## Academic Oversight of UCVM's Distributed Veterinary Learning Community



Bringing innovation and community together to advance animal and human health



## Caveats

- NOT BETTER, JUST DIFFERENT
- Specific reasons for using a distributed model
  - Political, Fiscal, Pedagogical
  - Meets our Mission and our needs
- 32 students per year
- Alberta only students
- Charge from government:
  - Rural community practice
  - Production animal health
  - Equine health
  - Ecosystem & public health
  - Investigative Medicine



- Strong research and graduate education mandate
  - Animal-human health, food safety, diagnostics, One Health, infectious disease, comparative biomedical research

## Caveats

- A work in progress: we have no solid evidence
- We have not graduated a class yet
- But:
  - Fourth year evaluations
  - Case logs
  - Positive anecdotes from the community (private & academic)
  - No fourth year issues landed on my desk
  - 100% pass on NAVLE
    - 7 11% above NA average
  - ~90% success rate on internships
  - 40% increase in qualified applicants – students like it?





## Some definitions

- <u>Core faculty</u>: primary academic appointment at UCVM; provide clinical service in partner practices
- Sessional faculty: primary appointment in practice but also salaried university employee
  - Paid to teach on campus; may also supervise rotations as DVLC clinical instructors (2 appointments)
- DVLC clinical instructors: primary appointment in partner practice
  - Practice paid for their time participating in rotations
  - May also teach or examine on campus paid honorarium
  - Adjunct University appointment with review and system for promotion



## **Distributed Veterinary Learning Community**

- Sites of practical learning and practicum rotations:
- UCVM\*\*\*
- private practices
- federal and provincial agencies & departments
- partner veterinary colleges
- NGOs
- other animal industry partners



# **Distributed Veterinary Teaching Hospital**

- ABVMA permitted practice locations in Alberta that accept students
  - Typically private practices but also includes zoos, shelters, and some other partners
- 28 core practices = academic teaching hospital
  - Mandatory rotations
  - Faculty clinical home
  - Meet CoE & ABVMA requirements
- ~30 other practices
  - Largest group is for Rural Community Practice Externship
- We do not distinguish between these from an academic oversight perspective



## Where does it happen?



#### 20 minutes

Spy Hill Campus



### Distributed Veterinary Learning Community

#### When are students in the DVLC?



#### Year Four: Practicum Year Courses

- VM 570: Laboratory Diagnostics (4 weeks)
- VM 580: General Veterinary Practice (GVP) (16 weeks)
- Students take one of:
- VM 582: Production Animal Health (PAH) (10 weeks)
- VM 583: Ecosystem and Public Health (EPH) (10 weeks)
- VM 584: Equine Health (EH) (10weeks)
- VM 585: Investigative Medicine (IM) (10 weeks)
- VM 590: Clinical Enrichment (10 weeks)



## **Classification of Learning Experiences**

# Field Experiences or Courses

• DVLC experiences in the first 3 years

## Campus rotations – 15%

- Take place primarily on campus
- Range from clinical to research rotations
- Practicum Rotation Coordinator (PRC) typically a core faculty
- Field rotations 15%
  - Based out of campus but take place in the field
  - PRC typically but not exclusively a core faculty; may engage clinical instructors

## DVTH rotations – 70%

- Based out of a DVTH partner practice
- PRC either a clinical instructor or a core faculty member; often engage core faculty



#### **Fourth Year Program**

- VM 560: 4 weeks Laboratory Diagnostics -- campus
  - Anatomic pathology\*
  - Clinical pathology\*
  - Molecular Diagnostics\*
  - Diagnostic imaging\*
- 16 weeks General Veterinary Practice all DVTH
  - Food animal medicine and surgery
  - Equine medicine and surgery
  - Small animal medicine and surgery (\*)
  - Rural community practice externship

\* = led by or directly engages core or sessional faculty (other than as liaison)



