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For: NHS Improvement/ NHS England PrescQIPP AMS Hub

August 2019

# Re: CMO Letters to High Antibiotic Prescribers – sent August 2019 to land beginning of September 2019

Improving antibiotic stewardship is a priority for Public Health England due to the continuing threat of antimicrobial resistance. The Chief Medical Officer for England is sending her annual winter-season feedback letter on antibiotic prescribing rates to GPs in September 2019.

The feedback letters are being sent to over 19,400 individual GPs in over 2,290 different GP practices with high antibiotic prescribing rates. Practices were selected based on their level of prescribing per STAR-PU and in comparison with the England average and the NHS target of at or below 0.965 items per STAR-PU annually. The letters are tailored according to GP practice prescribing. While many GPs are already reducing their usage of antibiotics, the letters are intended to support GPs to reduce their prescribing further by providing feedback on practice prescribing rates, offering encouragement and suggesting practical actions in a clear and succinct manner. Public Health England Behavioural Insights (PHEBI) is managing the process.

Public Health England ran a randomised controlled trial in 2014/15 to test the effect of sending feedback to GPs about their antibiotic usage (LANCET Vol 387, No. 10029, p1743). The trial found that practices that were sent a supportive feedback letter prescribed 3.3% fewer antibiotics than practices that did not receive a letter. GPs in practices with antibiotic prescribing rates in the top 20% for each NHS Area Team were involved in this study.

In Jan 2016, March 2017 and March 2018 similar letters were sent to all GPs in practices whose prescribing rate, calculated as above, was in the top 20% nationally. An evaluation using a Regression Discontinuity Design on the 2017 letters showed the continued effectiveness of the intervention (Rataczjak et al, 2019, in press at Journal of Antimicrobial Chemotherapy). In March 2018 letters were also sent to practices who were outside the top 20% of prescribers but whose prescribing had increased by more than 4%. In November 2018, in addition to sending similar letters to the top 20% of prescribers, letters were sent to practices with high levels of broad spectrum prescribing, defined as practices where more than 10% of all antibiotic prescribing was broad spectrum antibiotics.

The methodology used to allocate letter content is provided in the table below, with copies of all ten letters posted on the AMS Hub, and an excel sheet containing details of all prescribers and practices who have been sent letters. The spreadsheet says which trial arm the practices were in and we have posted twelve letters labelled by trial arm, but note that letters B1 and C2 are the same (see below), so there are only ten different letter contents.

GP practices were included if the antibiotic prescribing in that practice between April 2018 – March 2019 exceeded 0.919 items per STAR-PU. This value was chosen to include practices which were above or close to the target of 0.965 items per STAR-PU. This year PHEBI is running three trials and each practice was included in either trial A, B or C, based on their exact prescribing rates in April 2018-March 2019:

* Trial A included GP practices whose prescribing was between 0.919 and 0.965 items per STAR-PU (i.e. practices who met the target in 2018/9 but for whom a 5% increase in prescribing would put them over the target).
* Trial B included GP practices whose prescribing was above the target of 0.965 items per STAR-PU but who were not in the top 20% of GP practices in terms of antibiotic prescribing adjusted for STAR-PU.
* Trial C included GP practices that were in the top 20% of GP practices in terms of antibiotic prescribing adjusted for STAR-PU.

GP practices in the top 1% in terms of antibiotic prescribing adjusted for STAR-PU were treated as outliers and therefore were not including in any of the trials and did not receive any communication.

There were five main letters across the three trials, summarised here:

* Letter A1, feedback letter comparing practice prescribing rate to the target for practices that met the target in 2018/9, but where a 5% increase in prescribing would put them over the target.
* Letter B1/C2, feedback letter comparing practice prescribing rates to the target for practices who missed the target in 2018/9 (this letter was used in trials B and C).
* Letter B2, feedback letter comparing practice prescribing rates to the target for practices who missed the target in 2018/9, with a chart showing prescribing compared to the target.
* Letter C1, feedback letter comparing practice prescribing to peers.
* Letter C3, feedback letter comparing practice prescribing to peers, with an example of a specific patient affected by antibiotic resistance.

For practices receiving one of the above letters whose prescribing had increased by more than 5% in April 2018–March 2019 compared to April 2017–March 2018, their letter included a sentence noting that their prescribing increased. There are two control groups whose data will be used in the trial but who did not receive a letter.

More details about the three trials and the hypotheses being tested (see also Table 2):

Trial A involves practices that met the target of at or below 0.965 items per STAR-PU but would exceed this target if prescribing increased by 5%. This corresponds to practices prescribing between 0.919 and 0.965 items per STAR-PU. Half of these practices will receive Letter A, which informs the practice of their current prescribing rate and the target, thanking them for meeting the target and giving information on tools to ensure they continue to meet the target. The rest of the practices will receive no letter as a control. PHEBI will investigate how prescribing compares with the two groups, to see if receiving a letter improves compliance with the target in practices who are just under the target.

Trial B involves practices that exceeded the target of 0.965 items per STAR-PU but are not in the top 20% of prescribers. One third of these practices received Letter B1 informing them of their current prescribing rate compared to the target, with information on tools to help them meet the target in future. One third of practices will receive a similar letter, Letter B2, but including a graphical representation of their current prescribing rate compared to the target. The final third of practices will receive no letter, acting as a control group. PHEBI will investigate whether receiving a letter reduces future prescribing compared to the control group, and the relative effectiveness of the two types of letter.

