Introducing the Care Framework

Development of a data-driven quality improvement project

Marie Erwood, Data Scientist

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IVC Evidensia is one of the biggest veterinary companies in the world.

We have over 2500 clinics across 20 countries in Europe and North America, with a team of around 41,000 people, treating more than 8.5 million animals a year.

We cover a wide spread of veterinary areas including first opinion practices; state-of-the-art referral hospitals; companion animal, farm and equine practices; and supporting businesses including crematoria and online pharmaceutical providers.

The Group Clinical Research & Quality Improvement Team has been built over the past year to support research across IVCE at all levels.

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How to improve the quality of veterinary care on a grand scale?

- Ongoing drive to improve quality of care holistically
- Need to reduce antimicrobial usage as part of global efforts
- Time from research to adoption of new clinical practice is long
- Need to measure any changes and improvements effectively
- Potential to drive evidence-based veterinary medicine forward using data in large scale projects

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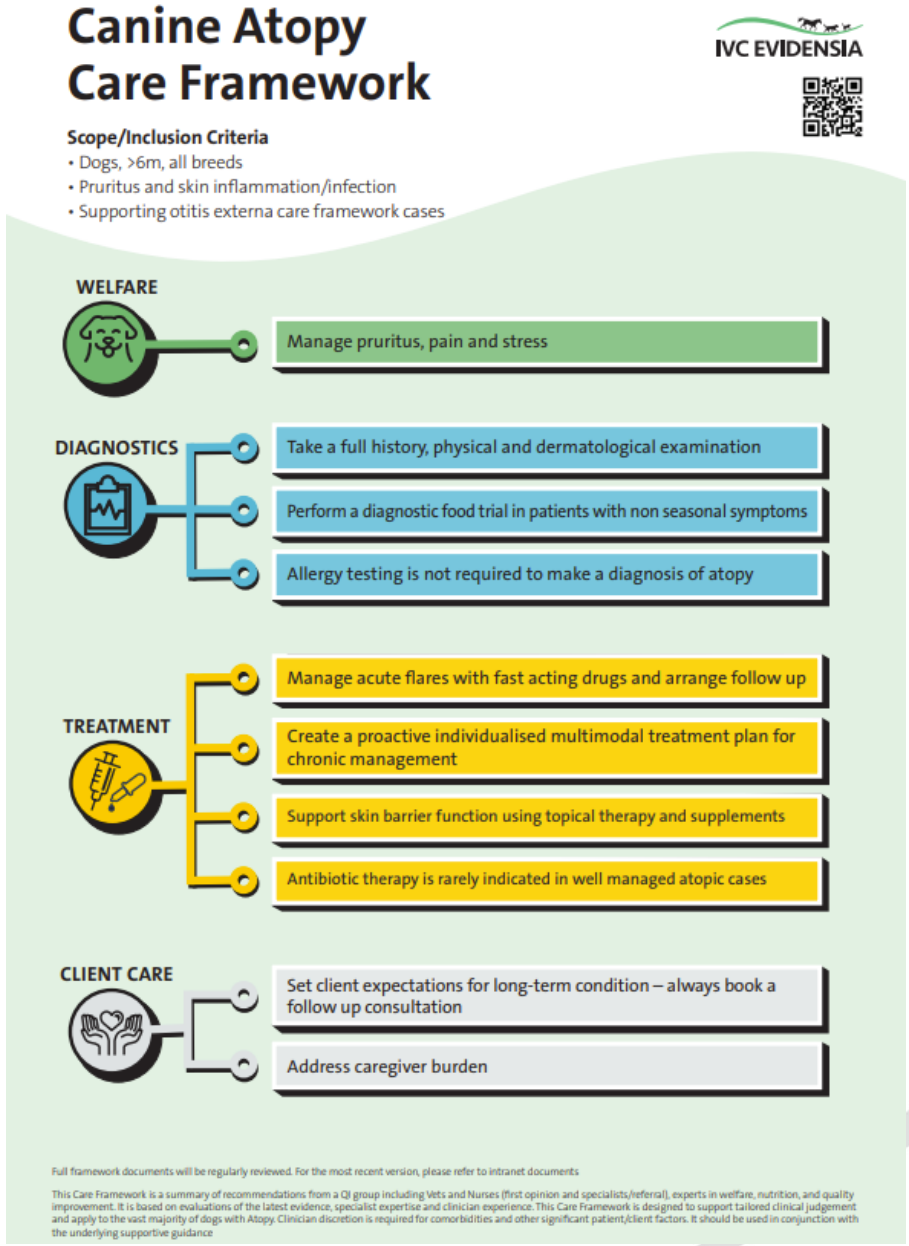
Introducing Care Frameworks

- Created for common conditions
- 10 points highlighting optimal care based on current research
- Created by a team of peers – over 100 involved in creation
- Tools not rules - aid, not prescriptive
- Aim to support closer engagement with care
- Linked to measurable behaviours



Canine Atopy Care Framework

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Scope/Inclusion Criteria

- Dogs, >6m, all breeds
- Pruritus and skin inflammation/infection
- Supporting otitis externa care framework cases

WELFARE

- Manage pruritus, pain and stress

DIAGNOSTICS

- Take a full history, physical and dermatological examination
- Perform a diagnostic food trial in patients with non seasonal symptoms
- Allergy testing is not required to make a diagnosis of atopy

TREATMENT

- Manage acute flares with fast acting drugs and arrange follow up
- Create a proactive individualised multimodal treatment plan for chronic management
- Support skin barrier function using topical therapy and supplements
- Antibiotic therapy is rarely indicated in well managed atopic cases

CLIENT CARE

- Set client expectations for long-term condition – always book a follow up consultation
- Address caregiver burden

Full framework documents will be regularly reviewed. For the most recent version, please refer to intranet documents

This Care Framework is a summary of recommendations from a QI group including Vets and Nurses (first opinion and specialists/referral), experts in welfare, nutrition, and quality improvement. It is based on evaluations of the latest evidence, specialist expertise and clinician experience. This Care Framework is designed to support tailored clinical judgement and apply to the vast majority of dogs with Atopy. Clinician discretion is required for comorbidities and other significant patient/client factors. It should be used in conjunction with the underlying supportive guidance

