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Coventry and Warwickshire VTS, CRN West Midlands and Warwick Medical School

'Primary Care Research and Audit in Coventry and Warwickshire'

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PRESENTER'S DETAILS

Title (Prof, Dr, Mr, Mrs, Miss)	First Name	Surname
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Place of work/study - University of Warwick

PRESENTATION DETAILS (total max 250 words - not including title)

Co-Authors	Title of Study
	Acne Vulgaris

What's the problem you are tackling? (Background)

Antibiotic resistance is a major issue affecting the world at present. Campaigns from the World Health Organisations and NHS bodies have been active in trying to reduce the unnecessary use of antibiotics in various healthcare settings. Despite this, public health England reports that resistance rates in key infections, including E coli, K. pneumonia, K. oxytoca and Pseudomonas SPP resistance was higher in 2016 than 2012.
In 2019, the UK government has set out its 5 year action plan and 20 year vision on antimicrobial resistance.

The targets for this plan are to:

- cut the number of drug-resistant infections by 10% (5,000 infections) by 2025
- reduce the use of antibiotics in humans by 15%
- prevent at least 15,000 patients from contracting infections as a result of their healthcare each year by 2024

There is also a focus on building a world wide database on antibiotic use and resistance.
As part of this plan, local providers of NHS care such as GP practices should also look into ways that they can help achieve this target.

Acne Vulgaris is an inflammatory condition affecting the hair follicles and surrounding sebaceous glands. It is a common condition that affects not only teenagers but adults too. It has been reported that over 3.5 million appointments are made per year by patients who wish to discuss acne problems with their general practitioners. At our GP practice there is anecdotal evidence to suggest the overuse of oral antibiotics for Acne vulgaris and the lack of prescribing of topical treatments alongside oral treatments. Reduction in prescribing lengths and the introduction of topical treatments earlier could be beneficial in the fight against antibiotic resistance.

There are currently no Nice Clinical guidelines for acne treatment, which can cause variation in prescribing. The documents we found which provided physicians with some guidance

included: NICE Clinical Knowledge Summaries, a leaflet by the British Association of Dermatologists and a document by the local CCG.

NICE Clinical Knowledge Summaries state that oral antibiotics should be prescribed to patients who have moderate acne and aren't responding to topical treatment. The document states an orally taken antibiotic such as Doxycycline or Lymecycline should be taken for a maximum of 3 months. The British Association of Dermatologists have produced a leaflet for patients that outline treatment options. It states that oral antibiotics need to be taken for a minimum of two months and treatment is continued till the patient has no additional improvement. The Birmingham and Solihull local commissioning group state than oral antibiotics can be used for patients who have severe acne or are not responding to treatment. They state that the duration of treatment for Doxycycline and Lymecycline should be between 6 to 12 weeks. NICE Clinical Knowledge Summaries recommends that a topical agent is always prescribed alongside the oral antibiotic. This is stated to reduce the risk of antibiotic resistance from developing.

Due to the conflicting nature of these guidelines we decided to audit the General Practice surgery against two outcome measures. Firstly whether the oral antibiotics, doxycycline and Lymecycline, were prescribed for longer than the recommended 3 months and secondly whether topical agents were always prescribed alongside oral antibiotics.

How did/will you do it? (Method)

Data was collected on all patients that were prescribed oral antibiotics between April 2018 and April 2019. We felt using data from the last year would give us sufficient and up to date data that could give us information on how well the practice was meeting standards. Our inclusion criteria was: patients aged ≥ 12 and prescribed doxycycline or Lymecycline. After excluding patients who had been prescribed Doxycycline for infections we identified 25 patients suitable for review. We then cross-matched these patients with patients who had been prescribed a topical agent, to allow us to see if the practice met our second outcome measure.

What did you find? (Results)

Outcome 1:
Of the 25 patients identified, we needed to calculate how many patients were prescribed antibiotics for longer than the recommended 3 months. After applying the relevant filters on Microsoft Excel we were able to deduce that 1 patient, out of the 25, was prescribed oral antibiotics for ≤ 3 months. Therefore 96% of patients who were being prescribed oral antibiotics were consuming them for longer than NICE Clinical Knowledge Summaries recommends. The mean duration of prescription was 58 months with the range being between 3 and 167 months.

Outcome 2:
We secondly needed to consider whether all patients who were prescribed oral antibiotics were also prescribed topical agents. Cross matching the data on patients that were prescribed topical agents with patients who were on oral antibiotics allowed us to observe how the standards were being met. It was found that 6 out of 25 patients (24%) were being prescribed concurrent topical agents alongside their oral antibiotics. This does not meet the NICE Clinical Knowledge Summaries standard of all patients being prescribed both.

Why does this matter? (Conclusion)
The audit found that most patients were not being prescribed oral antibiotics for the recommended 3 months. In addition to this, patients who were prescribed oral antibiotics were not being prescribed topical agents to use alongside. Whilst the surgery did not meet the criteria we had set using NICE CKS, this could be due to various reasons. As previously stated, there are currently no NICE clinical guidelines for acne treatment. This could cause physicians to have uncertainty on how they should be treating patients. NICE plans on publishing clinical guidelines on the treatment of Acne in 2021 which will provide guidance on the management of this condition. However in the meantime the surgery should address the inconsistencies on prescribing to ensure patients are receiving effect treatment and minimize antibiotic resistance.

To tackle this problem we should retain physicians on prescription of antibiotics for acne. The practice manager could arrange a seminar to discuss with general practitioners and the practice pharmacist how oral antibiotics should be prescribed. This will allow them to share any ideas on how they can improve compliance and address any concerns they might have.

Another method the general practice surgery could implement is developing popups that alert the physician that the patient has been prescribed antibiotics for 3 months. As most patients will come in for a review of their medication and to renew their prescription, this would be an ideal time for the doctor to see whether continuing antibiotics is appropriate. The pop-up could also remind physicians that antibiotics for acne should be prescribed with topical agents.

In addition to educating the prescribers on the guidelines, another approach could be to produce patient information leaflets that detail the usual course of medication for acne. These leaflets could be distributed when the patient is initially prescribed antibiotics and can outline the duration as well as common side effects. This will empower the patients and help them understand their treatment better, which could possibly improve compliance. Having the normal course of treatment in the leaflet will allow patients to take charge of their own treatment and ensure they are using their topical agents alongside their antibiotics.

In summary, although the practice is severely under the targets for both outcomes, both of these are easily rectifiable with the combination of physician and patient education.