

Evaluation of the effectiveness of carbapenem and piperacillin/tazobactam guidance in Scotland

Jacqueline Sneddon¹, Abdulrhman Mohana², Alexander Mullen², Siân Robson¹, Marion Bennie² & Alison Cockburn¹

1) Healthcare Improvement Scotland 2) University of Strathclyde

Background

In 2013, the Scottish Antimicrobial Prescribing Group (SAPG) produced national guidance on the use of carbapenems and piperacillin/tazobactam (piptaz) to reduce emergence of multi-drug resistant gram negative bacteria¹. This study assessed the implementation of this guidance and its impact on use of these agents in clinical practice.

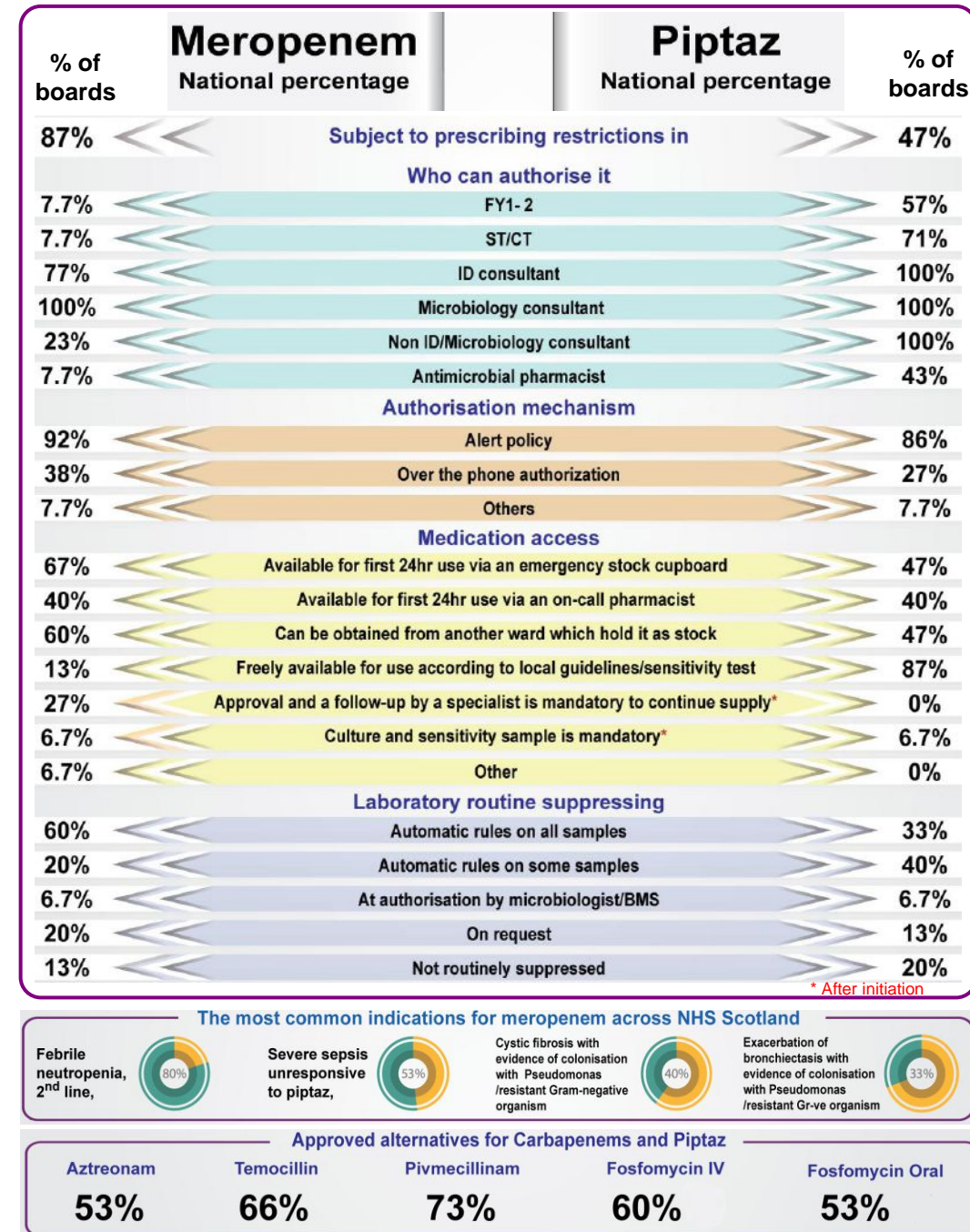
Methods

- A multi-professional steering group developed a survey on implementation of the SAPG guidance. A member of the Antimicrobial Management Team in the 15 NHS Scotland health boards completed the survey online in June 2015.
- A targeted point prevalence survey (PPS) was conducted to assess use of carbapenems and piptaz in acute hospitals in October 2015. The National Antimicrobial Stewardship Point Prevalence System© (NAS-PPS) was used to record and analyse the data.