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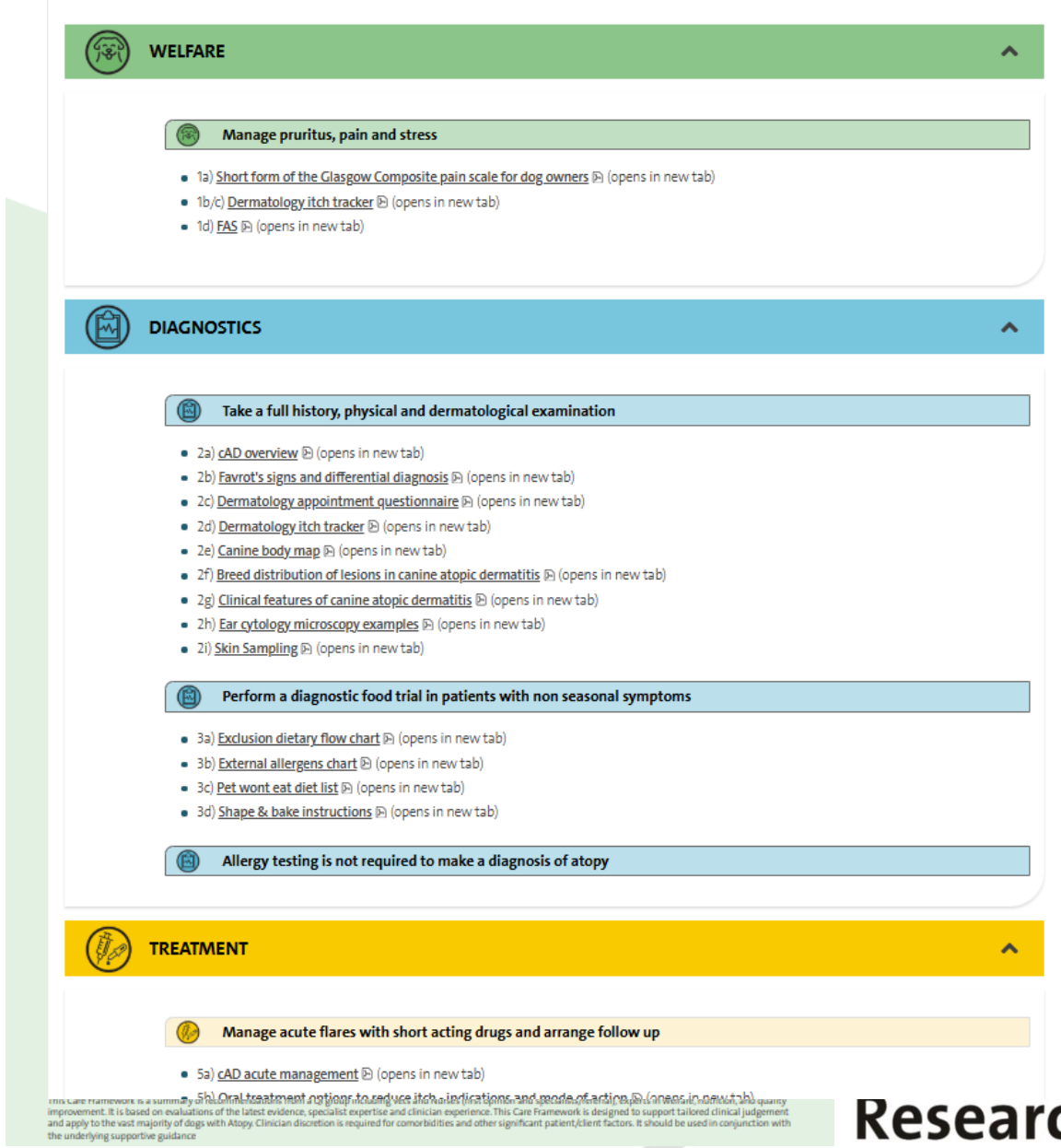

WELFARE

Manage pruritus, pain and stress

- 1a) Short form of the Glasgow Composite pain scale for dog owners (opens in new tab)
- 1b/c) Dermatology itch tracker (opens in new tab)
- 1d) FAS (opens in new tab)

DIAGNOSTICS

Take a full history, physical and dermatological examination

- 2a) cAD overview (opens in new tab)
- 2b) Favrot's signs and differential diagnosis (opens in new tab)
- 2c) Dermatology appointment questionnaire (opens in new tab)
- 2d) Dermatology itch tracker (opens in new tab)
- 2e) Canine body map (opens in new tab)
- 2f) Breed distribution of lesions in canine atopic dermatitis (opens in new tab)
- 2g) Clinical features of canine atopic dermatitis (opens in new tab)
- 2h) Ear cytology microscopy examples (opens in new tab)
- 2i) Skin Sampling (opens in new tab)

Perform a diagnostic food trial in patients with non seasonal symptoms

- 3a) Exclusion dietary flow chart (opens in new tab)
- 3b) External allergens chart (opens in new tab)
- 3c) Pet wont eat diet list (opens in new tab)
- 3d) Shape & bake instructions (opens in new tab)

Allergy testing is not required to make a diagnosis of atopy

TREATMENT

Manage acute flares with short acting drugs and arrange follow up

- 5a) cAD acute management (opens in new tab)
- 5b) Oral treatment options to reduce itch - indications and mode of action (opens in new tab)

This Care Framework is a summary of recommendations for good management and quality improvement. It is based on evaluations of the latest evidence, specialist expertise and clinician experience. This Care Framework is designed to support tailored clinical judgement and apply to the vast majority of dogs with Atopy. Clinician discretion is required for comorbidities and other significant patient/client factors. It should be used in conjunction with the underlying supportive guidance

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References for Canine Atopy care framework

Welfare	
Harvey et al (2019). Behavioural difference in dogs with atopic dermatitis suggest stress could be a significant problem associated with chronic pruritis. (2019). MDPI (9).	https://www.mdpi.com/2076-2615/9/10/813
Koch, C. et al. (2022) Associations between atopic dermatitis and anxiety, aggression and fear based behaviors in dogs. Journal of the American Animal Hospital Association 58 (4). 161-167.	https://www.researchgate.net/publication/361822487_Associations_Between_Atopic_Dermatitis_and_Anxiety_Aggression_and_Fear-Based_Behaviors_in_Dogs
Noli C, Minafo, G & Galzerano, M. (2011). Quality of life of dogs with skin disease and their owners. Part 1. Development and validation of a questionnaire. Veterinary Dermatology. 22. 335-343. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-3164.2010.00954.x	https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-3164.2010.00954.x
Rybnícek J, Lau-Gillard PJ, Harvey R, Hill PB. Further validation of a pruritus severity scale for use in dogs. Vet Dermatol. 2009 Apr;20(2):115-22. doi: 10.1111/j.1365-3164.2008.00728.x. Epub 2009 Dec 19. PMID: 19171021.	
Diagnostics	
Miller J, Simpson A, Bloom P, Diesel A, Friedeck A, Paterson T, Wisecup M, Yu CM. 2023 AAHA Management of Allergic Skin Diseases in Dogs and Cats Guidelines. J Am Anim Hosp Assoc. 2023 Nov 1;59(6):255-284. doi: 10.5326/JAAHA-MS-7396. PMID: 37883677.	JAAHA7396_proof.pdf

