

# Unique Case Reports

and

# Old West Medicine

SDSU P4 students on APPEs

Journal reports

Interventions

Case reports

# Preceptor CE

Goal – present unique P4 learning experiences from various APPEs and present a look back in time at Old West Medicine

## Overall Learning Objectives

Pharmacists and Pharmacy Technicians:

- 1. Evaluate significant patient safety and drug information situations that confront pharmacy professionals on a daily basis in various fields of practice;*
- 2. Provide useful references for Pharmacists and Technicians related to selected cases.*

# Financial disclaimer

- The planner and presenters for this course have no financial relationships to declare.

# Presenters

- Jack Kerner- P4
- Winner, SD



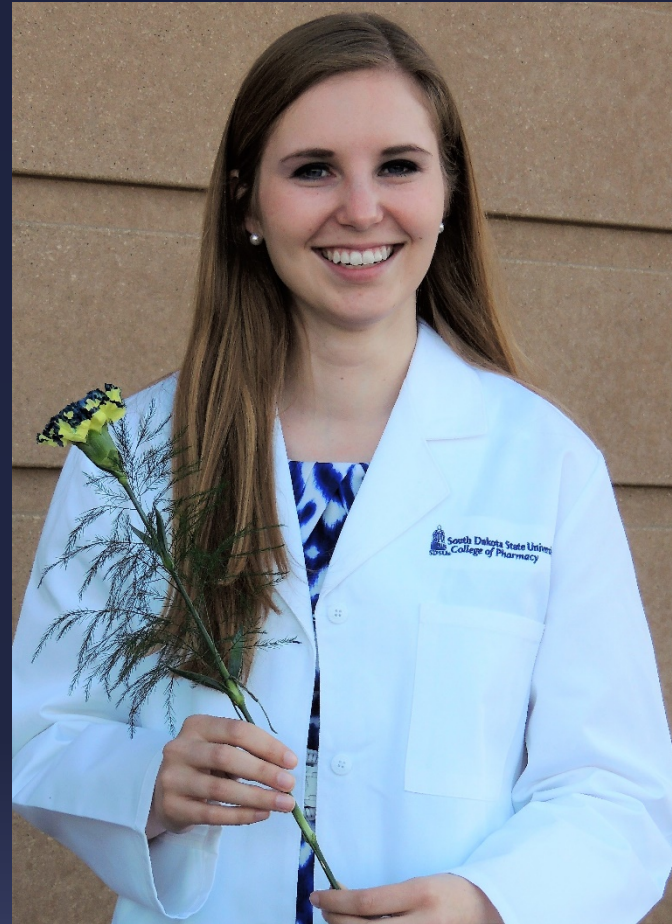
# Presenters

- Nicole Carr - P4
- Elmore, MN



# Presenters

- Jade Kutzke – P4
- Lake Lillian, MN



# Moderator

- Bernie Hendricks, RPh
  - APPE Coordinator
  - Continuing Education Coordinator

# Pharmacy Admin APPE – Eagle River, AK

## “The Curious Case of the Restroom Sniffles”

- Case – June 2016:



# Pharmacy Admin APPE – Eagle River, AK

## “The Curious Case of the Restroom Sniffles”

- Question: Is it illegal to ingest a legally-prescribed and legally-obtained CII medication through a route other than the route stated (or implied)?
- Answer:



# Jack Kerner – P4

# Jack Kerner – P4

- Deadwood – Old West Medicine
  - *Forgotten history...*

## *Opium poppy*



Opium Den. *Pinterest. n.d.*



*Papaver somniferum. PressTV. n.d.*

# Jack Kerner – P4

- Deadwood - *modern history...*

## 9 Suspects Charged in Deadly Drug Ring in South Dakota | South ...

<https://www.usnews.com/.../south-dakota/.../9-people-in-northern-black-hills-charged-...>

Jun 21, 2017 - SPEARFISH, S.D. (AP) — Nine people in the northern Black Hills have been ... of Black Hills distributed methamphetamine as well as a **drug similar to fentanyl**, ... remain in custody at the Lawrence County Jail in **Deadwood**.

## Police: Baby born in Deadwood was addicted to drugs | Local ...

[rapidcityjournal.com/...deadwood.../article\\_7ba93218-ebf5-5b2a-8218-292b7a3778b...](rapidcityjournal.com/...deadwood.../article_7ba93218-ebf5-5b2a-8218-292b7a3778b...)

Jul 8, 2016 - **DEADWOOD** | A 28-year-old Nebraska woman pleaded not guilty Thursday to ... Urine testing on the baby also found **opiates and methamphetamine**. ... and representatives of the *South Dakota* Department of Social Services, ...