Trial C involves practices in the top 20% of prescribers of antibiotics. One third of these practices will receive the standard practice letter (Letter C1), informing them of their specific percentile of prescribers with information on tools to help them reduce prescribing, acting as the control group. One third of these practices will receive Letter C2 informing them of their current prescribing rates and the target, the same letter as Letter B1. The final third of practices will receive a similar letter (Letter C3) to the control group, but with the addition of a specific patient story of a patient affected by antibiotic resistance. PHEBI will investigate the effect of each of these new letters on reducing prescribing compared to the standard letter.

Table 1: Letter numbers and trial arm: Showing which letter numbers (in the spreadsheet) were in which trial arm, what the letter content was, and whether it stated that there had been an increase in prescribing

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| **Letter number** | **Trial Arm** | **Letter content** | **Letter refers to an increase in prescribing** |
| 1 | A1 | Feedback about being near to exceeding target | No |
| 2 | A1 | Feedback about being near to exceeding target | Yes |
| 3 | B1 or C2 | Feedback about exceeding target | No |
| 4 | B1 or C2 | Feedback about exceeding target | Yes |
| 5 | B2 | Feedback about exceeding target with bar chart | No |
| 6 | B2 | Feedback about exceeding target with bar chart | Yes |
| 7 | C1 | Standard practice letter, comparison to peers | No |
| 8 | C1 | Standard practice letter, comparison to peers | Yes |
| 9 | C3 | Standard practice letter with specific example | No |
| 10 | C3 | Standard practice letter with specific example | Yes |

Table 2: Summary of each trial arm: content of letters and number of practices and GPs receiving the letters

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| **Group** | **Overall prescribing in the last 12mths** | **Category** | **Headline Message** | **Secondary Message** | **Visual representation** | **Count of Practices** | **Count of GPs** |
| Trial C: Top 20% | Top 20% (More than 1.048 items per STAR-PU) | Letter C1  (standard practice as control, comparison to peers) | Your prescribes more antibiotics than xx% of practices in England | Your practice prescribes more antibiotics per patient than the great majority of practices in England (after adjustments for age and sex of the patient population). | None | 440 | 3526 |
| Trial C:  Top 20% | Top 20% (More than 1.048 items per STAR-PU) | Letter C2  (intervention letter,  feedback about exceeding target) | Target prescribing: 0.965 items per STAR-PU  Your practice’s prescribing 2018/19: x.xxx items per STAR-PU  Your practice missed the target | Your practice prescribed over the target of 0.965 antibiotic items per STAR-PU between April 2018 and March 2019. Please take action to ensure your practice meets the target in 2019/20. | None | 438 | 3601 |
| Trial C:  Top 20% | Top 20% (More than 1.048 items per STAR-PU) | Letter C3  (intervention letter,  standard practice letter with specific example) | Your prescribes more antibiotics than xx% of practices in England | Your practice prescribes more antibiotics per patient than the great majority of practices in England (after adjustments for age and sex of the patient population). | None | 438 | 3584 |
| Trial B:  Above target | Above target but not in top 20% (between 0.965 and 1.048 items per STAR-PU) | No letter  (standard practice) | n/a | n/a | n/a | 332 | n/a |
| Trial B:  Above target | Above target but not in top 20% (between 0.965 and 1.048 items per STAR-PU) | Letter B1  (intervention letter, feedback about exceeding target) | Target prescribing: 0.965 items per STAR-PU  Your practice’s prescribing 2018/19: x.xxx items per STAR-PU  Your practice missed the target | Your practice prescribed over the target of 0.965 antibiotic items per STAR-PU between April 2018 and March 2019. Please take action to ensure your practice meets the target in 2019/20. | None | 332 | 2796 |
| Trial B:  Above target | Above target but not in top 20% (between 0.965 and 1.048 items per STAR-PU) | Letter B2  (intervention letter, feedback about exceeding target with bar chart) | Target prescribing: 0.965 items per STAR-PU  Your practice’s prescribing 2018/19: x.xxx items per STAR-PU  Your practice missed the target | Your practice prescribed over the target of 0.965 antibiotic items per STAR-PU between April 2018 and March 2019. Please take action to ensure your practice meets the target in 2019/20. | Practice prescribing compared to target prescribing | 332 | 2868 |
| Trial A:  Less than 5% under target | Just below target (between 0.919 and 0.965 items per STAR-PU) | No letter (standard practice, control) | n/a | n/a | n/a | 326 | n/a |
| Trial A:  Less than 5% under target | Just below target (between 0.919 and 0.965 items per STAR-PU) | Letter A1 (intervention letter, feedback about being near to exceeding target) | Target prescribing: 0.965 items per STAR-PU  Your practice’s prescribing 2018/19: 0.xxx items per STAR-PU  Please reduce your prescribing | Your practice prescribed just under the target of 0.965 antibiotic items per STAR-PU between April 2018 and March 2019. Thank you for your efforts so far, but please be careful to ensure your practice also meets the target in 2019/20. | None | 325 | 3070 |

If CCGs have any questions please contact:

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