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

- **Core faculty**: 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
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?

Foothills Campus

20 minutes

Spy Hill Campus

Distributed Veterinary Learning Community
When are students in the DVLC?

Year 1
- Field courses
- General Veterinary Education

Year 2
- Field courses
- General Veterinary Education
- AoE Electives - field

Year 3
- Field courses
- General Veterinary Education

Year 4
- General Veterinary Practice:
  Food animal, equine, small animal,
  rural community, diagnostic laboratory
- AoE elective program
- Enrichment electives
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) (10 weeks)
  - 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

**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

* = led by or directly engages core or sessional faculty
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

Processes for academic oversight are the same regardless of type of rotation.
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 noted and 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
Clinical Rotations

Student name: ________________________________________________
Dates: _____________  to  ______________

Completed by: ________________________________________________

Please list other veterinarians or staff consulted in this process.

______________________________________________________________

______________________________________________________________

______________________________________________________________

______________________________________________________________

This evaluation is a:  ○ Interim evaluation  ○ Final evaluation

In order to provide a relevant assessment of this student, please rate their performance as you would assess a new graduate who you just hired. Please check the appropriate box for each of 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.
<table>
<thead>
<tr>
<th>1. Maintains professional demeanor in all interactions</th>
<th>Not applicable</th>
<th>Unacceptable</th>
<th>Borderline</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Responsible and reliable (on time, takes initiative)</td>
<td>O</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. Dresses appropriately</td>
<td>O</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. Demonstrates evidence of self-directed learning</td>
<td>O</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. Willingness to accept advice and guidance</td>
<td>O</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. Works effectively with other veterinarians and health care professionals</td>
<td>O</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. Work ethic</td>
<td>O</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. Demonstrates positive attitude</td>
<td>O</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Main Clinical Problem(s) of patient</th>
<th>Complexity of the Case (circle one): Low</th>
<th>Average</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please grade the following categories using this scale (circle one)</td>
<td>Unsatisfactory Performance</td>
<td>Satisfactory Performance</td>
<td>Highly Satisfactory Performance</td>
</tr>
<tr>
<td>Is able to generate a problem list after completing a physical examination of the patient</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Is able to arrange the problems in order of priority for diagnostic workup or treatment</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Is able to select the appropriate diagnostic tests to perform</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Can discuss the reliability of the tests, the anticipated results, and the method of interpretation of the test</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Can generate an accurate estimate of costs of the diagnostic tests</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Can explain the method of testing and the practicalities involved</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Can effectively explain the diagnostic plan to the client</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

### Additional Comments:

Signature of Assessor: ___________________________  Signature of Student: ___________________________

Date: ___________________________

**Grade Calculation** = \[
\text{Sum of all scores in categories assessed} \times 100 = \text{_____} \% \\
9 \times \text{number of categories assessed}
\]
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