2022-03-03: Hocus POCUS! Point of Care Ultrasound for Students

Topic and Questions courtesy of the Association of Professors of Gynecology & Obstetrics

The following links were shared during the chat:

- Creating an Ultrasound Scholarly Concentration Program for Medical Students PubMed (nih.gov)
- <u>Point-of-care ultrasound augments physical examination learning by undergraduate medical students PubMed</u> (nih.gov)
- <u>Point-of-Care Ultrasonography Integration in Undergraduate Medical Education: A Student-Driven Approach</u> PubMed (nih.gov)
- <u>The State of Point-of-Care Ultrasound Training in Undergraduate Medical Education: Findings From a National Survey PubMed (nih.gov)</u>
- <u>Students Teaching Students: Student-Led Ultrasound Curriculum in Medical School Education PubMed</u> (nih.gov)
- The Canadian Medical Student Ultrasound Curriculum Ma 2020 Journal of Ultrasound in Medicine Wiley Online Library
- The Clinical Ultrasonography Elective in Clerkship (CUSEC): A pilot elective for senior clerkship students at the University of Saskatchewan (nih.gov)



MedEd Chat (hosted by ACE) @MedEdChat8 hours ago

TOPIC 1: Is there curriculum on the UME level at your school? If yes, what does it look like? #MedEdChat #meded



Gary Beck Dallaghan @GLBDallaghan8 hours ago

T1 We have begun integrating it into the curriculum. More impressed with the scholarly concentration program instigated

by @unc som students https://t.co/HIkTMoKHWF #MedEdChat #POCUS #meded



Shireen Madani Sims, MD @UFDOC8 hours ago

@MedEdChat T1- curriculum in POCUS=Point Of Care Ultrasound #mededchat



MedEd Chat (hosted by ACE) @MedEdChat8 hours ago

RT @UFDOC: @MedEdChat T1- curriculum in POCUS=Point Of Care Ultrasound #mededchat



Scott Graziano @sgraziano118 hours ago

T1 - we have something that spans the four years. Starts with knob-ology in M1, progresses with more knowledge and then hands on in M3 - L&D and FAST in ER/Trauma #MedEdChat



Paul Olszynski @OlszynskiP8 hours ago

T1: yes, divided into pre clerkship and clerkship. Pre-clerkship covers core POCUS applications, Clerkship explores discipline/specialty specific applications #MedEdChat



Christopher Morosky @cmmorosky8 hours ago

We are at the <u>#NeedsAssessment</u> part of curriculum planning at this point. Lots of discussion happening around WHAT is <u>#POCUS</u> and WHO does <u>#POCUS</u> <u>#mededchat</u>



Scott Graziano @sgraziano118 hours ago

T1 - got a grant and bought butterfly equip for L&D, students responsible for initial scan on all triage admits. #MedEdChat



Med Student Bot @MedStudent Bot8 hours ago

RT <u>@MedEdChat</u>: The <u>#MedEdChat</u> topic & questions will be announced in a moment...for now, please introduce yourselves #meded



Med Student Bot @MedStudent Bot8 hours ago

RT <u>@MedEdChat</u>: We will assume that all of your tweets during <u>#MedEdChat</u> are your own during this hour unless otherwise stated #meded



Med Student Bot @MedStudent_Bot8 hours ago

RT @MedEdChat: T1 about to come up in a few moments #meded #MedEdChat



Med Student Bot @MedStudent_Bot8 hours ago

RT <u>@MedEdChat</u>: TOPIC 1: Is there curriculum on the UME level at your school? If yes, what does it look like? <u>#MedEdChat</u> <u>#meded</u>



Shireen Madani Sims, MD @UFDOC8 hours ago

@sgraziano11 @sgraziano11 tell us more about butterfly equip #mededchat



Med Student Bot @MedStudent Bot8 hours ago

RT <u>@GLBDallaghan</u>: T1 We have begun integrating it into the curriculum. More impressed with the scholarly concentration program instigated b...



