

Background

The problem: There has been a gradual year on year increase in the rate of secondary care antibiotic consumption in Northern Ireland since 2014 (1).

Public Health England advised that if we fail to address the issue of antibiotic resistance there could be an estimated 10 million deaths every year globally by 2050 (2).

The solution:

Responsible antibiotic prescribing and investing research efforts into antimicrobials are key in the strategy to tackle antimicrobial resistance.

Our audit focuses on the completion of the indication, duration and cultures sent yes/no sections when prescribing antimicrobials.

Clear documentation of these factors is a small step we can all take to ensure we are responsible antimicrobial prescribers.

Aims

Our aim was to ensure that 50% of kardexes to have Indication, Duration and Cultures Y/N completed

Specific – 50% of kardexes to have all 3 sections completed

Measurable - we measured the number of sections completed in each Kardex throughout the time span of the project

Achievable – we believe this is a realistic and achievable aim

Relevant – antibiotic resistance and rationalising antimicrobial prescribing are relevant issues for our health service

Time-related – 23/03/2021 to 05/05/2021

Remember to complete the INDICATION, DURATION and CULTURES SENT YES/NO when prescribing antimicrobials

Year: _____		Day and month: _____	
Circle times or enter variable dose / time			
Medicine	Check allergy	Start date	06 ⁰⁰
Dose	Route	Frequency	Stop date
Special instructions	Signature		12 ⁰⁰
What infection are you treating?	Supply		14 ⁰⁰
Cultures sent <input type="checkbox"/> Yes <input type="checkbox"/> No	Remember blood culture		18 ⁰⁰
Sign	Prof. no.		Pharmacist
Print	Bleep		22 ⁰⁰
Monitoring information			

Methods

We commenced the following plan to achieve our aim:

Population: 61 Kardexes from Ward 32

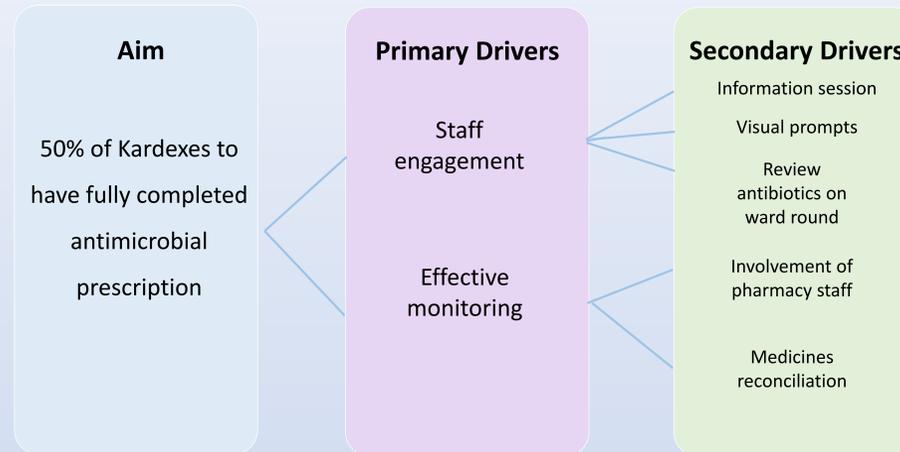
Intervention:

- Information session on anti-microbial prescribing
- Visual prompts on the ward in the form of poster
- Involvement of pharmacy staff
- Reminders to junior medical staff to encourage responsible antimicrobial prescribing

Comparison: Serial kardexes with 4 rounds of data collection

Outcome: Measuring the completion of each of the three sections at each data collection

Driver Diagram



Results

- Mean number of Kardexes with Antibiotics prescribed: 12/20
- Number of kardexes with all 3 sections complete (10%) did not change over the 5 rounds of data collection
- Number of kardexes with at least one section complete increased from 40% to 90%
- Indication was the most commonly completed category
- Duration was the least commonly completed category