- 5a) cAD acute management (opens in new tab)
- 5b) Oral treatment options to reduce itch - indications and mode of action (opens in new tab)

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Care Frameworks are available across many different common conditions and treatment approaches

- Canine Atopy
- Canine Diabetes Mellitus
- Canine Mitral Valve Disease
- Canine Otitis Externa
- Cushing's Syndrome

- Feline Cardiomyopathy
- Feline Diabetes Mellitus
- Feline Lower Urinary Tract Disease
- Feline Renal Disease
- Feline Urethral Obstruction

- Osteoarthritis
- Periodontal Disease
- End-of-life
- Urgent Eye Conditions
- Major Trauma
- Emergency Seizures
- Low Flow Anaesthesia
- Health Checks
- Wellness Screening

7 more in development, as well as Equine and Farm frameworks

Also launched in 7 other countries: Sweden, Norway, Spain, Germany, Netherlands, Republic of Ireland, Canada

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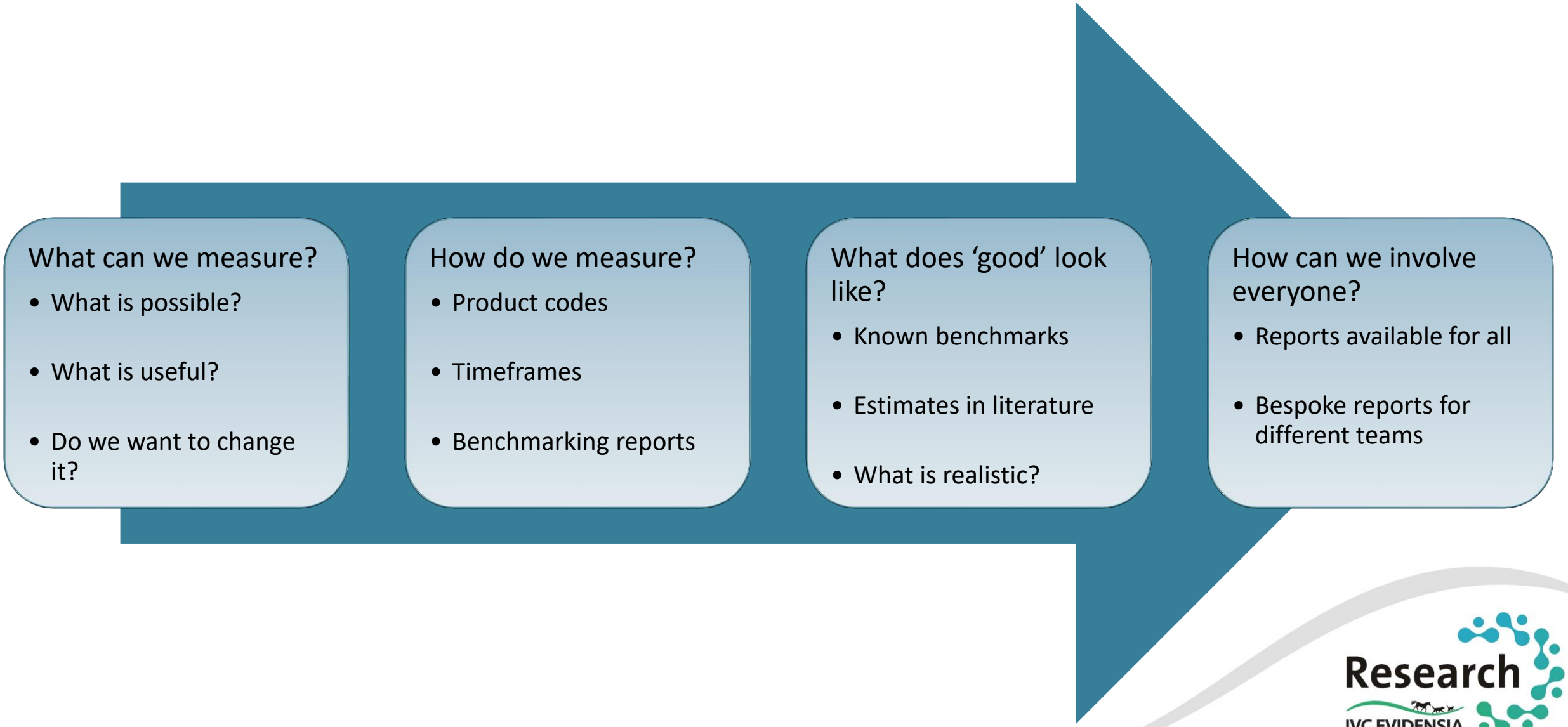
How can we measure the impact of Care Frameworks?