## Trio face felony charges for heroin seizure | Local | rapidcityjournal.com

[rapidcityjournal.com/...heroin.../article\\_c3765fcb-76af-5ebd-958e-211459ae412f.ht...](rapidcityjournal.com/...heroin.../article_c3765fcb-76af-5ebd-958e-211459ae412f.ht...)

Aug 5, 2015 - **DEADWOOD** | A Lawrence County grand jury Wednesday indicted two ... men and an Arizona woman on felony **heroin possession** and trafficking charges ... At about 11:30 a.m. *South Dakota* state troopers stopped the SUV, .



# Jack Kerner – P4

- Emergency Medicine APPE - Apr 2017

“The Case of the Interrupted Snorer”

# Jack Kerner – P4

- Emergency Medicine - Apr 2017
- “The Case of the Interrupted Snorer”
  - Opioid Epidemic
  - Reversal Agent - **Naloxone**
    - Narcan Nasal Spray
      - Generic nasal atomizer
    - Evzio Auto-Injector
    - IV/IM naloxone solution



Narcan and Evzio. *UFA*. 2017

# Jack Kerner – P4

- Narcan Administration
  - [Video](#)
- Evzio Administration
  - [Video](#)

# Jack Kerner – P4

## ■ Naloxone Administration – Key Points

- Check for signs of opioid overdose (unconscious and unarousable, slow or absent breathing, pale, clammy skin, slow or no heart beat)
- Call EMS to access immediate medical attention
- Administer naloxone
- Rescue breathe if patient not breathing
- Stay with the person and monitor their response until emergency medical assistance arrives
- After 2-3 minutes, repeat the naloxone dose if person is not awakening or breathing well enough (10 or more breaths per minute)
- **A repeat dose may be needed** 30–90 minutes later if sedation and respiratory depression recur



# Jack Kerner – P4

- Naloxone Administration – Key Points
  - Warnings and Precautions
    - Risk of recurrent respiratory and CNS depression
    - Risk of limited efficacy with partial agonists or mixed agonist/antagonists
    - Precipitation of severe opioid withdrawal
  - Adverse Effects

# Jack Kerner – P4

- International Health APPE - Feb 2017  
“The Case of the furry friend from Honduras”



Honduras. Google images. 2017

# Jack Kerner – P4

- Tarantula Facts
  - Old-world Tarantulas
    - More potent venom
  - New-world Tarantulas
    - Urticating hairs (bristles)



Honduras Tarantula. *Roadshow*. 2017



Tarantula Distribution. *Pet Tarantulas*. n.d.

# Jack Kerner – P4

## ■ Tarantula Bites – Key Points

- May cause discomfort, but non-lethal
  - Usually no worse than a wasp sting
  - Treatment: clean area, ice, analgesics
- Serious cases: severe and diffuse muscle cramps
  - Treatment: benzodiazepines and magnesium
- May have allergic reaction to venom or urticating hairs
  - Treatment: epinephrine (serious reactions) and/or antihistamines

# Jack Kerner – P4

## References / Additional Reading

- Evzio (naloxone) Auto-Injector [package insert]. Richmond, VA: Kaleo Inc., 2014 April.
- Insys Development Company, inc. Naloxone for Treatment of Opioid Overdose. 2016 October 5. Available from: <https://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/AnestheticAndAnalgesicDrugProductsAdvisoryCommittee/UCM522690.pdf>
- Markley B. Deadwood's Lost Chinatown. True West Magazine [Internet]. 2006. Available from: <https://truwestmagazine.com/deadwoods-lost-chinatown/>.
- Narcan (naloxone) Nasal Spray [package insert]. Radnor, PA: Adapt Pharma, 2015 November.
- Opium. *Wikipedia*. 2017 August 24. Available from <https://en.wikipedia.org/w/index.php?title=Opium&oldid=796948277>

# Jack Kerner – P4

## References / Additional Reading

- Pappas S. Some Tarantula Bites More Harmful than Thought. Live Science [Internet]. 2013. Available from: <https://www.livescience.com/41795-tarantula-bites-harmful.html>
- Pearson JC. Deadwood's Chinese Underground. Black Hills Pioneer [Internet]. 2012. Available from: [http://www.bhpioneer.com/opinion/deadwood-s-chinese-underground/article\\_550abf72-e0dc-11e1-bfa9-001a4bcf887a.html](http://www.bhpioneer.com/opinion/deadwood-s-chinese-underground/article_550abf72-e0dc-11e1-bfa9-001a4bcf887a.html).
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# Jack Kerner – P4