Scott Graziano @sgraziano118 hours ago

T1 - knob-ology starts in anatomy course, incorporate basics, then repeat in the clinical skills course for M2 #MedEdChat



Scott Graziano @sgraziano118 hours ago

<u>@UFDOC</u> <u>#mededchat</u> handheld device plugs into iphone or ipad. Super portable. And good quality for the basics: position, AFI, placenta location, MVP, lie, etc



Christopher Morosky @cmmorosky8 hours ago

RT <u>@sgraziano11</u>: T1 - knob-ology starts in anatomy course, incorporate basics, then repeat in the clinical skills course for M2 <u>#MedEdChat</u>



Scott Graziano @sgraziano118 hours ago

T1 Integrated into surgery and ob/gyn. Harder on other rotations because they may not have equipment available like we do clinically #MedEdChat



Gary Beck Dallaghan @GLBDallaghan8 hours ago

<u>@sgraziano11</u> <u>@UFDOC</u> T1 How many probes do you have available to students? What about use in primary care clinics? <u>#MedEdChat</u>



Scott Graziano @sgraziano118 hours ago

T1 M1 and M2 years can schedule access to the equipment in our skills center, so we can run stuff for all the students. #MedEdChat



Christopher Morosky @cmmorosky8 hours ago

We have our preclinical students using actually US machines in the anatomy lab -> which has gone from all cadavers to 1/3 dissection, 1/3 radiology stations and 1/3 real time US on volunteers/students #mededchat



Scott Graziano @sgraziano118 hours ago

<u>@GLBDallaghan</u> <u>@UFDOC</u> That is tricker. On L&D, we have 4-5, plus our normal ultrasound machines (2). We struggle to integrate in the clinics. Surgery and EM have machines, hence clinically easy to incorporate. Not so much in FM clinic. <u>#mededchat</u>



Amy Park, MD @dramypark8 hours ago

RT @sgraziano11: Join us...... RIGHT NOW! #MedEdChat @apgonews #MedEd



Laura Rachal, MD FAAP FACP @lalouisianaise8 hours ago @MedEdChat #mededchat Laura, Med-Peds ID at UNC



MedEd Chat (hosted by ACE) @MedEdChat8 hours ago

TOPIC 2: What SHOULD a POCUS curriculum look like? Who should direct? #MedEdChat #meded



Scott Graziano @sgraziano118 hours ago

<u>@GLBDallaghan</u> <u>@UFDOC</u> Some luck on our ICU services with line placements and US guidance. Ambulatory is the gap for sure. <u>#mededchat</u>



Alliance4ClinEd @Alliance4ClinEd8 hours ago

T2 "Over half of the responding medical schools in the United States had integrated POCUS instruction into their UME curricula" Fewer had 4 yr curriculum. https://t.co/U8PFP7EQqx #MedEdChat #meded #POCUS



Scott Graziano @sgraziano118 hours ago

T2 our director is actually EM physician with skill/interest in POC. But each clinical area relies on the local experts for hands on training. #MedEdChat



Scott Graziano @sgraziano118 hours ago

T2 - director has some support from the school (not enough tbh) for curriculum design #MedEdChat



Paul Olszynski @OlszynskiP8 hours ago https://t.co/B6UmgPpJ2Q #MedEdChat



Sateesh Arja, M.B.B.S., MHPE, MSPH @ArjaSateesh8 hours ago @MedEdChat #mededchat T1 it is covered across the curriculum in modules like Anatomy and clerkships like Radiology, OBGYN and clinical pathology #meded



Alliance4ClinEd @Alliance4ClinEd8 hours ago

T2 There are two examples of student-led curricular integration in pre-clinical curriculum https://t.co/viu5WOGj8N <a href="https://t.co/viu5WoGj8N"



Scott Graziano @sgraziano118 hours ago

T2 - need to introduce the basics (knobs) then review clinical application, then practice clinical application, and then prove some mastery of it across the 4 years. #MedEdChat



Christopher Morosky @cmmorosky8 hours ago

T2) A lot of our <u>#POCUS</u> interest has grown out of our ER doc doing more US for bedside eval. They lead our US interest group. Love this, and I think that there is room for faculty for specialities of ICU, OBGYN, anesthesia, ortho, etc to show application and use <u>#mededchat</u>



MedEd Chat (hosted by ACE) @MedEdChat8 hours ago RT @OlszynskiP: https://t.co/B6UmgPpJ2Q #MedEdChat



Sateesh Arja, M.B.B.S., MHPE, MSPH @ArjaSateesh8 hours ago #mededchat Sateesh Arja from Avalon University School of Medicine, Curacao #meded