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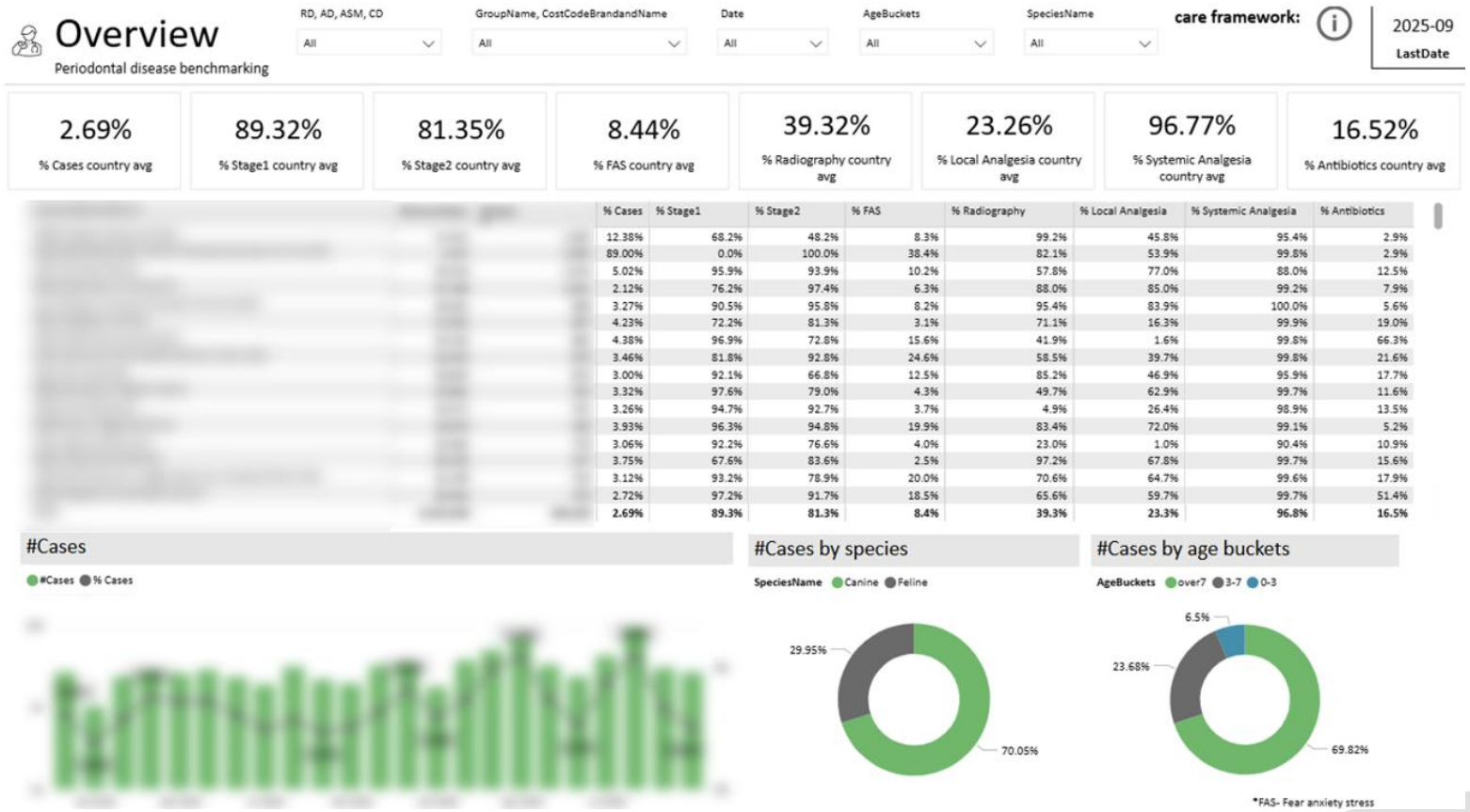
How can we measure the impact of Care Frameworks?

- Detailed metric measurement
- Time Period
- Clinic/Region
- Species/Age
- Time trends



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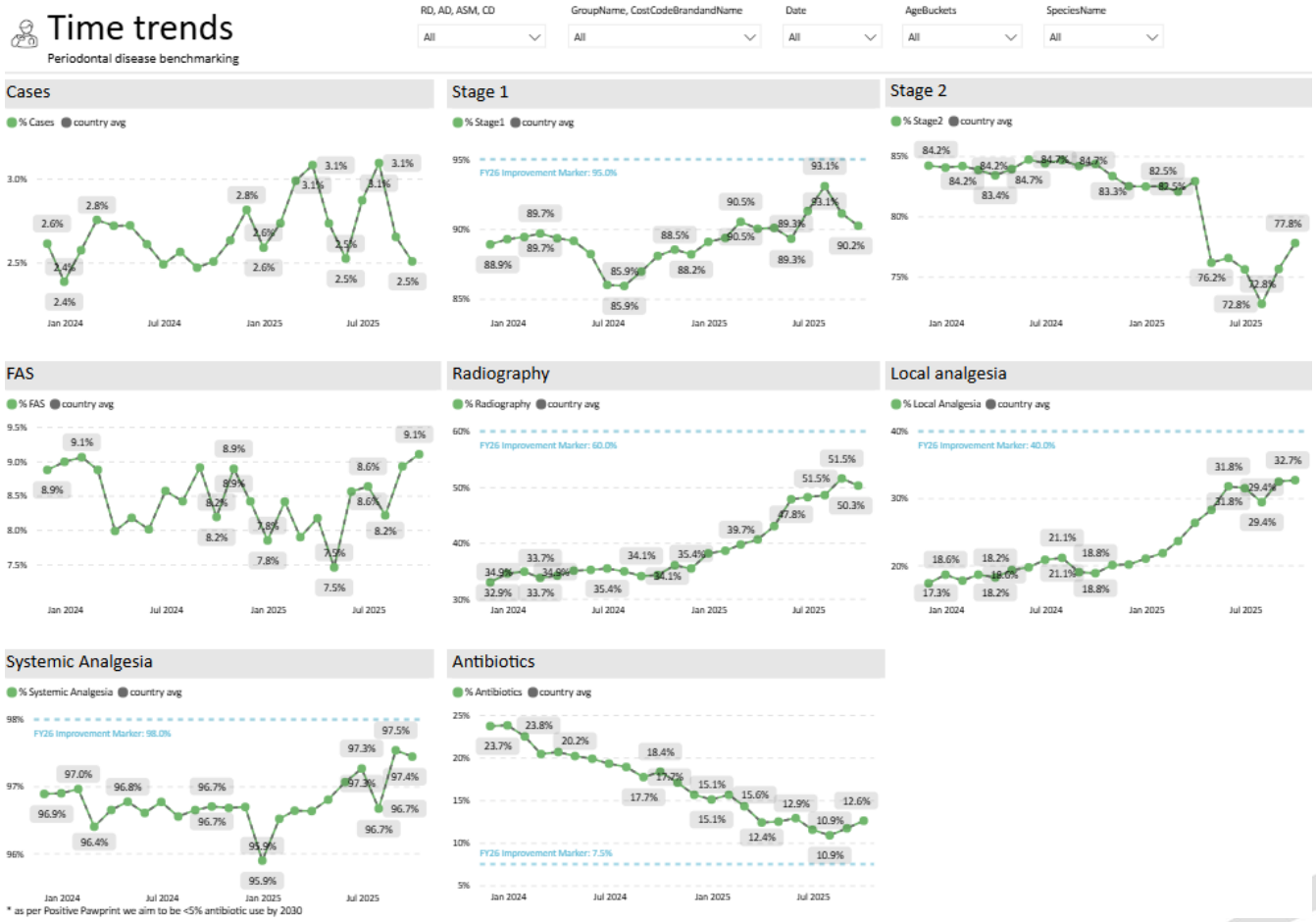

