Introduction

Patient safety is a key principle in medicine. The traditional approach to patient safety within the NHS aims to identify error or harm, and introduce change to reduce or mitigate risk. This reactive approach includes incident reporting and root cause analysis.

Although intuitive, these methods may miss opportunities to learn from and replicate good practice, whilst also risking creating a culture of blame. Although, it is vital that lessons are learnt from mistakes, adverse events only account for the minority of healthcare interactions. Some parties are even sceptical of the impact of these traditionally employed methodologies, further exacerbated by organisational forgetfulness. BF Skinner advanced behavioural theory with his hypothesis on operating conditioning; that all behaviour is governed by reinforcing and punishing stimuli. There are several benefits of reinforcement compared to punishment, including:

- Punished behaviour is not forgotten, but only suppressed. Therefore the behaviour can return.
- Punishments can increase aggression and fear.
- Punished behaviour is not forgotten, but only suppressed.

Recent psychological research has supported the concept of effective learning from reflection on successes as well as failures. Learning from Excellence (LfE) is an initiative aiming to encourage better practice by acknowledging exceptional activity and attempting to facilitate it into wider practice, in addition to increasing staff morale. This in turn increases the resilience, the ability to successfully adapt when faced with adversity, within complex and diverse hospital environments.

A recent pilot study completed at Birmingham Children’s Hospital (BCH) demonstrated an improvement in antibiotic prescribing after the introduction of Excellence Reporting (ER). We aim to demonstrate that the utilisation of an ER approach can reinforce good behaviour and achieve sustained improvement in antibiotic prescribing.

Methodology

This study utilised a continuous improvement methodology, involving weekly point prevalence measurements of gold standard prescribing. Antibiotic prescriptions were examined on treatment charts in the paediatric intensive care (PIC) unit. Documenting of three gold standard identifiers was obligatory for an ‘excellent’ prescription.

- An indication for prescription
- Duration of antimicrobial course or review date
- Identifiable prescriber

Clinicians completing a gold standard prescription received recognition of their actions through weekly ER reporting. However, clinicians outside PIC did not receive this intervention.

Antibiotic prescriptions completed outside of PIC were compared to the prescriptions written in PIC and the standards of prescribing were observed over time.

Results

793 treatment chart entries were examined in total. 656 (83.8%) prescriptions were written in PIC, 133 (17.2%) were written outside PIC and the initial location of 24 (3%) prescriptions were unknown. Of the gold standard variables, an indication for the antibiotic was documented in 94% (746) of cases, the prescriber was identifiable in 89% (708) of cases and a review date or duration of prescription was documented in 69% (553) of cases.

Discussion

The significant overall improvement in antibiotic prescribing is very encouraging. The drop after July is probably due to the annual intake of new trainees. Whether this is just the normal improvement throughout the academic year is initially not discernible. However, the difference in quality between antibiotic prescribing on PIC and outside implies that ER is a significant factor in the sustained behaviour modification. This is probably the consequence of multiple factors including recognition of excellent practice, positive reinforcement of the behaviour and the creation of an environment in which clinicians are striving to be better.

References


Conclusion

An ER initiative appears to be able to produce sustainable behaviour modification and is compatible with the traditional incident reporting methodology, possibly even complementing one another. Implementation of ER in other fields may result in other noticeable improvements.

‘What is love except another name for the use of positive reinforcement? Or vice versa.’

-BF Skinner

Maybe an interpretation of this is that positive reinforcement in the workplace can inspire a love for work.