Gloucestershire Safety & Quality Improvement Academy

Gloucestershire Hospitals NHS Foundation Trust

Opioid Prescribing: Reducing Errors and Improving Patient Care

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1. The Safety Concern

Pain is a common symptom for hospital patients. Safe and effective analgesia is a vital part of good clinical care. However, opioid prescribing is recognised as complex, and errors are common.

Opioids have been highlighted as the therapeutic group most frequently associated with preventable medication errors causing severe harm or death (National Patient Safety Agency 2007).

After a number of reported adverse incidents relating to errors in the prescription of opioids within the trust, we wanted to improve the accuracy of opioid prescribing by junior doctors.

2. SMART Aim

By April 2017 at least 50% of F1 and F2 doctors within the trust should be able to correctly answer 3 common opioid prescribing questions at a level that would be expected of a junior doctor.

3. Method

A cohort of F1 and F2 doctors were asked to anonymously complete a questionnaire. The questions included a self reported confidence level when prescribing opioids scaled from 1 to 5 (1 = completely unsure 5 = totally confident) and 3 common opioid prescribing calculations at the level that would be expected of junior doctor. The calculations could be answered using any resources to which they might normally refer to in their clinical practice .

The Intervention

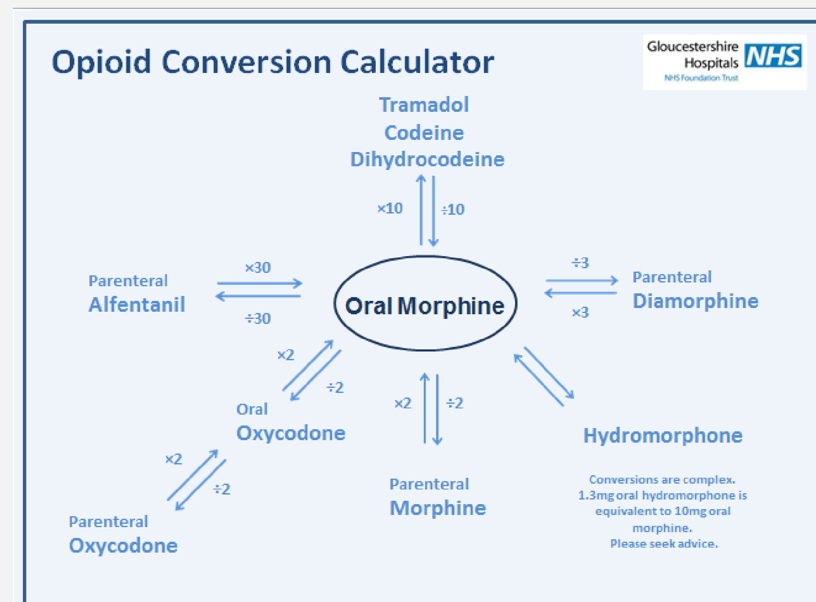
We designed an opioid conversion tool. The goal was for it to be accurate but straightforward to use. The tool was in line with BNF guidance and approved by pharmacy.

The tool allows the user to convert any opioid (via any route) to an equivalent dose of another opioid (via any route) by simplifying the relevant conversion ratios.

The opioid conversion tool was distributed via:

- Intranet guidelines
- Pharmacy update
- Printed 'aide memoire' cards distributed to F1 and F2 doctors
- Incorporated into the foundation programme teaching

We then re audited the F1 and F2 doctors using the original questionnaire.



Oral Morphine (mg/24 hours)	Buprenorphine Patch (mcg/hr)	Fentanyl Patch (mcg/hr)
10	5	-
20	10	-
30		12
40	20	-
60	-	25
120	-	50
180	-	75

TRANSDERMAL PATCHES

- Doses received via transdermal patches are variable conversions given are for the lowest guaranteed dose
- Patches are NOT recommended in unstable pain
- At end of life – see palliative care guidelines on intranet or contact the out of hours service via switch

KEY POINTS

- Morphine remains first-line opioid of choice
- Alfentanil is the gold-standard opioid if eGFR<30 as least likely to accumulate and cause toxicity

