

Mayo Clinic Pharmacy Grand Rounds

Activity Description

Mayo Clinic Pharmacy Grand Rounds Podcast is a weekly podcast delivered by pharmacists to healthcare professionals who routinely manage the selection and monitoring of medication(s) as part of their patient care duties. Each week, speakers deliver insight to healthcare providers on evidence-based pharmacology topics in nearly every specialty area. The podcast content applies to pharmacists, physicians, physician assistants, and nurse practitioners in the inpatient and ambulatory care practice settings who care for neonatal through geriatric patient populations.

Target Audience

This activity is appropriate for physicians, pharmacists, nurse practitioners, physician assistants, residents, fellows, students and allied health professionals.

Learning Objectives

Upon conclusion of this activity, participants should be able to:

- Select patient-specific pharmacotherapy for a broad scope of disease states
- Recall evidence-based literature to direct medication best-practices
- Identify controversial pharmacology topics and their potential impact on patient care

Attendance at this Mayo Clinic course does not indicate nor guarantee competence or proficiency in the performance of any procedures which may be discussed or taught in this course.

Accreditation Statement



In support of improving patient care, Mayo Clinic College of Medicine and Science is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Credit Statement(s)

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The Mayo Clinic College of Medicine and Science designates this enduring material for a maximum of 63.75 *AMA PRA Category 1 Credit(s)*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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AAPA



Mayo Clinic College of Medicine and Science has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. Approval is valid until 09/01/2024. This activity is designated for 63.75 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

Disclosure Summary

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Listed below are individuals with control of the content of this program who have disclosed...

Relevant financial relationship(s) with ineligible companies:

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Consultant: La Jolla Pharmaceutical Company

All relevant financial relationships listed for these individuals have been mitigated.

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 Jamie Reed, Pharm.D., BCPS
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 Ming (May) M. Zhang, Pharm.D., R.Ph.
 Joseph J. Zieminski, Pharm.D.

References to off-label and/or investigational usage(s) of pharmaceuticals or instruments in their presentation:

Mikhaila L. Rice, Pharm.D.	Merck & Co, Inc. - Letermovir
Allison P. Golbach, Pharm.D.	Dronabinol, Nabilone
Andrew J. Webb, Pharm.D.	X-Gen Pharamceuticals, Inc. – Neomycin Eli Lilly & Co – Vancomycin, Tobramycin Sandoz Inc – Amikacin Merck Inc. – Gentamicin Pfizer Inc. – linezolid, Clindamycin Janssen Inc – Levofloxacin Bayer Pharmaceuticals – Ciprofloxacin Sanofi, LLC – Telithromycin
Mikhaila L. Rice, Pharm.D.	Merck & Co., Inc.: Letermovir
Casey O'Connell, Pharm.D.	Fluoxetine, Sertraline, Citalopram, Escitalopram, Paroxetine, Fluvoxamine, Lithium, Ondansetron, Cyproheptadine, Olanzapine, Chlorpromazine
Mikaela M. Hofer, Pharm.D.	Amitriptyline, Brexanolone, Bupropion, Citalopram, Duloxetine, Escitalopram, Fluoxetine, Fluvoxamine, Nortriptyline, Paroxetine, Sertraline, Venlafaxine
Jade L. Kutzke, Pharm.D.	Biogen & Genentech, Inc.: Rituximab, Novartis Pharmaceuticals, Inc.: Cyclosporine A, Hospira, Inc.: Vincristine, Cumberland Pharmaceuticals, Inc.: N-acetylcysteine, Millenium Pharmaceuticals, Inc.: Bortezomib, & Shire Pharmaceuticals, Inc.: Recombinant ADAMTS13
Abby K. Hendricks, Pharm.D.	Aripiprazole, Asenapine, Chlorpromazine, Haloperidol, Iloperidone, Lurasidone, Olanzapine, Paliperidone, Quetiapine, Risperidone, Thiothixene, Ziprasidone, Lorazepam, Melatonin, Ramelteon, Suvorexant, Valproate
Alex B. Wontor, Pharm.D.	Acetaminophen, Atenolol, Cholestyramine resin, Dexamethasone, Digoxin, Diltiazem, Esmolol, Hydrocortisone, Lithium, Saturated solution of potassium iodide (SSKI), Methimazole, Metoprolol, Propranolol, Propylthiouracil
Victoria R. Milano, Pharm.D.	Prednisone, Methylprednisolone, Mycophenolate, Tacrolimus, Cyclophosphamide, Infliximab, & Tocilizumab
Deann N. Tims, Pharm.D.	Emmaus Life Sciences, Inc.: L-Glutamine (Endari); Novartis: Crizanlizumab (Adakveo); Global Blood Therapeutics: Voxelotor (Oxbryta)
Joseph C. Osborne II, Pharm.D.	Gabapentin, Pregabalin
Jamie Reed, Pharm.D., BCPS	Varies: Albuterol, Diphenhydramine, Famotidine, Methylprednisolone, Prednisone, Ranitidine
Nicholas J. Vollmer, Pharm.D.	Apotex Corp., Myland Pharmaceuticals Inc.: Tranexamic Acid; Teva Pharmaceuticals USA, Inc., Heritage Pharmaceutical: Tranexamic Acid; Prasco

