

WELCOME!

[Distance and Online Education](#) (DOE) has partnered with Dana Fowler, Associate Professor (Instructional) in the College of Nursing, to share this online course model. Please see below for assignments that Dana gives students using online collaborate documents, the instructions she provides, and sample student submissions.



LEARN MORE →

See the DOE [Online Course Models](#) webpage to hear more about Dana's story.

EXPLORE →

Scroll to see how Dana uses online collaborative documents in her courses.

Boost student engagement and motivation

Would you like to improve student interactions in your online course? The DOE [Effective Instruction Guide](#) shares strategies to increase online student engagement and motivation. Our staff can assist you at all stages of course development – from initial conception to final implementation – following evidence-based best practices. Our instructional designers will partner with you to provide customized course design recommendations that fit your teaching style, course goals, and address your students' needs to enhance your online course.

REQUEST A CONSULTATION

CASE STUDIES

Case studies are common in Dana's courses. Here you see instructions on the initial slide of a case study discussion where student groups share decisions in a collaborative online PowerPoint document. Notice the alignment of these instructions with the module learning objectives.

Learning Objectives

1. Define the terms genomics and pharmacogenomics and their use in drug therapy.
2. Explore the ethical questions that arise around pharmacogenomics
3. Discuss factors that alter pharmacodynamics and pharmacokinetics in older adults.
4. Discuss factors that alter pharmacodynamics and pharmacokinetics in individuals experiencing acute and critical illnesses.
5. Use the Beers Criteria and STOPP/START Criteria in prescribing for older adults.
6. Apply principles of geriatric pharmacology to optimize medication management in older adults
7. Utilizing the tools above, critically evaluate medication prescription for older adults and create a deprescribing plan to reduce polypharmacy in this population.

Alignment

Module learning objective #5 is explicitly mentioned in the assignment instructions.

FIND YOUR GROUP BELOW


1. Work as a group to critically look at the polypharmacy of each of the cases presented.
2. Use the case example provided in module one as your template (you may need to go into presentation mode to hyperlink or cut and paste into your browser to open). Use up to 6 slides to present your information (you may use a 7th slide for citation if needed). Place slides underneath your group title slide.
3. Use Beers criteria and geriatric medication management information provided in class to support your decisions.
4. Cite all resources used to make your decisions.
5. 20 points will be provided for completion. All group members are expected to participate.
6. You are to **review all three group's postings and comment**. This content could be used for future testing...hint hint.
7. This needs to be completed by **11pm on Sunday June 18**.

CASE STUDIES

Following the instructions slide above, each group starts with a slide in the collaborative online PowerPoint where they are provided a link to their case inside ICON.

GROUP 1

Case link:
<https://uiowa.instructure.com/courses/206554/files/23051861/download?wrap=1>



Practical Application

Dana's students are practicing real-world collaboration while also producing a shared document with each group's conclusions for easy download and later reference.

Students then create slides to report out final recommendations from their group.

FINAL MED REC

MEDICATION	COMMENTS
Metoprolol ER 12.5 mg daily	Reduce dose to 12.5mg daily for ischemic heart disease; continue to monitor for bradycardia
Enteric-coated aspirin (81 mg daily)	Per STOPP criteria, no added benefit of daily ASA > 160mg (O'Mahony et al., 2015).
Famotidine 20mg at bedtime	Would like to DC; discussion with patient regarding symptoms
Lisinopril 10 mg daily	Per STOPP criteria, with hyperkalemia (O'Mahony et al., 2015); however, appears to be isolated incident; need to explore nature of hyperkalemia; Per START criteria, in DM pts for renal protection (O'Mahony et al., 2015)
Insulin lispro 8 U SQ with meals	Continue for blood sugar control; continue to monitor sugars inpatient; obtain HgA1C
Insulin glargine 20 U SQ at bedtime	Continue for blood sugar control; continue to monitor sugars inpatient; obtain HgA1C
Warfarin 5mg daily	Needed to prevent post-procedural clotting; INR 2.3
HCTZ 12.5mg daily	Continue for BP control; potentially increase in future to achieve goal of < 140/90;
Atorvastatin 10 mg daily	START criteria with CAD, PVD (O'Mahony et al., 2015)