#### Area of Emphasis Program: 10 weeks

#### EQUINE HEALTH

- Advanced equine practice (Mandatory)\* - DVTH
- Eq. theriogenology DVTH
- Eq. lameness\* Campus
- Eq. dentistry\* Campus
- Sports horse performance medicine\* - DVTH
- Eq. ambulatory practice DVTH
- Eq. Externship other

#### \* = led by or directly engages core or sessional faculty

#### ECOSYSTEM AND PUBLIC HEALTH

- Center for coastal health \* Field
- Wildlife field medicine \* -- Field
- Alberta agriculture veterinary public health field placement- Field
- Ecohealth national field course \* -Field
- Wildlife veterinary practice in government- Field
- Tanzania global health field school\* -Field
- Calgary Zoo DVTH
- Edmonton Zoo DVTH
- Shelter medicine and surgery DVTH
- Aboriginal and community health and wellness \* - Field

Food safety and animal welfare impacts in international trade\*- Field

- Estimate that ~40-50% of fourth year rotations time does not directly engage core faculty member (80% of this is primary care: general veterinary practice)
  - ~40% of Mandatory GVP rotations directly engage core faculty
  - ~75% advanced elective rotations engage core faculty
- Engage:
  - PRC
  - Participate on clinic floor or in other mechanism in all or part of rotation
  - Formal engagement in rounds
- DVTH sites host from 1 seat (2 4 week rotation) up to 52 seats (52 X 2 weeks)



#### **Academic Oversight of Fourth Year**





#### How are sites selected?

- Visited by Assistant Dean, Clinical Practice, Director, DVLC, or faculty member (section liaison)
- Facilities appropriate
- Expertise appropriate
- Case load appropriate
- Want to be engaged
- Agreement signed
- Clinical instructor (PRC) identified and appointed



#### How are sites and PRC prepared?

#### General group meetings

- Setting expectations, general issues, contact
- AD, Clinical Practice; Director)
  - Communication: visit, e-mail, phone
  - Physical Facilities: deficiencies notedand addressed
  - Policies and protocols
  - Logistics and operations

## Section liaisons

- Contact
  - (phone, e-mail, visits)
- Academic content oversight
- Student supervision





## **Faculty engagement in practices**

- Faculty have assigned clinical homes
- Faculty consult in various practices
- Visit practices during rotations (in addition to liaisons)
- Deliver clinical service
- Deliver clinical rotations
- Support clinical rotations (e.g. rounds, format, etc)
- To monitor and enhance clinical skills (formal and informal CE)
  - Veterinarians
  - Animal health technologists
  - Students

UCVM core faculty member Renaud Leguillette, DVM, PhD, DACVIM at work in the field



### **Engaging Clinical Instructors prior to fourth year**

- Clinical instructors act as student mentors
- Clinical instructors engaged on campus
  - Sessionals, visiting lecturers
  - OSCEs, communication labs, clinical skills labs



Mike Scott, DVM, MVsc, DACVS Moore Equine Veterinary Centre

Participating in simulator lab on campus



#### **Formal Preparation**

# Clinical instructors brought to campus for educational session

- Expectations
- Structure of Yr IV Program overview
- Competencies vs technical skills
- Communications
- Orientation
- Student engagement
- Rounds
- Assessments, case logs, evaluations
- Administration
- Ongoing
  - Annual event
  - Small group meetings through Adobe Connect



#### **Communication: making resources available**





#### **Examples of Materials**

- DVTH Instructor and Student Handbooks
- Provided with detailed summary of technical skills students have been taught (and tested on)
- Assessment forms
- Access to students' self-check skills list
  - (note: skills list ≠ competencies)
- Orientation checklist
- Policies/protocols

Provide/loan equipment if appropriate – to facilitate teaching



#### How are students prepared?

- First three years\*\*\*\*
- Student handbook
- Presentations multiple topics & times
- Peers
- Mentors
- Clinical instructors engaged in program
- On-site orientation
- General competencies
- Comprehensive skills list
- Case logs



## Competent, Confident, Communicate, Context

First 3 years heavy on:

- clinical skills (20%)
- professional skills (10%)
- clinical presentations (10%)
- field courses (10-15%)





Some key points about first 3 years

- Professional skills essential
  - clinical communications
  - business
  - medical records
- Clinical skills essential
  - 9 OSCEs/6-8 live animal surgeries
  - We can't just think it and they can't just write it
  - Compilation of skills provided to Practicum Rotation Coordinators
- Life-long learners
  - Asking the right question

#### How are site staff (non-clinical) prepared?

- Need to be oriented by PRC
- Visits of UCVM faculty & staff help familiarity
- Orientation checklist
- In some cases, a non-clinical staff member is also part of the communications tree -- helps
- Having staff "on board" is critical
- Poor orientation and introduction to staff most common source of friction
  - Everyone needs clear roles and expectations



#### How are students scheduled?

- Student choice through a lottery system
- Not really any different than on-campus teaching hospital
- Slightly more complicated; topic, time, location
- Communication with sites so they understand the process is important (especially when no student picks rotation – often a scheduling problem)
- Students are provided a travel subsidy based on distance from campus, accommodation subsidy, and a base "travel cost"
  - Varies from student to student but works out to about \$5,000 per student
  - Alberta students so lots of friends and relatives

Are there payments for the experience?

- We pay for the learning, not the experience
- \$850 per student/week for professional time
- \$125 per student for consumables
- Additional costs considered if justifiable very little. Need to be firm. We do not pay specifically for opportunity cost.
- No discount for multiple students
- Necropsies are free if student involved in case
- Each student has \$4,000 teaching allowance per year
- They pay us for our faculty members clinical work (25% gross)
- Every faculty member has a scholarly allowance tied to time in clinics

## Monitoring the Clinical Experience

- Do not underestimate the importance of informal monitoring
- Be careful of informal monitoring reacting to anecdotes
- Case logs; email traffic; common rounds
- Self-monitoring skills checklist
- Formal assessment of students: PRC
- Fourth year "capstone" clinical reasoning exam: core
- Formal assessment of practices: students
- Cross-referencing

#### **Evaluation forms**

- All rotations: End of rotation evaluations submitted on-line (One45)
  - Good compliance, well received
  - Interim evaluation for 4 week rotations
- V580 GVP: Clinical Interactions and Technical skills
  - 5 different evaluations
  - 8 required to be completed
- Future
  - Slight modification of end of rotation assessment forms
  - Modify requirements for others to complete on-line



#### **Formal assessment**

UCVM Year IV Student Performance Evaluation						
<u>Cinical Rotations</u>						
Student name:						
Dates: to						
Completed by:						
Please list other veterinarians or staff consulted in this process.						
This evaluation is a: O Interim evaluation O Final evaluation						
In order to provide a relevant assessment of this student, please rate their per-	erformance as you					
the following questions.						
Excellent – you would have absolute confidence in this individual's ability.						

Good – with a moderate amount of mentoring, this individual's performance would be acceptable.

*Borderline* – this individual's performance needs substantial improvement and would require considerable mentoring

*Unacceptable* – With this level of performance, you would strongly consider terminating this individual's employment.



		Not applicable	Unacceptable	Borderline	Good	Excellent	
1.	Maintains professional demeanor in all interactions	0	٥	Ø	3	۲	
1.	Responsible and reliable (on time, takes initiative)	0	0	2	3	4	
1.	Dresses appropriately	0	$\bigcirc$	2	3	4	
1.	Demonstrates evidence of self- directed learning	0	$\odot$	0	3	۲	
1.	Willingness to accept advice and guidance	0	0	0	3	۹	
1.	Works effectively with other veterinarians and health care professionals	0	$\odot$	0	3	۹	
1.	Work ethic	0	$\bigcirc$	2	3	4	
1.	Demonstrates positive attitude	0	$\bigcirc$	2	3	4	

Professionalism, clinical skills, knowledge, veterinary business, communications, over-all