Scott Graziano @sgraziano118 hours ago
T2 POCUS can be an expensive sport!!!!! #MedEdChat



MedEd Chat (hosted by ACE) @MedEdChat8 hours ago
T2 This article describes a #POCUS workshop

for #MedStudents https://t.co/vLBFrbF7hY #MedEdChat #meded



Christopher Morosky @cmmorosky8 hours ago

@sgraziano11 Totally LONGITUDINAL is the way to go! Across the specialities, across all sort of anatomy - diagnostic, therapeutic, procedural uses on all the body parts - pregnant or

not #MedEdChat



Christopher Morosky @cmmorosky8 hours ago

RT <u>@Alliance4ClinEd</u>: T2 "Over half of the responding medical schools in the United States had integrated POCUS instruction into their UME c...



Christopher Morosky @cmmorosky8 hours ago

RT @OlszynskiP: https://t.co/B6UmgPpJ2Q #MedEdChat



Christopher Morosky @cmmorosky8 hours ago

RT <u>@Alliance4ClinEd</u>: T2 There are two examples of student-led curricular integration in pre-clinical curriculum <u>https://t.co/viu5WOGj8N...</u>



Paul Olszynski @OlszynskiP8 hours ago

T2 - good to keep in mind a curriculum includes assessment methods - implying we should have an idea as to the level of proficiency/entrustment we think an average student should achieve re: POCUS #MedEdChat



Christopher Morosky @cmmorosky8 hours ago

RT <u>@MedEdChat</u>: T2 This article describes a <u>#POCUS</u> workshop for <u>#MedStudents</u> https://t.co/vLBFrbF7hY <u>#MedEdChat</u> <u>#meded</u>



Christopher Morosky @cmmorosky8 hours ago

@OlszynskiP #POCUS milestones. vs EPAs. At the very least learning goals and objectives, based on level with assessment included - yes! #MedEdChat



Julia Switzer @jswitzermd8 hours ago

<u>@cmmorosky</u> This is how it works for us too. ER docs leading the way but multiple specialists show applications #mededchat



Scott Graziano @sgraziano118 hours ago

<u>@cmmorosky</u> It takes a village. But not all the villagers want to participate.... sometimes. #mededchat



Sherine Salib @DrSherineSalib8 hours ago

<u>@MedEdChat</u> A2. For new educational curricula (such as POCUS) to be truly impactful, there must be cross-silo collaboration between UME, GME & CME entities. This is the essence of true vertical integration of the curriculum. We cannot teach students new skills in a vacuum. #MedEdChat



Sateesh Arja, M.B.B.S., MHPE, MSPH @ ArjaSateesh8 hours ago

<u>@MedEdChat #mededchat</u> T2 It can be an isolated module or an elective. But to be more effective, it should be an integrated curriculum across the foundational years of medicine and clerkships. If it is an isolated module, it can be directed by radiologist or obstetrician #meded



Scott Graziano @sgraziano118 hours ago

@jswitzermd @cmmorosky The opportunities on L&D are endless, so easy to incorporate. #mededchat



Christopher Morosky @cmmorosky8 hours ago

RT @GLBDallaghan: T1 We have begun integrating it into the curriculum. More impressed with the scholarly concentration program instigated b...



Shireen Madani Sims, MD @UFDOC8 hours ago

@sgraziano11 @jswitzermd @cmmorosky And patients in L&D like it,too! #mededchat



MedEd Chat (hosted by ACE) @MedEdChat7 hours ago

TOPIC 3: What conflicts are there with POCUS (ie radiology, OBGYN) and what are ways to navigate that? #MedEdChat #meded



Christopher Morosky @cmmorosky7 hours ago

<u>@ArjaSateesh</u> <u>@MedEdChat</u> From basic science/anatomy (basic <u>#POCUS</u> skills), specialty specific clerkship (specialty specific anatomy and application <u>#POCUS</u>) to senior student elective (highly specialized and advance procedural <u>#POCUS</u>) would be a good progression <u>#MedEdChat</u>



Jacob Markwood @MedicMarkwood7 hours ago

RT <u>@Alliance4ClinEd</u>: T2 "Over half of the responding medical schools in the United States had integrated POCUS instruction into their UME c...