RATIONALE

STOP

- Digoxin- no clear benefit with normal systolic function, unclear GFR and already has toxicity.
- NSAIDS- patient has CAD, is 71 y/o, and taking Warfarin. Unknown GFR, but baseline creatinine is 1.2.
- Aspirin- No added benefit >160mg, with increased risk of bleeding, decrease to 81mg ASA. (O'Mahony et al., 2015)
- Diltiazem- should not be taken with beta-blockers for risk of heart block. (O'Mahony et al., 2015)
- Famotidine- Should not be used with GFR <50, also does not seem to have an indication for this patient.
- KCl 40 mEq every am- no indication, patient is not taking a loop diuretic and with baseline CKD.
- Vitamin C 500 mg daily Vitamin E 400 IU daily Calcium/Vitamin D 500 mg/ 200 IU twice daily

START

- Low dose statin due to documented history of CAD and PVD. (O'Mahony et al., 2015)
- Continue ACEI for BP management, CAD, and in the presence of diabetes with evidence of renal disease.
- Metoprolol (Lower dose)- Beta-blocker for CAD. (O'Mahony et al., 2015)

CITATIONS

- By the 2023 American Geriatrics Society Beers Criteria® Update Expert Panel (2023). American Geriatrics Society 2023 updated AGS Beers Criteria® for potentially inappropriate medication use in older adults. *Journal of the American Geriatrics Society*, 10.1111/jgs.18372. Advance online publication. <https://doi.org/10.1111/jgs.18372>
- O'Mahony, D., O'Sullivan, D., Byrne, S., O'Connor, M. N., Ryan, C., & Gallagher, P. (2015). STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. *Age and ageing*, 44(2), 213-218. <https://doi.org/10.1093/ageing/afu145>
- Baugreet, S., Hamill, R.M., Kerry, J.P., & McCarthy, S.N.(2017). Mitigating nutrition and health deficiencies in older adults: A role for food innovation? *Journal of Food Science* 82(4) 848-855. <https://doi.org/10.1111/1750-3841.13674>

CASE STUDIES

Dana is able to comment on specific slides to start a conversation with student groups.

Consideration for reduction or discontinuation

S/S of pleural effusion r/t HF not responsive to torsemide. Should hold acutely and consider other treatments. May need different diuretic on D/C, ie:: thiazide. Need to monitor potassium/dehydration status if continued (O'Mahony, 2020).

Afib currently rate controlled. Necessary to support cardiac output.

HTN currently uncontrolled. Not a non-dihydropyridine CCB which is contraindicated in Beers (AGS, 2019).

Vitamin B may be needed based on diet. Does not need two vitamin B supplements and multivitamin.

Multivitamin may be needed based on diet. Does not need two vitamin B supplements and multivitamin. May just need one multivitamin and nothing else, consult dietary.

Comments

New

FD Fowler, Dana
Thoughts on vitamins and supplements? I often see medication lists with 8-10 additional vitamins and supplements. It is hard to know what to do with all of these medications. The guidelines are vague...any thoughts?

RE Student A
I looked for articles to support supplementation but only found evidence in the setting of documented malnutrition. I feel some patients are very attached to their supplements and I think it can be a conversation with the patient and let them make the final decision in the outpatient setting.

KC Student B
I agree I think that a multivitamin should be enough to cover all possible nutritional deficiencies in most adults.

@mention or reply

DISCUSSIONS

Dana uses shared online PowerPoint documents to replace her use of ICON discussion boards. Here she assigns different prompts for each student as they build shared knowledge. Students see document edits in real-time, which adds to the sense that they are working together in their asynchronous course.

HYPERTENSIVE URGENCY VS EMERGENCY CLASS DISCUSSION

USE THREE SLIDES TO ANSWER YOUR QUESTIONS

STUDENT A

- DISCUSS HOW YOU WOULD APPROACH HYPERTENSIVE EMERGENCY IN SPECIAL POPULAITONS
- CVA (depends on type & acuity)
 - Hemorrhagic goal blood pressure SBP<160
 - Ischemic +tPA SBP<185,
 - Ischemic SBP <220/110
 - Permissive HTN to allow perfusion

