The NUMB Initiative

Improving local anaesthetic use in dental surgeries

David Donovan, Walton Vale Vets For Pets

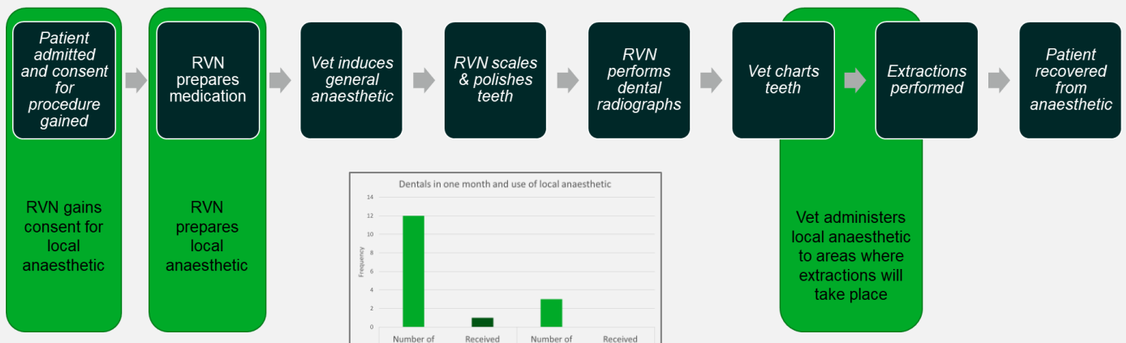
Patients aren't getting local anaesthetic for their dental surgery.

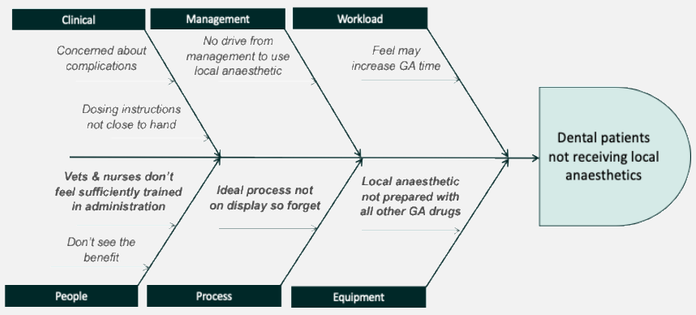
If they suffer, we give additional anaesthetic and pain medication, bringing them more risk and stress.
It's also more costly for owners.

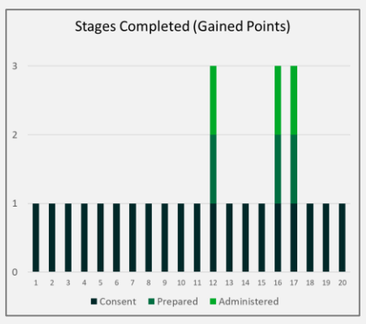
BACKGROUND

- We are a seven-vet small animal veterinary practice located in Liverpool, UK.
- We provide a high level of care to patients and routinely provide dental treatments to cats and dogs but noticed very few were receiving local anaesthetics as part of their dental surgery.
- Local anaesthetics provide the patient with increased comfort and reduce the volume and number of additional pain relief medications required during general anaesthesia and post-operatively, so reducing patient risk.

DIAGNOSTICS







AIM

By December 2025, at least 7/10 canine and feline patients are receiving local anaesthetic for their dental surgery