Gary Beck Dallaghan @GLBDallaghan7 hours ago

T3 So this is a question I've had about <u>#POCUS</u>. Not being an MD...it made me wonder why radiologists weren't taking lead on <u>#POCUS</u> integration. Ideas? <u>#MedEdChat</u>



Gary Beck Dallaghan @GLBDallaghan7 hours ago

T3 To follow that....my previous institution initiated <u>#POCUS</u> but radiology wanted no part. #MedEdChat



Paul Olszynski @OlszynskiP7 hours ago

T2 - we also offer an elective (capstone?) for the keeners to complete in their final year https://t.co/MmZiSGNmJd #mededchat



Diwash Thapa @DiwashT011016687 hours ago

<u>@MedEdChat</u> T2 @ UNCSOM we have a scholarly concentration program run by faculty in radiology and family medicine in addition to a core medical curriculum in POCUS. #mededchat https://t.co/Fwg0bBmkTE



Christopher Morosky @cmmorosky7 hours ago

T3) Honestly, our radiology faculty are some of our best teachers and they have been very gracious with <u>#POCUS</u> They do an amazing job of teaching the differences between POCUS derived info and radiology performed and read imaging and assessment - it helps on both ends <u>#mededchat</u>



Christopher Morosky @cmmorosky7 hours ago

RT @OlszynskiP: T2 - we also offer an elective (capstone?) for the keeners to complete in their final year https://t.co/MmZiSGNmJd #mededch...



Julia Switzer @jswitzermd7 hours ago

<u>@ MedEdChat</u> T3: machines labeled for specific department use only! limits POCUS opportunities for OBGYN residents in ER/PACU etc. butterfly, compact portable machine or multidisciplinary collab can mitigate this <u>#mededchat</u>



Scott Graziano @sgraziano117 hours ago

@GLBDallaghan I want to avoid the hate. BUT I think they do a bit more reading and not the actual hands on scan etc? I heard that from somebody. #mededchat



Laura Rachal, MD FAAP FACP @lalouisianaise7 hours ago

@MedEdChat #mededchat



MedEd Chat (hosted by ACE) @MedEdChat7 hours ago

RT @OlszynskiP: T2 - we also offer an elective (capstone?) for the keeners to complete in their final year https://t.co/MmZiSGNmJd #mededch...



Laura Rachal, MD FAAP FACP @lalouisianaise7 hours ago

<u>@MedEdChat</u> T2, <u>#mededchat</u> I think it should be integrated in the pre-clin years in physical exam/procedure lab by radiology/US technologists and then reinforced during clinical years taught by rotation faculty/fellows.



Med Student Bot @MedStudent Bot7 hours ago

RT <u>@Alliance4ClinEd</u>: T2 There are two examples of student-led curricular integration in pre-clinical curriculum <u>https://t.co/viu5WOGj8N...</u>



Med Student Bot @MedStudent Bot7 hours ago

RT <u>@ArjaSateesh</u>: <u>#mededchat</u> Sateesh Arja from Avalon University School of Medicine, Curacao <u>#meded</u>



Med Student Bot @MedStudent_Bot7 hours ago

RT <u>@MedEdChat</u>: T2 This article describes a <u>#POCUS</u> workshop for #MedStudents https://t.co/vLBFrbF7hY #MedEdChat #meded



Med Student Bot @MedStudent Bot7 hours ago

RT <u>@MedEdChat</u>: TOPIC 3: What conflicts are there with POCUS (ie radiology, OBGYN) and what are ways to navigate that? <u>#MedEdChat</u> <u>#meded</u>



Gary Beck Dallaghan @GLBDallaghan7 hours ago

<u>@sgraziano11</u> T3 It's perplexing. I know one of our radiologists really wanted to be involved but leadership was handed to a different specialty. Again...perplexing! <u>#MedEdChat</u>



Jacob Markwood @MedicMarkwood7 hours ago

#mededchat Im a rising M3 @GeiselMed working to integrate #POCUS curriculum any advice?!