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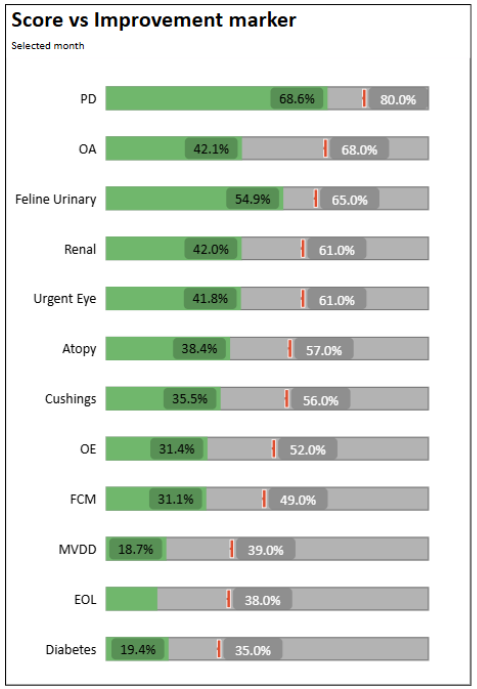
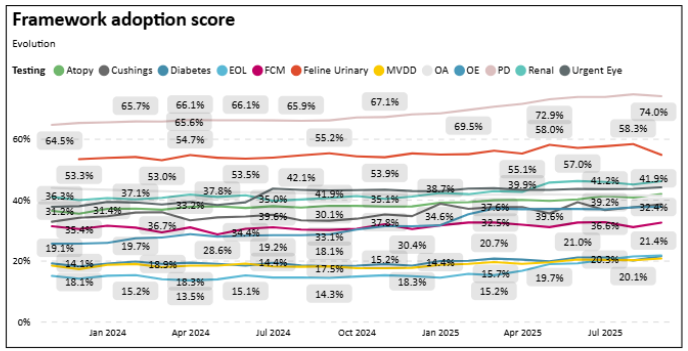
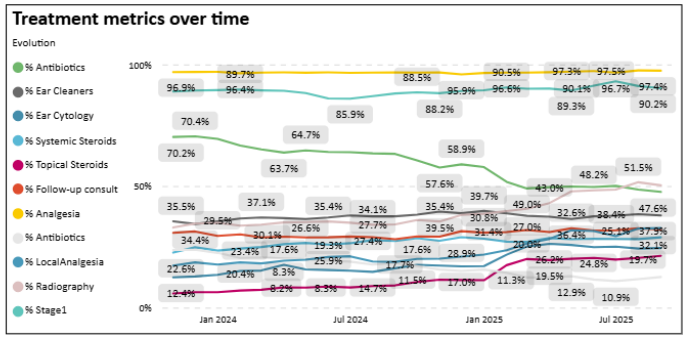
How can we measure the impact of Care Frameworks?

Adoption score – summary metric

- At-a-glance view, single number per CF
- Aggregate of individual metric measurements
- How close are we to what could be possible in an ideal situation?

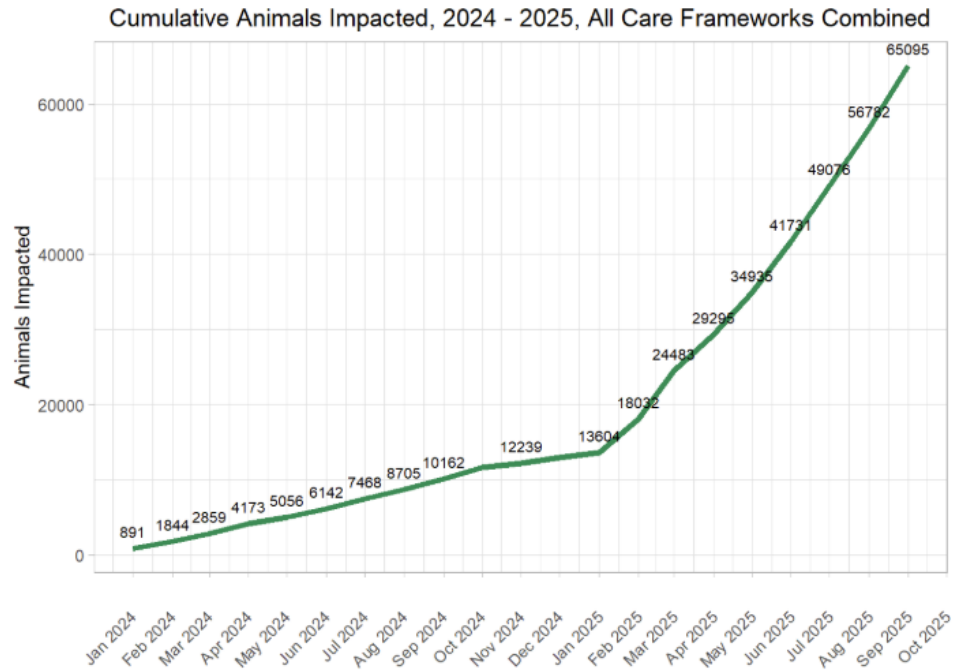






Animals impacted – summary metric

- Higher level, single number overall
- Calculated based on % of animals receiving 3+ of the measurable recommendations on a CF compared to baseline of 12m prior
- Some caveats, i.e. may duplicate if animals are seen for more than one condition, but gives a general trend



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Colleagues have reacted very positively and are using Care Frameworks in practice

> To produce a care framework for something I am passionate about and to provide guidance and materials for other practices to use gave a huge sense of achievement.

> I really enjoyed collaborating with other vets from all the different backgrounds and putting something together that will hopefully really make a difference.

> We assign each one to a vet to go through it in detail and then put together a summary presentation highlighting what we could do to improve on our current approach.

> The care framework prompted us to look at our antimicrobial usage and ear cytology now plays a key role in guiding these decisions.

> Client care have accessed and used resources in other frameworks - such as End of Life to act as training and support resources for their team. I think it is great how it is all joined up!

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Colleagues have reacted very positively and are using Care Frameworks in practice

88% were **aware** of the Care Frameworks

71% rated the Care Frameworks either **very or extremely useful**.

Of those that were aware, **72%** had **used** a Care Framework in the last 12 months.

64% agreed or strongly agreed that the Care Frameworks had changed the way they treated cases in their clinic

64% agreed or strongly agreed that the Care Frameworks had helped reduce the use of antibiotics in their clinic

IVC Evidensia Annual Research & QI Survey 2025, n= 75 (UK & ROI)