4. Results

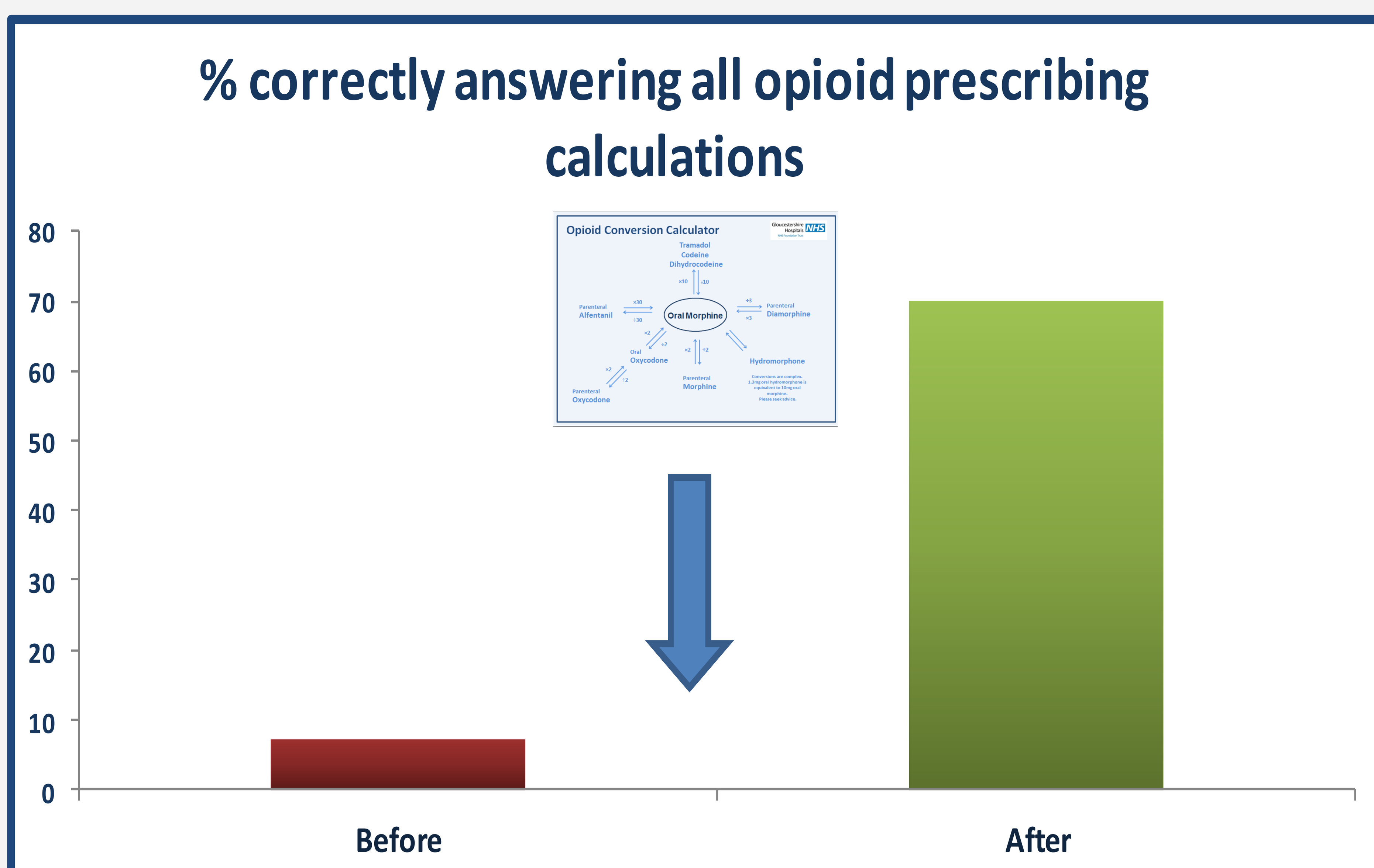
96% of respondents had encountered the new guidance

