Pain Assessment and Scoring

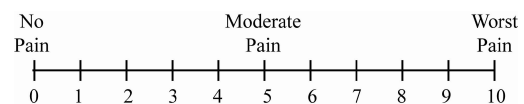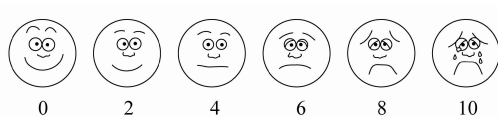**Matt Read, DVM, MVSc, DACVAA**
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Pain scoring is a way to quantify something that is not directly measurable…

• Pain ***threshold*** is the same between individuals – physiology, anatomy

• Pain ***tolerance*** is different
   • Like happiness, pain is subjective and is uniquely experienced by an individual

0	2	4	6	8	10

No Pain		Moderate Pain			Worst Pain
0 1	2 3	4 5	6 7	8	9 10

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Learning objectives:

By the end of this session, you will be able to:

1. Use the **GCMPS-SF** to assess pain in *two* canine patients;
2. Use the **GCMPS-Feline** to assess pain in *two* feline patients;
3. Integrate pain scoring with the Glasgow Pain Scales into your daily practice.

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Invited review

Measuring pain in dogs and cats using structured behavioural observation

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Table 1
Currently available instruments to measure acute pain in dogs and cats.

Scale	Target species	Behavioural observations	Physiological measurements	Validated	Intervention level derived	Ref.
University of Melbourne Pain Scale	Dog	Yes	Yes	Yes	No	Firth and Haldane (1999)
Glasgow Composite Measure Pain Scale	Dog	Yes	No	Yes	Yes	Reid et al. (2007)
CMPS – SF						http://www.newmetrica.com/acute-pain-measurement/
4AVet	Dog & cat	Yes	Yes	Yes	No	Holopherne-Doran et al. (2010)
Colorado State acute pain scale	Dog	Yes	No	No	No	http://www.vasg.org/pdfs/CSU_Acute_Pain_Scale_Canine.pdf
Colorado State acute pain scale	Cat	Yes	No	No	No	http://www.vasg.org/pdfs/CSU_Acute_Pain_Scale_Kitten.pdf
UNESP-Botucatu multidimensional composite pain scale	Cat	Yes	Yes	Yes	Yes	Brondani et al. (2011, 2013) http://www.animalpain.com.br/assets/upload/escala-en-us.pdf
Glasgow CMPS-Feline	Cat	Yes	No	Yes	Yes	Calvo et al., 2014
Definitive Glasgow CMPS-Feline	Cat	Yes	No	Yes	Yes	Reid et al. (2017a, 2017b) http://newmetrica.com/acute-pain-measurement/

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Development of Glasgow Pain Scales

- Focus groups of veterinarians and other veterinary professionals
- Aim was to develop a "*Language of Pain"*

- **Words are important** – they must mean the same thing to different people
- Goal is for us all to be able to speak the same language
  - mg/dL, Fahrenheit, beats per minute

- Want to minimize inter-rater variability so patients can receive consistent care
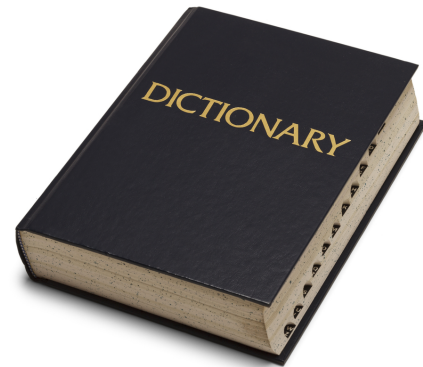
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We need to be able to treat patients that are experiencing acute pain

- The **Glasgow pain scales** are *valid* and *reliable* for measuring acute pain in dogs and cats.
  (**they *do not* measure chronic pain or quality of life)

- Scales can differentiate *painful* from *non-painful* patients and can detect differences *after* pain medications have been administered.

- Specific intervention levels have been derived and tell us when pain meds are indicated and should be given. **We cannot change these!!**

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- Scoring a patient using the Glasgow pain scales does not take long, but it does involve more than just standing at the kennel, looking through the bars, and simply "making up a number"...

- We need to interact with the patient, get it up, move it around, and palpate near the potentially painful area.
  - This is no different than taking blood to measure glucose, taking a patient's temperature, or listening to its heart to measure heart rate... You need to open the door and touch the patient.

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Ultimately, we want to be able to answer the question,
"Does my patient need pain medication?"

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Guidance for use of the CMPS - SF

The short form composite measure pain score (CMPS-SF) can be applied quickly and reliably in a clinical setting and has been designed as a clinical decision making tool which was developed for dogs in acute pain. It includes 30 descriptor options within 6 behavioural categories, including mobility. Within each category, the descriptors are ranked numerically according to their associated pain severity and the person carrying out the assessment chooses the descriptor within each category which best fits the dog's behaviour/condition. It is important to carry out the assessment procedure as described on the questionnaire, following the protocol closely. The pain score is the sum of the rank scores. The maximum score for the 6 categories is 24, or 20 if mobility is impossible to assess. The total CMPS-SF score has been shown to be a useful indicator of analgesic requirement and the recommended analgesic intervention level is 6/24 or 5/20.

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SHORT FORM OF THE GLASGOW COMPOSITE PAIN SCALE

Dog's name _____

Hospital Number _____   Date   /   /   Time

Surgery Yes/No (delete as appropriate)

Procedure or Condition_____

_____

In the sections below please circle the appropriate score in each list and sum these to give the total score.

A. Look at dog in Kennel

Is the dog?