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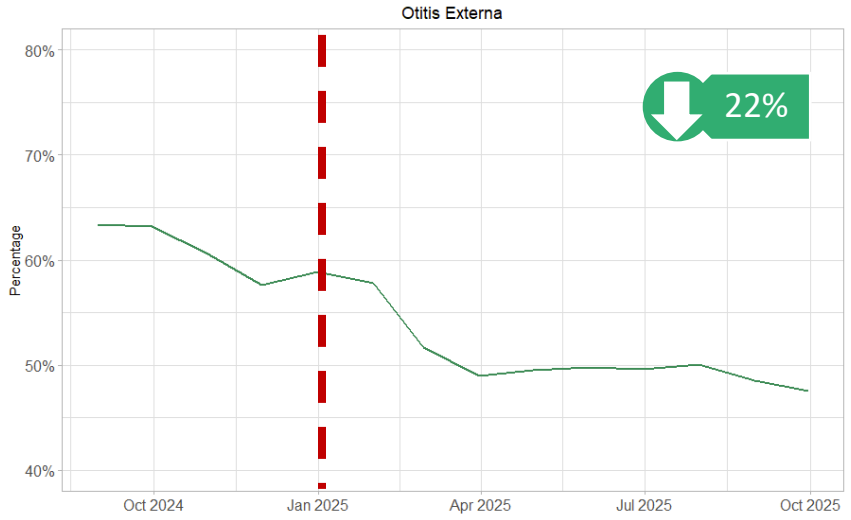
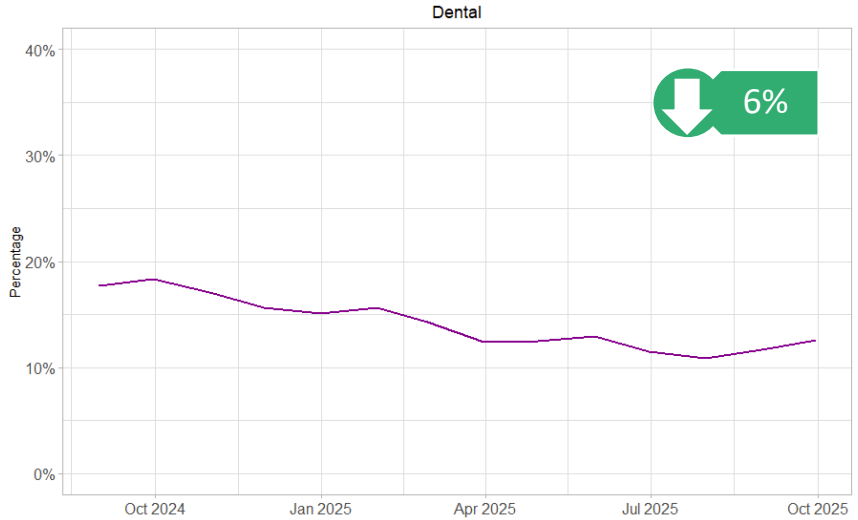
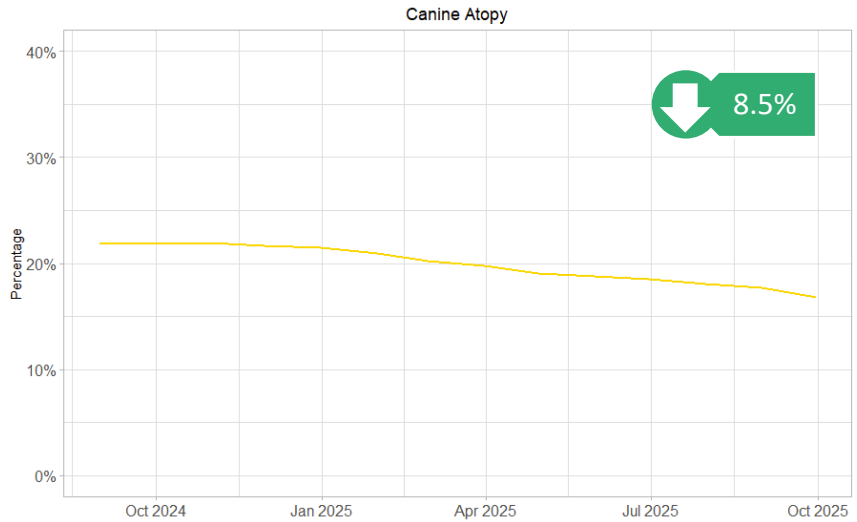
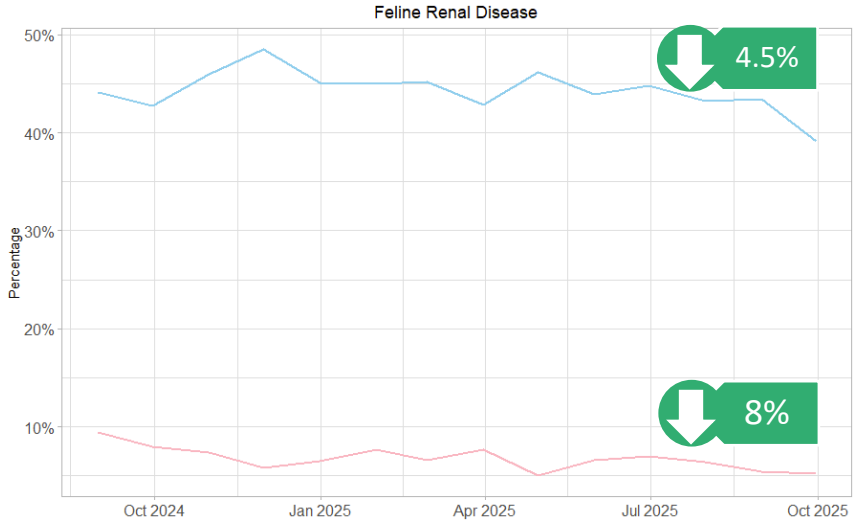
Antibiotic Usage has noticeably decreased









