St Helens and Knowsley Teaching Hospitals NHS
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Exploring the impact of a feedback intervention on insulin prescribing behaviour: A qualitative study

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Background

Insulin is a high risk drug, and common source of serious medication error,[1] with international guidelines outlining the need to reduce harm from medication error by 50%.[2]

Interventions to improve prescribing outcomes are needed. Prescribers have reported a lack of feedback previously[3] with recent national guidance advocating the need for more feedback for doctors.[4]

Feedback has been reported to improve prescribing outcomes elsewhere [5,6] with potential for similar effects on insulin prescribing. However little is known of the impact of feedback on insulin prescribing and in particular insulin prescribing behaviors.

Exploration of this subject will contribute to what little is known in this area and advance understanding of interventions to reduce harm from insulin prescribing errors.

Design & Methodology

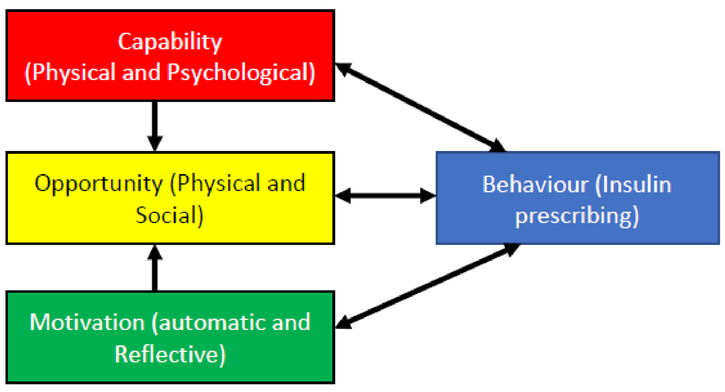
Methods:

- Pharmacists trained in data collection and facilitation of constructive feedback.
- Pharmacists audited insulin prescribing continuously for a four-month period on two wards

- Monthly feedback provided verbally and in writing both:
  - Individually and;
  - Shared across ward areas

- Semi-structured interviews were conducted with doctors who had received feedback and volunteered to participate.
- A topic guide was used.
- Interviews were digitally recorded, transcribed verbatim
- Transcripts were analyzed thematically using COM-B for a framework approach where **B**ehavior occurs following interaction between **C**apability, **O**pportunity and **M**otivation (figure 1). [7]

- **Figure 1: The COM-B model of behavior change**



Aims

- The aim of this research was to explore the impact of feedback on insulin prescribing behaviour.

Results

- Ten prescribers (4 Foundation Trainees, 4 Core Medical Trainees, 1 Specialty trainee, 1 consultant) participated to be interviewed.

- **Capability**

The intervention supported the ***physical capability*** of prescribing through deliberate practice following feedback.

> *"As a junior doctor you don't get feedback and we need it to develop. If we don't get feedback how do we know where we need to improve?" (D3, CT1)*

Feedback influenced the ***psychological capability*** of doctors. The intervention was described as educational, raised awareness of prescribing capability, learning needs and insulin error causation. Participants described a raised awareness of the role of pharmacists which influenced their working relationship. Some doctors questioned if they would obtain this same capability with experience alone.

- **Opportunity**

> *"Well I think that after that first session… then… how can I explain this… the feedback session really just becomes a medium to open up discussion about insulin prescribing with the pharmacist" (d8, FY1)*

Previous feedback on insulin prescribing was considered limited with the **physical *opportunity*** for feedback valued and considered feasible.

Doctors described feedback as a ***social opportunity*** to engage with the pharmacist and develop working relationships, ask questions to consolidate learning, and learn from others.

- **Motivation**

Participants described feedback encouraging ***reflection*** on insulin prescribing with conscious plans to improve their prescribing practice.

> "You don't reflect on your practice and that's what feedback does, it makes you reflect on your insulin prescribing." (D7, CMT2)

> *"You can't help but look at each other and think okay well who has done the best?"(d9, CT2)*

Automatic motivators were described including competitiveness, personal pride, a desire to improve and develop, avoidance of error and 'bad' feedback.

- **Behaviour (Insulin prescribing)**

Prescribers agreed that feedback could reduce error recurrence. They reported greater information and feedback seeking **behaviours** to inform their prescribing practice.

> *"I ask more questions… and I am definitely more mindful when prescribing insulin… like specifying units, writing 15 minutes before meals and making sure I confirm the device." (D3, CT1)*

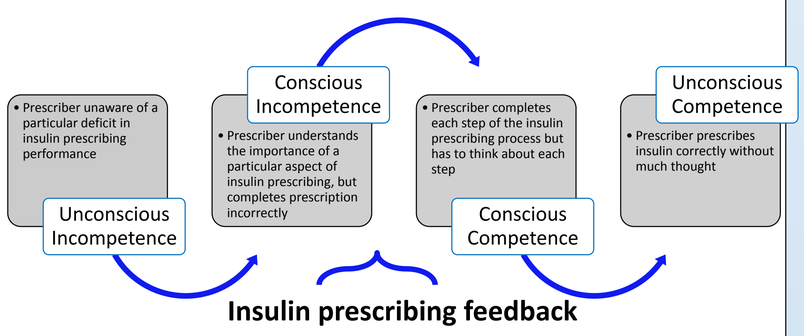
This included both clinical information and medicines information from colleagues to inform prescribing. Doctors described a shift from an automatic to more cautious or mindful insulin prescribing process, with feedback supporting reflecting-in-action on their prescribing.

Discussion

Feedback raises awareness of prescriber performance (see figure 3), challenging prescriber perceptions, informing learning needs, and their ability to self-regulate their prescribing behaviour.

By raising awareness of prescribing performance and risk of error, insulin prescribing becomes less automated and a more cognitively engaging task with feedback accelerating development of prescribing competence (figure 2).

Figure 2: Conscious competence prescribing model



Whilst feedback is educational, the benefits extend beyond cognitive understanding of insulin prescribing with metacognitive processes described by participants in this study. Feedback is a prompt and a motivator to enhance the capability of doctors to prescribe insulin and direct their future behaviours through self-regulation.

Prescribing can be typically taught in classroom areas with a focus on drug knowledge yet the behaviours reported in this study (such as communication, team-work, feedback seeking and reflective practice) may not be developed to same degree.

Whilst drug knowledge is an important aspect of prescribing insulin, its is only one component and the non-technical skills of prescribing could offer important avenues of future research for contextualised safe insulin prescribing.

Conclusion

Feedback has potential to positively influence insulin prescribing behaviour.

However, whilst feedback could be catalysing change, the influencing factors are varied and complex.

Further work is needed to explore the impact on insulin prescribing error rates with this research providing further avenues of enquiry to support prescribing education and safe prescribing outcomes.

References

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