Comments



## **Technical Skills and Clinical Interactions**

- Student: "I am ready to be tested"
- Technical Skills
  - General procedure
  - Surgical procedure
- Clinical Interactions
  - History Taking
  - Diagnostic Plan
  - Treatment Plan



#### UCVM Clinical Interaction Assessment - Diagnostic Plan

2011/2012

Student name:		Assessor	Name:		Practice:		Rotation	:		
Main Clinical Problem(s) of patient: Complexity of the Case (circle one): Low Average High										
Please grade the following categories using this scale (circle one)	g e Unsatisfactory Performance		Satisfactory Performance		Highly Satisfactory Performance			Not applicable		
	1	2	3	4	5	6	7	8	9	N/A
Is able to generate a problem list after completing a physica examination of the patient	Unable to recognize the with proper vet	ne problems or lab erinary medical ter	el the problems minology.	Identifies so veterinary m identify all	me of the problems and labels edical terminology but is unabl of those that arise from the his physical exam.	them with e to clearly story and	Clearly articulates history and phys them with pro	a list of problems ger ical exam findings and per veterinary medical	nerated from the I is able to label I terminology.	
is able to arrange the problems	1	2	3	4	5	6	7	8	9	N/A
is able to arrange the problem in order of priority for diagnostic workup or treatment	S Unable to effectively identify the problems and fails to recognize in what order of priority they should be worked up.		Able to prioritize some of the problems but fails to recognizes more minor problems that deserve work-up and can not put them in order of priority.			Clearly identifies a complete problem list and prioritizes them to allow an efficient diagnostic workup.				
	1	2	3	4	5	6	7	8	9	N/A
Is able to select the appropriate diagnostic tests to perform	Unable to articulate	which diagnostic t appropriate.	ests are most	Selects on important of tl	ly a narrow range of tests missi nes OR makes the range of test hat they are not discriminating	ing some ts so broad	Able to select a prioritize which o to consider all	ppropriate diagnostic nes should be perform diagnostic possibilitie presented	tests, able to ad first and able s for the case	
	1	2	3	4	5	6	7	8	9	N/A
the test, the anticipated results, and the method of interpretation of the test	Unable to discuss the reliability of the test, anticipated results or interpretation methods adequately.		Demonstrates some knowledge about the interpretation of the diagnostic tests selected but can not anticipate what results they may obtain based on the case presented.			<sup>1</sup> Can explain these aspects in a manner that is clear and understandable. Able to anticipate test results based on the case presented.				
	1	2	3	4	5	6	7	8	9	N/A
Can generate an accurate estimate of costs of the diagnostic tests	Has not taken time to generate a cost estimate.		Has generated a cost estimate but it is not accurate or detailed.			Has an accurate detailed cost estimate.				
	1	2	3	4	5	6	7	8	9	N/A
Can explain the method of testing and the practicalities involved	Unable to adequately explain the procedure for testing.		Has some knowledge of the tests but limited understanding of practical implications.			Explains testing and seems to understand the practical implications of the tests.				
	1	2	3	4	5	6	7	8	9	N/A
Can effectively explain the diagnostic plan to the client	Speaks in a nervous fashion and the dient has trouble understanding the plan.		Fails to check for understanding. Client appears to miss some details of the plan.			Explain plan in an organized and logical manner, and checks in for client understanding. Speaks clearly, concisely.				
Additional Comments:										
Signature of Assessor: Signature of Student:										
Date:										
Grade Calculation =	<u>Sum of all scor</u> 9 X number	<u>es in categories</u> of categories as	<u>assessed</u> sessed	X 100 =	%					

#### **Case Logs**

- All clinical rotations, regardless of location
- What did they see
- What did they do
- Reviewed by course coordinators and section liaisons



#### **Closing Comments**

- Decision to employ a significant proportion of the distributed sites in program influences whole program
- Changes nature of work of clinical faculty
  - Changes hiring requirements
  - Not more or less work different
- Budget major savings is on infrastructure, not operating (at least the way we do it)
- We are pleased to date but recognize there are challenges ahead





#### http://vet.ucalgary.ca/invest2012