Clear decreases in antibiotic usage since launching the CFs

In particular for Otitis Externa since Jan 2025 – focus in clinics

All

Convenia

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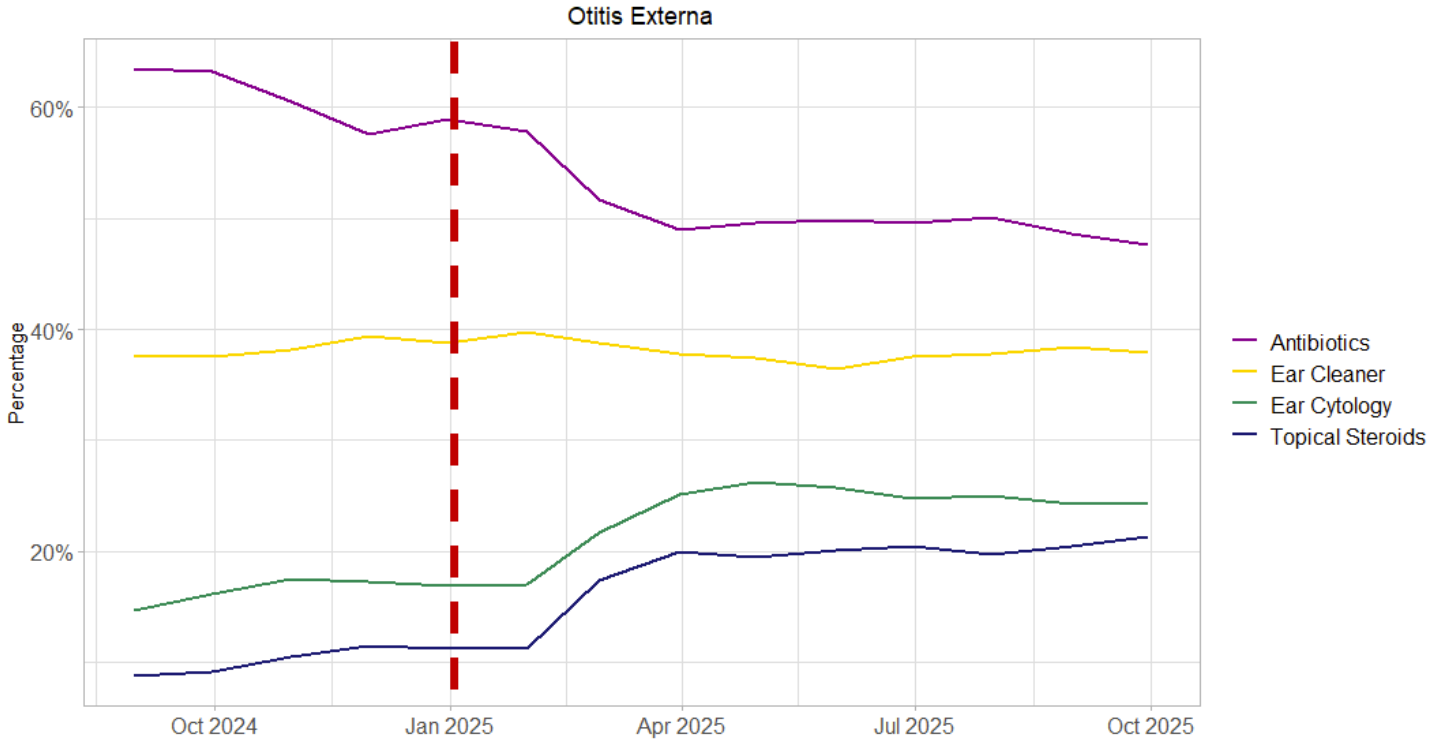
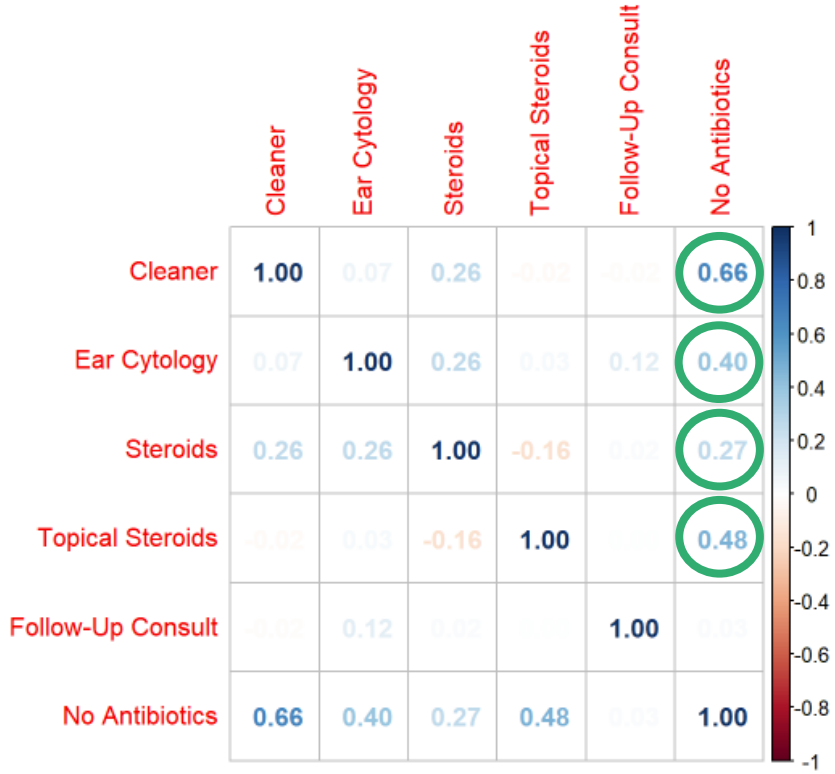
Otitis Externa has been a particular success story





Clear increases in Ear Cytology and Topical Steroids alongside reductions in Antibiotics indicates behaviour change

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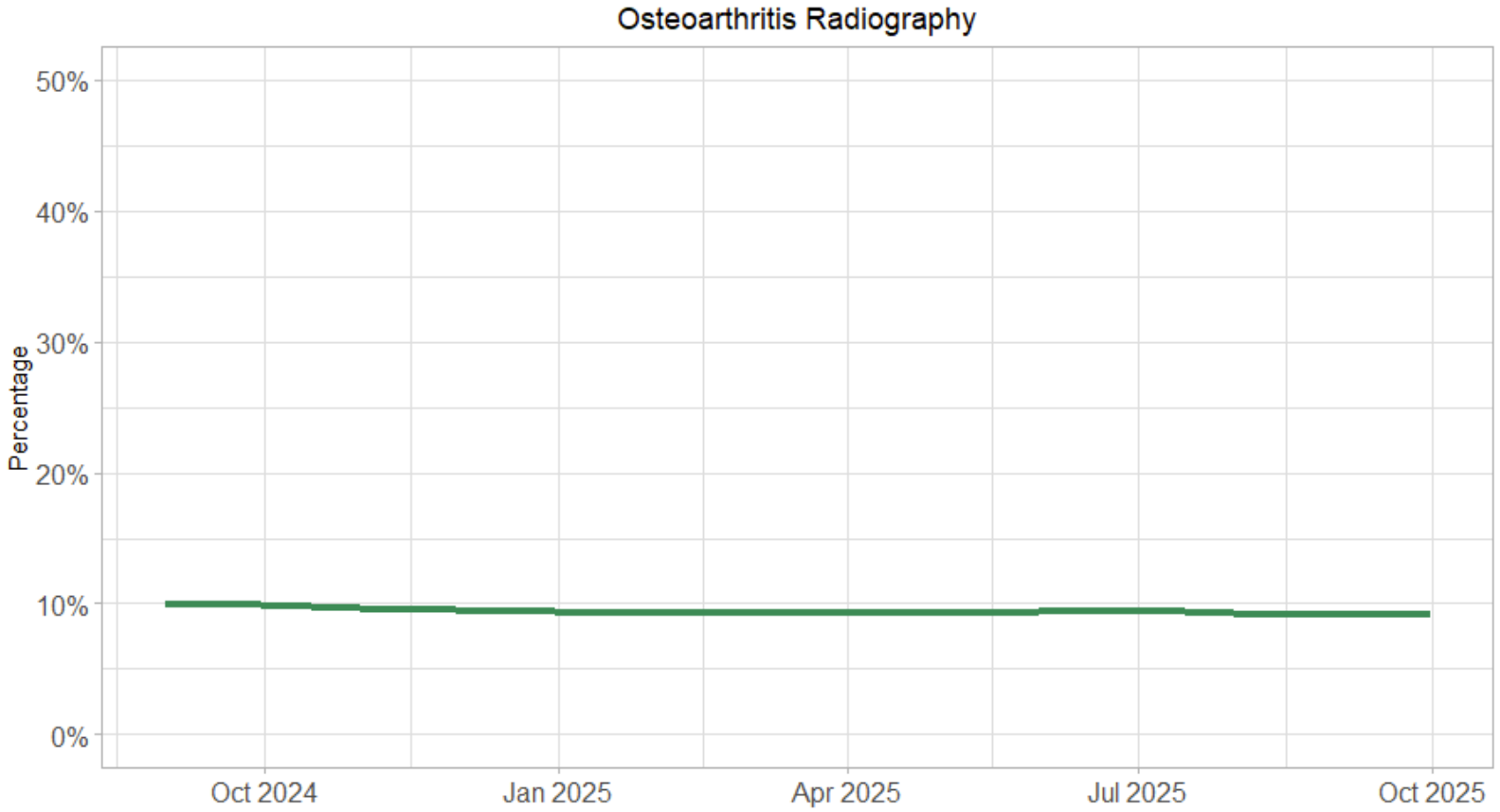
However, less change has been seen in Osteoarthritis (OA)