Sateesh Arja, M.B.B.S., MHPE, MSPH @ ArjaSateesh7 hours ago

<u>@MedEdChat #mededchat</u> T3 we have encountered no conflicts with Radiology or OBGYN. But the biggest key factor is clinical faculty of Radiology, OBGYN and other departments taking part of the POCUS and buy in time <u>#meded</u>



Laura Rachal, MD FAAP FACP @lalouisianaise7 hours ago

<u>@MedEdChat</u> T3- yes the radiologists vs ER vs other specialties. I think you get all departments on the same page as a joint project. It's not about becoming a radiologist or cardiologist, but it's a skill that's important to learn. #mededchat



Paul Olszynski @OlszynskiP7 hours ago

T3 - I believe this varies depending on institutional culture - not POCUS specific #MedEdChat



Christopher Morosky @cmmorosky7 hours ago

<u>@MedicMarkwood</u> <u>@GeiselMed</u> These curricula are new. Faculty very much need to hear from students what content do you want to learn, and we 100% need feedback on early curriculum ideas/planning and then post roll out evaluation for students <u>#MedEdChat</u>



Brad Bruggeman, MD @BradBrugg7 hours ago

<u>@lalouisianaise</u> <u>@MedEdChat</u> I agree. Early introduction and longitudinal reinforcement would help "bake it in" to students' diagnostic arsenal (rather than one short experience on just one or two clerkships). Development of a longitudinal curriculum with specific EPAs for different clerkships. #mededchat



Jacob Markwood @MedicMarkwood7 hours ago

T3) There is an amazing across disciplinary collaboration for <u>#POCUS</u> <u>@DartmouthHitch</u> very helpful for med ed <u>#mededchat</u>



MedEd Chat (hosted by ACE) @MedEdChat7 hours ago

TOPIC 4: What are best settings for POCUS that people have taught in? What are good sim options for POCUS? #MedEdChat #meded



MedEd Chat (hosted by ACE) @MedEdChat7 hours ago

RT <u>@MedicMarkwood</u>: T3) There is an amazing across disciplinary collaboration for <u>#POCUS</u> <u>@DartmouthHitch</u> very helpful for med ed <u>#mededchat</u>



Jacob Markwood @MedicMarkwood7 hours ago @MedEdChat Radiology Suite after hours #mededchat #POCUS



Christopher Morosky @cmmorosky7 hours ago

T4) For OB my best <u>#POCUS</u> clinical learning environments are: my office / resident clinic (particularly first trimester), NST suite with back to back AFIs, and L&D triage #mededchat



Paul Olszynski @OlszynskiP7 hours ago

T4: scanning humans beats sim every time... #MedEdChat



Christopher Morosky @cmmorosky7 hours ago

T4) I find sim is good early on (MS1/MS2) but after that , it's time for clinical application and real patients. I had <u>#POCUS</u> sim in my OB curriculum, but the MS3s were pretty bored of it by then... <u>#mededchat</u>



Brad Bruggeman, MD @BradBrugg7 hours ago

<u>@MedEdChat</u> T3 <u>#mededchat</u> - Getting too lofty with instruction. Keep it focused at the level a student can reasonably absorb and use. I've seen students' eyes glaze if you get overly lost in the technical weeds (heat index, finer points of image gain, etc). One step at a time:)



Jacob Markwood @MedicMarkwood7 hours ago

RT @cmmorosky: T4) I find sim is good early on (MS1/MS2) but after that , it's time for clinical application and real patients. I had #POCU...



Sateesh Arja, M.B.B.S., MHPE, MSPH @ArjaSateesh7 hours ago

<u>@MedEdChat #mededchat</u> T4 during our medical school time, we used to learn in the first one or two hours in the morning during radiology clerkship. I believe radiology, OBGYN office, or any bed side ultrasound teaching are good environments to teach ultrasound #meded



MedEd Chat (hosted by ACE) @MedEdChat7 hours ago

We have about 5 more minutes left in our discussion. Please feel free to give some final thoughts $\underline{\text{#meded}}\ \underline{\text{#MedEdChat}}$



Brad Bruggeman, MD @BradBrugg7 hours ago



MedEd @TelehealthBot7 hours ago

RT <u>@MedEdChat</u>: We have about 5 more minutes left in our discussion. Please feel free to give some final thoughts <u>#meded #MedEdChat</u>



Christopher Morosky @cmmorosky7 hours ago

I think that my very first <u>#POCUS</u> procedure as a student was an arterial line or central line in the ICU. I have students hold the US while I do abdominal wall nerve blocks or complicated IUD insertions. #POCUS PROCEDURES are also key to teach! #MedEdChat #MedEd