Reference: 2017 Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults

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graph TD
    A[Acute vs Chronic Hypertension] --> B{Symptoms?}
    B --> C[Acute Hypertension]
    B --> D[Chronic Hypertension]
    C --> E{SBP > 220 mmHg}
    C --> F{SBP 180-220 mmHg}
    E --> G[SBP lowering to <140 mmHg Class III/IV]
    F --> H[SBP lowering with continuous IV infusion and close BP monitoring Class IIa]
    D --> I{Stroke?}
    D --> J{MI?}
    D --> K{Heart Failure?}
    D --> L{Other?}
    I --> M{Ischemic Stroke}
    I --> N{Hemorrhagic Stroke}
    M --> O[SBP < 185 mmHg]
    N --> P[SBP < 160 mmHg]
    J --> Q[SBP < 185 mmHg]
    K --> R[SBP < 160 mmHg]
    L --> S[SBP < 160 mmHg]
```

Visual Aids

PowerPoint makes it easier for students to add visuals to their discussion contributions.

VISUAL ANALYSIS

Dana is able to add x-ray scans in her PowerPoints and then ask student groups to diagnose what they see. Again, each group has a different slide in the same PowerPoint, which makes for efficient class-wide sharing.

Group 6 : Activity 1

1. AP/PA, rotation, penetration, inspiration: PA, slightly rotated? - PA, slight rotation present, good penetration, good inspiration
2. Any tubes or lines present: no tubes or lines
3. Mediastinum, trachea, aorta, masses present, pulmonary vessels: can see left and right PA's, can see all heart borders, can see aortic knob, no masses, no deviation
4. Bones, thoracic cavity: no fractures
5. Lungs, tissue, any abnormalities: left lung normal: lung marks out full way
6. Soft tissue changes: no soft tissue changes – gastric bubble
7. Final diagnosis: Normal lungs


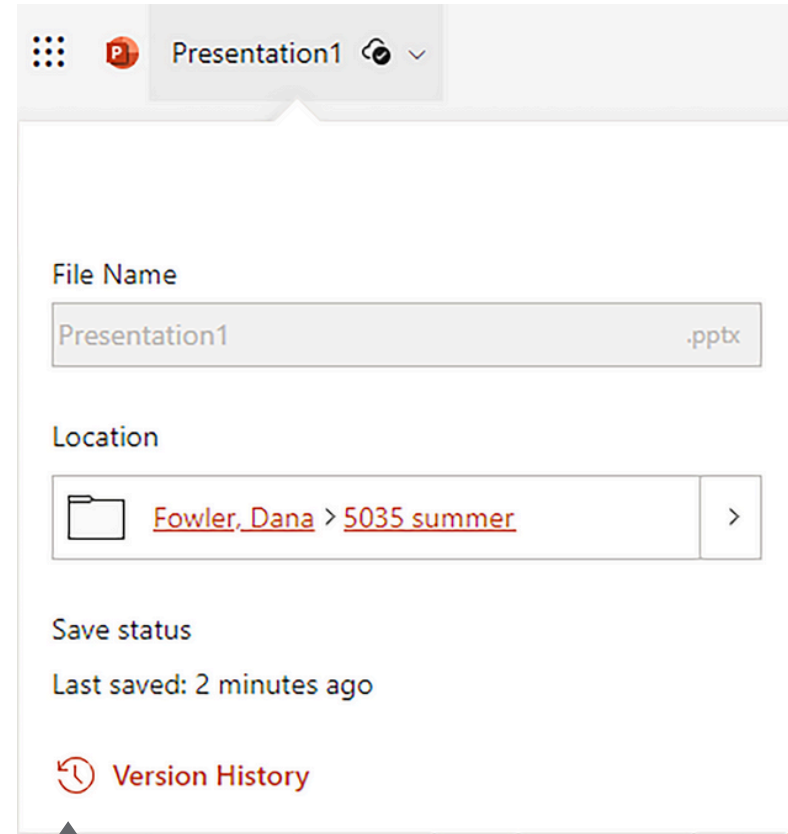


Image-Based Discussion

PowerPoint make it easy for Dana to distribute different x-rays on separate slides for student groups to analyze.

GRADING AND FEEDBACK

In addition to commenting on specific slides, Dana can use the Version History feature within online PowerPoints to see which students are actively working inside the document. Dana mentioned that this helps her identify “leaders, followers, and closers”.



Version History

- July 3, 2022, 11:42 PM
 - July 3, 2022, 11:42 PM
 - Student B modified
 - July 3, 2022, 11:38 PM
 - Student B modified
 - July 3, 2022, 4:38 PM
 - Student B modified
 - July 3, 2022, 4:26 PM
 - Student A modified
 - Student B modified
 - July 3, 2022, 3:16 PM
 - Student A modified
 - July 3, 2022, 3:10 PM
 - Student A modified
 - July 3, 2022, 2:57 PM
 - Student A modified
 - July 3, 2022, 2:49 PM
 - Student A modified
 - July 3, 2022, 2:39 PM
 - Student A modified

Version History

See which students added, removed, and modified elements on the slide.