Osteoarthritis is quite flat or trending down in most metrics

Ongoing investigation into why and if we can change this

Why not image all OA cases?

- Cost
- Risk of general anaesthetic
- Lack of confidence

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Identifying cases is the key issue in effectively measuring impact and change

No consistent clinical coding

Need to use a combination of products within a timeframe

Clear, discrete products?

- Simple to identify cases
- Data filtering based on product codes

Diabetes

Generic products?

- More complex – may be notable misclassification
- Filtering based on codes, IF/AND/OR, timeframes

Osteoarthritis

No identifying products?

- Not possible – need to use an alternative approach
- Machine Learning/AI

Major Trauma

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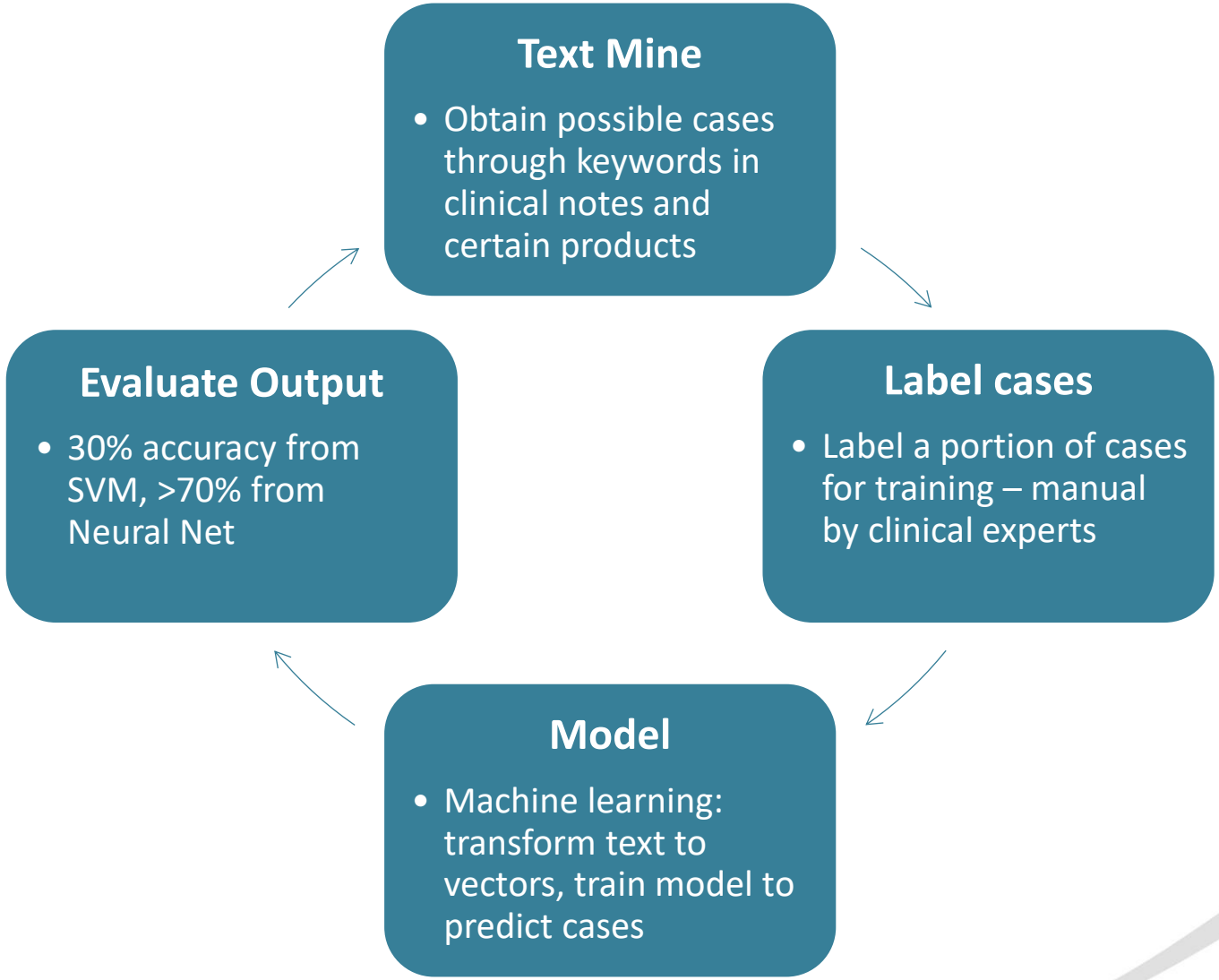
Identifying cases is the key issue in effectively measuring impact and change

Major Trauma

- Obvious in clinic, not so in data
- Several different treatment approaches, but nothing that separates it effectively



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Where do we go from here?

- LLMs may improve performance further
- Extending case identification to more conditions
- Using results for further research
- Apply rules & tools to other countries' data
- Improve structure of our data to aid modelling – ontologies etc

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Thank you

Acknowledgements

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