance with each of the three empirical prescribing measures from September 2009 to March 2010. Minimum, maximum and median results are also displayed.





Summary of Board-level Data

The table shows the median (min, max) results aggregated at Board level for each of the three hospital-based empirical prescribing measures and the time period over which data were collected. National data for each measure is also included.

NHS Board	Date Range	Compliance with policy Median(min,max)	Indication documented Median(min,max)	Combined measure Median(min,max)
National	Jan 09 – Mar 10	76% (70,100)	90% (72,100)	75% (69,100)
Ayrshire and Arran	Sep 09 - Mar 10	60% (50, 75)	95% (88, 100)	58% (50, 75)
Borders	Nov 09 - Mar 10	79% (45, 94)	100% (94, 100)	79% (45, 94)
Dumfries and Galloway	Aug 09 – Mar 10	85% (72, 87)	92% (69, 100)	79% (64, 86)
Fife	Aug 09 – Mar 10	72% (43, 80)	87% (73, 100)	72% (43, 80)
Forth Valley	Sep 09 – Mar 10	66% (59, 81)	95% (84, 100)	68% (53, 81)
Grampian	Oct 09 – Mar 10	92% (80, 100)	92% (20, 100)	90% (20, 100)
Greater Glasgow and Clyde	May 09 – Mar 10	84% (77, 90)	93% (70, 97)	77% (60, 85)
Highland	Oct 09 – Mar 10	81% (70, 88)	94% (91, 97)	79% (70, 83)
Lanarkshire	Dec 09 – Mar 10	75% (53, 94)	79% (75, 95)	71% (53, 75)
Lothian	Aug 09 – Mar 10	71% (57, 85)	93% (83, 98)	70% (57, 78)
Orkney	Dec 09 – Feb 10	62% (58, 69)	84% (83, 100)	61% (58, 69)
Shetland	Jan 10 – Mar 10	80% (55, 81)	95% (81, 100)	69% (55, 80)
Tayside	Jan 09 – Mar 10	82% (71, 100)	87% (79, 100)	80% (71, 100)
Western Isles	Jan 09 – Mar 10	70% (54, 100)	73% (52, 100)	63% (52, 86)