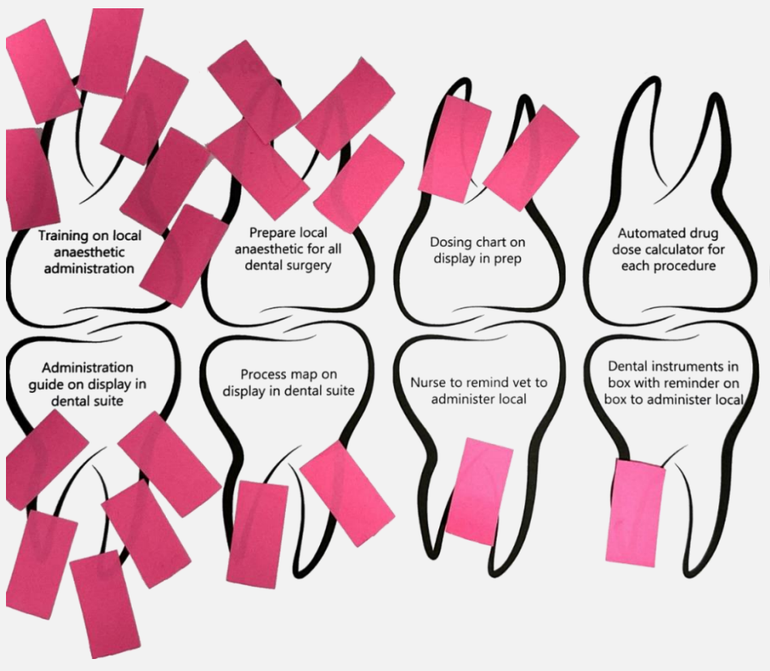
CHOSEN MEASURES

- Number of dentals performed on dogs and cats that required extractions
- One point for each of the following to give a total out of three
  - Consent obtained to administer local anaesthetic
  - Local anaesthetic prepared
  - Patient received local anaesthetic

CHANGE IDEAS

Change ideas shared with the team with space for their suggestions.

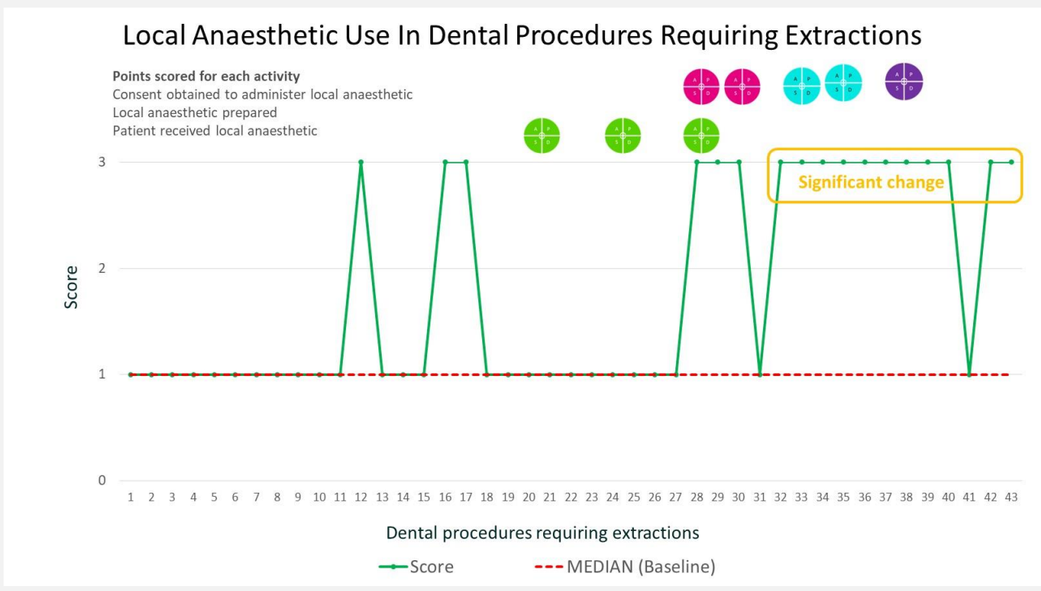
Each colleague voted on three ideas (pink stickers) which they thought would be most effective at improving local anaesthetic use in dental surgeries.