References:

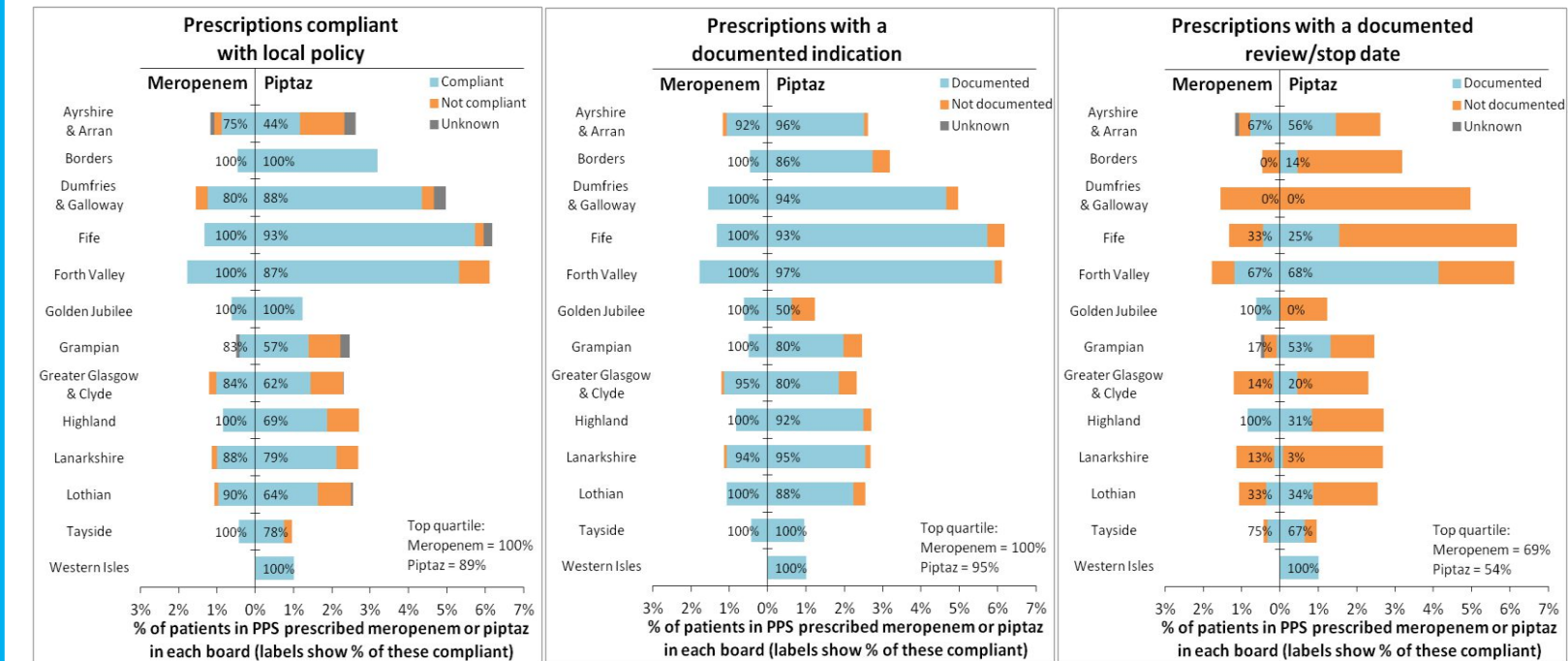
1) http://www.scottishmedicines.org.uk/files/sapg/SAPG_Guidance_to_reduce_MDRGNB_October_2013.pdf

Results: Online survey



- 14 of the 15 boards had updated or reviewed local guidelines around SAPG guidance.
- Clinicians were informed about the guidance verbally or electronically in 60% of boards.
- 80% of boards integrated the guidance into routine antimicrobials training.
- Meropenem is more restricted in terms of authorisation, access mechanisms and suppression of lab reporting, as shown above.
- Use of carbapenem sparing agents is low.

Results: Point Prevalence Survey



- 12,478 patients from 13 health boards were sampled. 127 were receiving meropenem and 337 receiving piptaz.
- National annual surveillance data confirmed that usage rates for both agents within the PPS dataset were typical.
- There was variation in use of carbapenem and piptaz across boards, shown by the size of bars in the figures above.
- Compliance with local guidelines was good for meropenem and variable for piptaz, in part due to fewer restrictions on its use.
- Indication for use was well documented in most boards.
- Review/stop dates were generally poorly documented.

Conclusions and future directions

- Most boards have implemented SAPG guidance as part of their local antimicrobial stewardship programme.
- Compliance with local guidelines varies.
- Comparison of local guidelines from the survey and actual prescribing practice from the PPS has identified areas for quality improvement in each board.
- Further qualitative work will evaluate clinicians' attitudes to use of carbapenems and piptaz to inform behaviour change strategies.