(i)

Quiet	0
Crying or whimpering	1
Groaning	2
Screaming	3

(ii)

Ignoring any wound or painful area	0
Looking at wound or painful area	1
Licking wound or painful area	2
Rubbing wound or painful area	3
Chewing wound or painful area	4

> In the case of spinal, pelvic or multiple limb fractures, or where assistance is required to aid locomotion do not carry out section **B** and proceed to **C**
> *Please tick if this is the case* ☐ then proceed to C.

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B. Put lead on dog and lead out of the kennel.

When the dog rises/walks is it?

(iii)

Normal	0
Lame	1
Slow or reluctant	2
Stiff	3
It refuses to move	4

C. If it has a wound or painful area including abdomen, apply gentle pressure 2 inches round the site.

Does it?

(iv)

Do nothing	0
Look round	1
Flinch	2
Growl or guard area	3
Snap	4
Cry	5

D. Overall

Is the dog?

(v)

Happy and content or happy and bouncy	0
Quiet	1
Indifferent or non-responsive to surroundings	2
Nervous or anxious or fearful	3
Depressed or non-responsive to stimulation	4

Is the dog?

(vi)

Comfortable	0
Unsettled	1
Restless	2
Hunched or tense	3
Rigid	4

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Total Score (i+ii+iii+iv+v+vi) = _____

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The Glasgow Feline Composite Measure Pain Scale (CMPS-Feline), which can be applied quickly and reliably in a clinical setting, has been designed as a clinical decision making tool for use in cats in acute pain. It includes 28 descriptor options within 7 behavioral categories. Within each category, the descriptors are ranked numerically according to their associated pain severity and the person carrying out the assessment chooses the descriptor within each category which best fits the cat's behavior/condition. It is important to carry out the assessment procedure as described on the questionnaire, following the protocol closely. The pain score is the sum of the rank scores. The maximum score for the 7 categories is 20. The total CMPS-Feline score has been shown to be a useful indicator of analgesic requirement and the recommended analgesic intervention level is 5/20.

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Glasgow Feline Composite Measure Pain Scale: CMPS - Feline

Choose the most appropriate expression from each section and total the scores to calculate the pain score for the cat. If more than one expression applies choose the higher score

LOOK AT THE CAT IN ITS CAGE:

Is it?
Question 1
    Silent / purring / meowing   0
    Crying/growling / groaning   1

Question 2
    Relaxed   0
    Licking lips   1
    Restless/cowering at back of cage   2
    Tense/crouched   3
    Rigid/hunched   4

Question 3
    Ignoring any wound or painful area   0
    Attention to wound   1

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Question 4
    a) Look at the following caricatures. Circle the drawing which best depicts the cat's ear position?
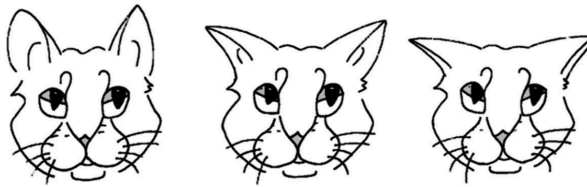
          0   1   2

b) Look at the shape of the muzzle in the following caricatures. Circle the drawing which appears most like that of the cat?

          0   1   2

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APPROACH THE CAGE, CALL THE CAT BY NAME & STROKE ALONG ITS BACK FROM HEAD TO TAIL

Question 5
Does it?

Respond to stroking	0

Is it?

Unresponsive	1
Aggressive	2

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IF IT HAS A WOUND OR PAINFUL AREA, APPLY GENTLE PRESSURE 5 CM AROUND THE SITE. IN THE ABSENCE OF ANY PAINFUL AREA APPLY SIMILAR PRESSURE AROUND THE HIND LEG ABOVE THE KNEE

Question 6
Does it?

Do nothing	0
Swish tail/flatten ears	1
Cry/hiss	2
Growl	3
Bite/lash out	4

Question 7
General impression
Is the cat?

Happy and content	0
Disinterested/quiet	1
Anxious/fearful	2
Dull	3
Depressed/grumpy	4

Pain Score … /20

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What if I score the level of pain incorrectly?

- Risk associated with giving pain meds to a patient that does not need them is not as bad as *not* giving pain meds to a patient that needs them.

- You will rarely, if ever, injure a patient.

- We might cause dysphoria if we give opioids to a patient that is not actually painful, but we can deal with this situation by reversing the drug or offering different sedation.

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What do I need to do?

1. Order **pain assessments** to be made (on cage sheets, etc.)
   a. Start **2 hours** after recovery from anesthesia/ surgery
   b. Should assess every **4 hours** (since most of our analgesics last that long…)

2. Make sure denominator and intervention level are indicated (and when you want to be called) – **6/24** or **5/20** for dogs, **5/20** for cats.

3. Order **analgesics** to be given if a pain score is above the threshold (it's not enough to just ask for patient to be assessed – give team members the ability to treat pain when indicated)

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What else should I do?

- Acute pain can be treated in a variety of ways, depending on the patient and the situation.

- In general:
  - Administer an "*analgesic*" dose of a drug (e.g., 3-5 µg/kg of fentanyl, not 1-2 µg/kg) and give it by a route that will work reliably (e.g., IV not SC).
  - We mainly use **opioids** (e.g., fentanyl, hydro, methadone) but can also administer **local anesthetics** (nerve blocks), **ketamine** (bolus or CRI), and **NSAIDs** for this purpose.

- Treat the patient and then come back and assess pain again 15-20 minutes later to make sure it is working and patient is doing better.

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What else should I know?

- Cats are challenging!

- Differentiating between *dysphoria* and *pain* can be tricky
  - If can't tell, give patient benefit of the doubt and treat them for pain
  - Can always reverse if you need to…

- Practice, practice, practice
  - Make pain scoring part of your routine
  - Team up and compare scores
  - Get everyone involved!

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