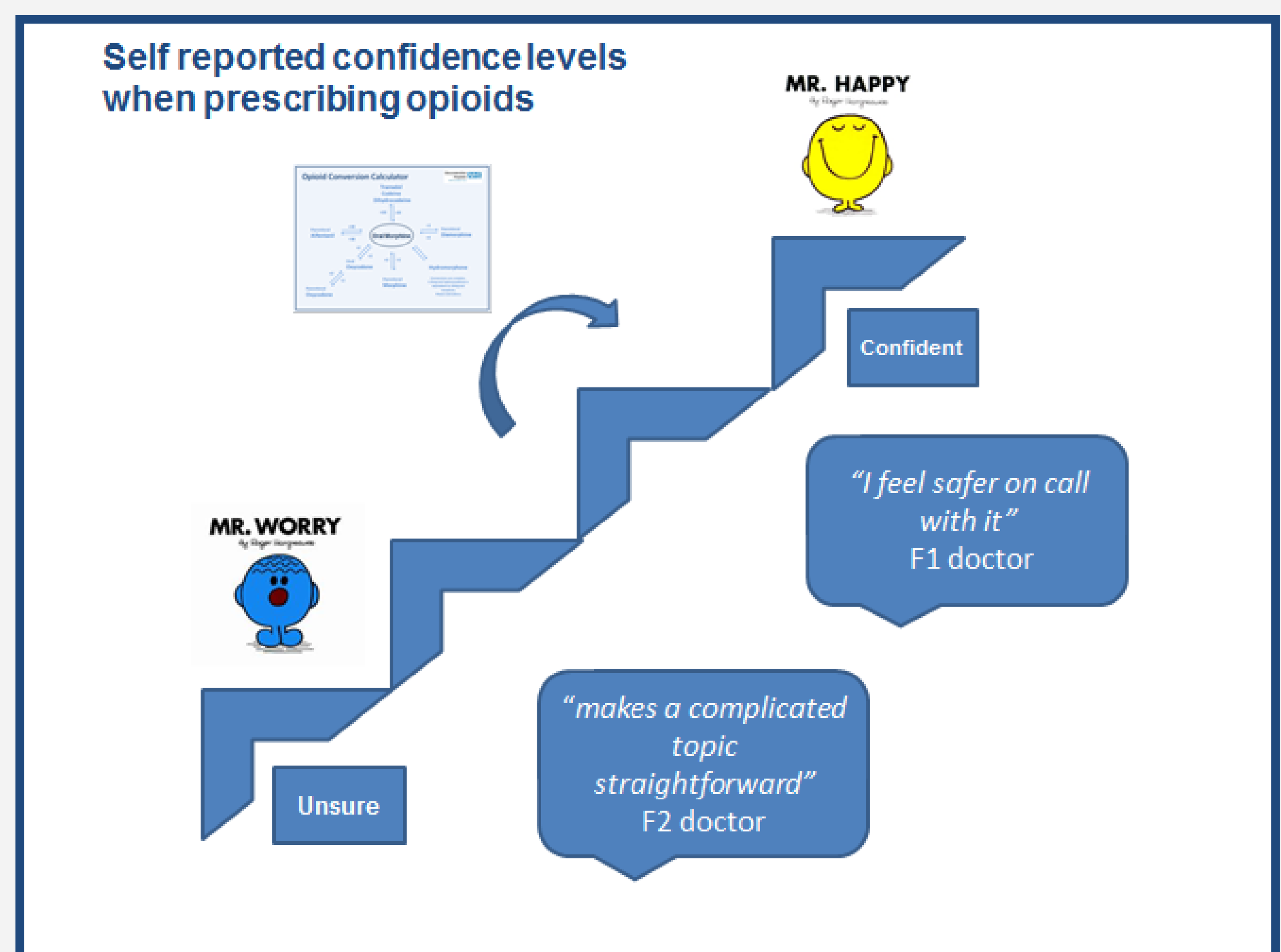
63% stated they used the opioid conversion tool regularly in clinical practice

Pre Intervention 7% could correctly answer all 3 opioid calculations

Post Intervention 70% could correctly answer all 3 opioid calculations

Self reported confidence levels increased: Pre intervention the median confidence level was 2 ("not very confident"), this increased to 3 ("somewhat confident") on re-audit .





5. Conclusion

We achieved our SMART Aim and the project was successful in making a quality improvement.

Going forward we want to build on this success by introducing the tool at the new foundation doctor's induction in the summer.

We are also exploring whether the tool may help in a primary care setting with an initial audit.