PDSA CYCLES

PDSA Test #	PLAN	DO	STUDY	ACT
1.1	Place a dental process map in the dental suite so colleagues are aware of the best practice process	Process map put on display. As consent always gained, only included steps that take place in the dental suite that were not regularly performed. Not many people looked at poster in room.	3 dentals performed following map on display. All had consent for local anaesthetic, none had local anaesthetic prepared, none had local anaesthetic administered	**Abandon** use of posters alone **Adapt** email the poster to vets and nurses to highlight the best practice process
1.2	Email communication to clinical team highlighting poster and process	Email sent to clinical team of dental process map. Kept email brief and placed image in email so no attachment to open.	4 dentals performed following email. All had consent for local anaesthetic, none had local anaesthetic prepared, none had local anaesthetic administered	**Abandon** use of email for sole method of communication **Adapt** and use Outlook Insights in future to see how many people open email
1.3	Discuss the best practice process for dentals in vet meeting	Discussed process with vets in the meeting on 01/10/2025. Really useful to hear teams views and discuss together. Gained feedback on barriers to giving local anaesthetic.	Feedback from discussion was that not having confidence in administration was a barrier to use and the local anaesthetic not being prepared	**Abandon** the focus on the process and tackle barriers from the feedback from the team
2.1	Use video demonstrations and produce administration guides as first part of training with vets	Went through video demonstrations and displayed administration guides in meeting on 01/10/2025. Useful to be able to discuss concerns and demonstrate techniques to reduce concerns from happening.	3 dentals performed following training. All had consent for local anaesthetic, all had local anaesthetic prepared, all had local anaesthetic administered	**Adopt** in person communication as most effective form **Adapt** training delivery – ensure all resources have in person component to support
2.2	Local anaesthetic administration guide on display in dental suite to support previous in person training	Local anaesthetic administration guide on display in dental suite from 03/10/2025. Saw one person refer back to poster as a reminder on technique.	2 dentals performed during this QI cycle. Both had consent for local anaesthetic, one had local anaesthetic prepared and administered	**Adapt** – seems to be a link if local anaesthetic is prepared then it is administered (never prepared and NOT administered). Move to focus on local anaesthetic preparation
3.1	Local anaesthetic doses on display, all nurses emailed and verbally briefed to draw up local anaesthetic in preparation of dental. Started 15/10/2025.	Performed a dental 21/10/2025 and local anaesthetic needed to be requested as not drawn up. Check everyone received message verbally and in writing.	2 dentals performed during QI cycle. Both had consent and administered but when dental performed on 21/10/2025 local anaesthetic not drawn up so had to request.	**Adapt** – add local anaesthetic line to anaesthetic charts as another reminder to draw up as part of process
3.2	Add line for local anaesthetic on anaesthetic charts as another reminder to draw up	Sticker placed over a blank line on anaesthetic chart stating 'local anaesthetic. If effective can re-print anaesthetic charts with this on permanently. Started 21/10/2025.	3 dentals performed during PDSA cycle. All 3 received consent, had local anaesthetic drawn up and administered.	**Adopt** – physical reminder as part of normal workflow seems to increase effectiveness of task being completed
4.1	Add physical reminder/barrier to administer local anaesthetci to storage of luxators and elevators	Sign placed in front of luxators and elevators stating 'Administer local anaesthetic prior to extractions'. Sign added 04/11/2025.	6 dentals performed during PDSA cycle. 5 received consent, had local anaesthetic drawn up and administered. 1 received consent but the local anaesthetic was not drawn up or administered	**Adopt** – physical reminder as part of normal workflow seems to increase effectiveness of task being completed **Adapt** – still a link between the drawing up and administering of local anaesthetic – it has never been drawn up and not administered, but cannot be administered if not drawn up

RUN CHART FOR LOCAL ANAESTHETIC USE IN DENTALS



CONCLUSIONS

- We have exceeded our aim as 9/10 of the last dental surgeries received local anaesthetic (aim 7/10). This is a massive improvement from 2/10 prior to quality improvement project and is statistically significant ($p<0.002\%$) as demonstrated by a run of 9 data points above the median.
- The run chart demonstrates that improvements are seen more after a PDSA involved verbal communication rather than posters or emails

REFLECTIONS & LEARNING

- Posters or email communication alone had poor responses
- Speaking to people had a much more positive response
- Open discussions allowed queries or concerns to be addressed to help make change more effective

Acknowledgements: Stephanie Meddick-Dyson QIClearn

| qiclearn.com | @VetsforPetsUK
| @qiclearn | David.Donovan@VetsForPets.com