Discussion

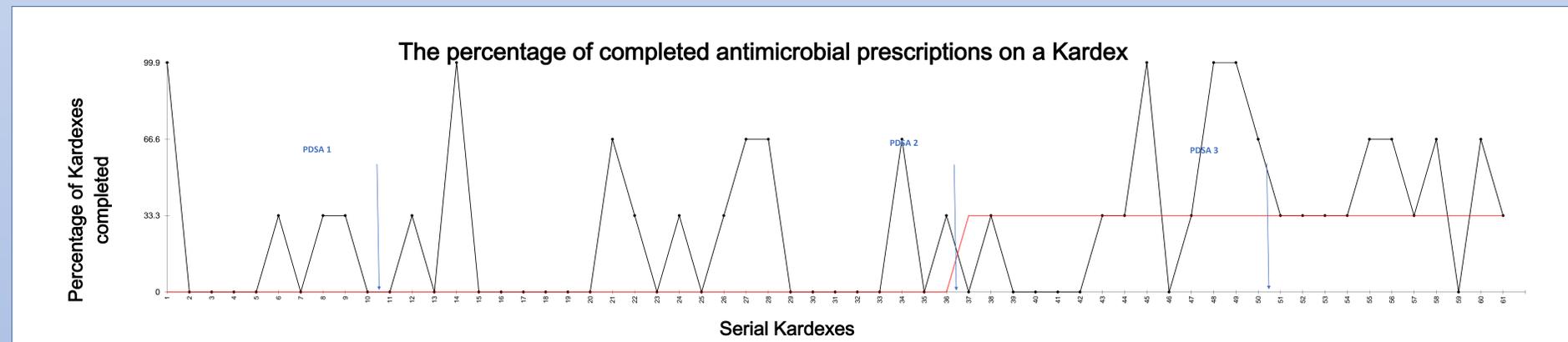
What are the barriers to responsible prescribing?

- Quick ward rounds, not having enough time to discuss with seniors re: antibiotic choice, indication, duration
- Busy ward – not having time to review antibiotic during day due to urgent clinical tasks
- Fear of writing duration for antibiotics and them being stopped prematurely as duration depends on clinical progress

Critical Analysis

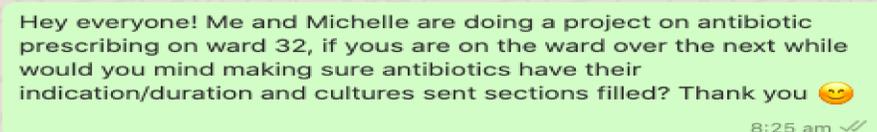
Limitations

- Small number of kardexes on 1 ward
- Risk of losing engagement from staff due to changeover period
- Factors out of our control – indication may be unclear whilst awaiting scans, duration may be unclear until we assess clinical progress of patients
- We are focussing on the mainly junior doctor role of the act of prescribing the antibiotics, do we need to address the mainly senior doctor role of making the decision for antibiotic choice/duration
- This is just one very small way of tackling antimicrobial prescribing on a small scale, to truly tackle this issue needs involvement on a larger scale



Adapting project – PDSA Cycle 3

- After PDSA Cycle 2 we realised that our project had a flaw: we focussed over interventions on F1s, however SHOs clerking patients in in ED are a significant source of antimicrobial prescribing
- We decided to implement an additional intervention focussing on SHOs, we wanted a simple and effective communication method to remind them of the importance of accurate antimicrobial prescribing – what better way to do this than a Whatsapp message
- Following this intervention we seen the greatest increase in compliance with over 90% of kardexes having at least one section completed!



Conclusion and Next Steps

Implementing change can be difficult. Although the aim of 50% of all kardexes having all 3 sections completed was not met we have achieved a significant change in the number of prescribers completing individual sections of the antimicrobial prescription section of the Kardex. Overall, this helps to achieve the bigger aim of improving patient care, reducing unnecessary antibiotic prescription and increasing antimicrobial stewardship. Looking forward we hope to expand this project across all surgical wards. We also aim to target the ED department as this is the first interface of the hospital.

References

- (1) Public Health England Advice Guidance - Health matters: antimicrobial resistance
- (2) Surveillance of Antimicrobial Use and Resistance in Northern Ireland, Annual Reports 2019