## Images

- Evzio and Narcan [image]. *Unite to Face Addiction*. 16 May 2017. Retrieved from: <http://ufamichigan.org/unite-to-face-addiction-michigan-learn-to-save-a-life-2-2/>
- Honduras [image]. *Google images*. 2017. Retrieved from: <https://www.google.com/search?q=map+honduras&ie=utf-8&oe=utf-8>
- Honduras tarantula [image]. 2017. Retrieved from: <http://www.jonathansjungleroadshow.co.uk/meet-the-honduran-curly-hair-tarantula!.html>
- Opium den [image]. Stishov S. *Pinterest*. 2016. Retrieved from: <https://www.pinterest.com/pin/518195500845198007>
- *Papaver somniferum* [image]. n.d. Retrieved from: <http://www.presstv.com/detail/237039.html>
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Thank you.



Nicole Carr – P4

**The case of the nauseous mother**



Nicole Carr – P4

## The case of the nauseous mother

- *ginger*
- *pyridoxine (Vitamin B6)*
- *doxylamine*
- *promethazine gel*

## Nicole Carr – P4

- *Ginger, pyridoxine (Vitamin B6), and doxylamine are first-line therapies.*
- *Promethazine gel can be compounded and used topically to treat nausea and vomiting of pregnancy.*

Nicole Carr – P4

**The case of the ‘hungry baby’...  
(and the anxious mom)**

# Nicole Carr – P4

## The case of the ‘hungry baby’... (and the anxious mom)

- *sertraline*
- *paroxetine*
- *but what about pregnancy???*

## Nicole Carr – P4

- *Sertraline and paroxetine are the preferred SSRIs in breastfeeding mothers.*
- *Paroxetine is pregnancy category D, other SSRIs are category C.*
- *LactMed can be used to evaluate the safety of a medication in breastfeeding mothers.*

Nicole Carr – P4

**The case of the Beer('s list criteria)**

Nicole Carr – P4

## The case of the Beer('s list criteria)

- *nitrofurantoin*
- *antiarrhythmic drugs*
- *eszopiclone, zaleplon, zolpidem*
- *PPIs*
- *desmopressin*



## Nicole Carr – P4

- ***nitrofurantoin: CrCl cutoff changed from <60 mL/min to <30 mL/min***
- ***antiarrhythmic drugs: recommendation to avoid antiarrhythmic drugs for a. fib. has been removed***

## Nicole Carr – P4

- ***eszopiclone, zaleplon, zolpidem: associated with harm, minimal efficacy in treating insomnia***
- ***PPIs: avoid use beyond 8 weeks without justification***
- ***desmopressin: risk of hyponatremia***

# Nicole Carr – P4

References / Additional Reading

SSRIs and Breastfeeding – LactMed 2017

<https://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm>

Nausea and Vomiting of Pregnancy – American Family Physician –  
June 2014

<http://www.aafp.org/afp/2014/0615/p965.html>

Beers list – American Geriatrics Society - 2015

<http://onlinelibrary.wiley.com/doi/10.1111/jgs.13702/pdf>

Thank you..!





Jade Kutzke – P4

“The case of the doubled INR”

# Jade Kutzke – P4

## “The case of the doubled INR”

### *Examples of drugs that may ↑ INR*

- *Antibiotics-macrolides, quinolones, penicillins, metronidazole, TMP/SMX*
- *Azole antifungals*
- *SSRI antidepressants*
- *Omeprazole, cimetidine*
- *Amiodarone*
- *Other considerations: herbals, diet, heart failure, liver disease, diarrhea*



Jade Kutzke – P4

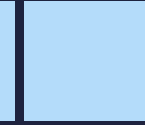
“The case of the unnecessary  
warfarin”

# Jade Kutzke – P4

“The case of the unnecessary warfarin”

- ***Common INR Goals***
  - ***2-3***
  - ***2.5-2.5***
- ***Duration of therapy***
  - ***Hereditary condition***
  - ***Atrial fibrillation***
  - ***Valve replacement***
  - ***Orthopedic surgery***
  - ***DVT or PE***





Jade Kutzke – P4

“The case of the red clots  
versus white clots”

# Jade Kutzke – P4

“The case of the red versus white clots”

## “White Clot”

- *Largely platelet-based*
- *Arterial*
- *Antiplatelet therapy-example: aspirin*

## “Red Clot”

- *Largely fibrin-based*
- *Venous*
- *Anticoagulant therapy-example: heparin*



## References / Additional Reading

- CHEST guidelines, 9<sup>th</sup> edition
- Guidance for the practical management of warfarin therapy in the treatment of venous thromboembolism (J Thromb Thrombolysis 2016)
- Red vs White Thrombi: Treating the Right Clot is Crucial (JAMA 2003)

Thank you..~