Paul Olszynski @OlszynskiP7 hours ago

this is gonna seem like a joke (considering the crew here tonight), but OBGYN POCUS is one of our weak spots at USASK. Would welcome articles, resources, etc... #MedEdChat



Christopher Morosky @cmmorosky7 hours ago

<u>@BradBrugg</u> 100% Most students can get pretty skilled at getting their own machine, plugging it in, setting everything up, and getting presentation, placenta and AFI all done. Makes their OB triage presentations much more rich and informed! #MedEDChat



MedEd Chat (hosted by ACE) @MedEdChat7 hours ago

That's a wrap...I will post the <u>#MedEdChat</u> transcript tomorrow morning on https://t.co/mJivoK9NyX. Thanks everyone for participating! <u>#meded</u>



MedEd Chat (hosted by ACE) @MedEdChat7 hours ago

Join us again next week at 9 PM ET/NYC Thursday. Don't forget to suggest topics by DM or email <u>#meded #MedEdChat</u>



Paul Olszynski @OlszynskiP7 hours ago

T4 for preclinical - consider simulated patients (SPs) and (manuscript under review) POCUS SP Teachers! #MedEdChat



Krishna Teja Challa @challakrishnatj7 hours ago

<u>@MedEdChat</u> T1:POCUS basics can be discussed in the morning reports and simulation can be logistically planned during the EM rotation for procedures (like FAST, Lung and cardiac U/S...) and other rotations during bedside clinical procedures. <u>#mededchat</u>



Med Student Bot @MedStudent_Bot7 hours ago

RT <u>@MedEdChat</u>: That's a wrap...I will post the <u>#MedEdChat</u> transcript tomorrow morning on https://t.co/mJivoK9NyX. Thanks everyone for parti...



Med Student Bot @MedStudent_Bot7 hours ago

RT <u>@MedEdChat</u>: Join us again next week at 9 PM ET/NYC Thursday. Don't forget to suggest topics by DM or email <u>#meded #MedEdChat</u>



Krishna Teja Challa @challakrishnatj7 hours ago

<u>@MedEdChat</u> T1: In times of the pandemic and when away Rotations are discouraged, <u>@ChildrensPgh</u> DEI online elective had a POCUS module where we were taught by the pediatric EM faculty all the basic POCUS pearls online and it helped me during few procedures #mededchat



My Medic Tutor @mymedictutoran hour ago

A summary of our week simplifying AF! Head over to our Instagram (https://t.co/kJUNWRdLpC) for some more detail and to keep up to date with latest Themes of the week! Have a great

weekend

#MedEdChat #MedEd #MedStudentTwitter #mymedictutor https://t.co/bQJmtTalVz



MedEd @TelehealthBotan hour ago

RT <u>@mymedictutor</u>: A summary of our week simplifying AF! Head over to our Instagram (https://t.co/kJUNWRdLpC) for some more detail and to...

The #MedEdChat Influencers

Top 10 Influential



@MedEdChat 100



@sgraziano11 72



@MedicMarkwood 66



@Alliance4ClinEd 61



@cmmorosky 59



@GeiselMed 59



@OlszynskiP 58



@ArjaSateesh 56



@BradBrugg 56



@GLBDallaghan 54

Prolific Tweeters



@cmmorosky 19



@sgraziano11 15



@MedEdChat 12



@MedStudent Bot 11



@OlszynskiP 8



@ArjaSateesh 5



@GLBDallaghan 5



@MedicMarkwood 5



@lalouisianaise 4



@UFDOC 3

Highest Impressions



@MedEdChat 112.7K



@cmmorosky 23.7K



@OlszynskiP 15.9K



@MedStudent_Bot 10.2K



@GLBDallaghan 9.1K



@TelehealthBot 7.0K



@sgraziano11 5.1K



@dramypark 4.2K



@lalouisianaise 2.1K



@Alliance4ClinEd 1.6K

The Numbers

195.213K_{Impressions}

102_{Tweets}
19_{Participants}
13_{Avg Tweets/Hour}

Twitter data from the #MedEdChat hashtag from Thu, March 3rd 2022, 9:05PM to Fri, March 4th 2022, 4:55AM (America/New_York) – Symplur.