	Laboratories, Acella Pharmaceuticals, LLC: Tranexamic Acid; X-GEN Pharmaceuticals, Inc., Fresenius Kabi USA, LLC: Tranexamic Acid; American Regent, Inc.: Tranexamic Acid
Natalie A. Haddad, Pharm.D.	Varies: Midodrine
Madison L. Fazio, Pharm.D.	Amgen and Sobi-anakinra; Novartis-canakinumab
Mikhaila L. Rice, Pharm.D.	Janssen Biotech, Inc.-Ibrutinib; AstraZeneca-Acalabrutinib; AbbVie Inc. and Genentech USA, Inc.-Venetoclax
Cassandra J. Schmitt, Pharm.D.	Genentech-Tenecteplase (TNKase)
Ashley O. Otto, Pharm.D.	Ursodeoxycholic acid (ursodiol); Diatrizoate meglumine; Diatrizoate sodium; Polyethylene glycol 3350 and electrolytes oral solution
Kyle S. Wamsley, Pharm.D.	Varies-Oral antibiotics for IE
Hannah M. Brokmeier, Pharm.D.	Pfizer-Eplerenone; Varies-Spironolactone
Jennifer Adema, Pharm.D.	Lilly USA LLC: Olumiant (Baricitinib); EMD Serono: Rebif (Interferon Beta-1a)
Mikhaila L. Rice, Pharm.D., BCPS	Novartis Pharmaceuticals Corporation: Imatinib; Pfizer, Inc.: Sunitinib; Bayer: Regorafenib; Deciphera Pharmaceuticals, Inc.: Ripretinib; Blueprint Medicines Corporation: Avapritinib; Takeda Pharmaceutical Co. Ltd.: Ponatinib; Exelixis, Inc.: Cabozantinib; Merck, Inc.: Lenvatinib; Pfizer, Inc.: Crenolanib; Jiangsu Chia-Tai Tianqin Pharmaceutical: Anlotinib; Daiichi Sankyo: Pexidartinib; Bristol Myer Squibb: Ipilimumab, Nivolumab; Karoypharm Therapeutics: Selinexor; Merck, Inc.: Temozolomide; Novartis, Inc.: Spartalizumab
Yen Tran, Pharm.D., M.B.A.	Belatacept, Bortezomib, Carfilomib, Clazakizumab, Daratumumab, Eculizumab, Imlifidase, Intravenous immunoglobulin, Obituzumab, Rituximab, Tocilizumab
Nicole L. Hlavacek, Pharm.D.	Varies: Magnesium
Allison P. Golbach, Pharm.D., BCPS	Azacitadine, Cytarabine, Daunorubicin, Decitabine, Filgrastim, Fludarabine, glasdegib, Idarubicin, Liposomal daunorubicin/cytarabine , Pegfilgrastim, Venetoclax
Mikaela M. Hofer, Pharm.D.	New Medicon Pharma, Ferring Pharmaceuticals: Terlipressin (Teripress, Glypressin), Selepressin, Adrecizumab
Nathan T. Smith, PharmD, BCPS	Varies: Leuprolide, Nafarelin, goserelin, triptorelin, buserelin, histrelin, Flutamide, bicalutamide, Spironolactone, Finasteride, dutasteride, Estradiol, conjugated estrogens, progesterone, Medroxyprogesterone acetate, Testosterone enanthate, testosterone cypionate, Testosterone undecanoate
Erin D. Wieruszewski, PharmD, BCCCP	Varies: Desmopressin, Tranexamic acid
Kyle S. Wamsley, PharmD	Varies: Phenobarbital
Natalie Haddad, Pharm.D.	Sobi: Anakinra, Generic: Aspirin, Roche: Tocilizumab, Multiple manufacturers: Infliximab, CSL Behring AG, Grifols Therapeutics inc.: Intravenous immunoglobulin
Mai Uyen Alissa Le, Pharm.D.	N/A: Bivalirudin
Audrey J. Umbreit, Pharm.D., BCACP	Varies: Baclofen, Gabapentin, Ondansetron, Topiramate
Hannah M. Brokmeier, PharmD	The Medicines Company: Bivalirudin, Grifols Biologicals, Inc.: Thrombate III, GTC Biotherapeutics: Atryn
Cassandra J. Schmitt, PharmD	Varies: Tenecteplase
Sydney E. Schultz, Pharm.D.	Takeda: Bortezomib, Genmab: Daratumumab, Varies: Dexamethasone, Thalidomide
Marissa Z. Powell, Pharm.D.	Eli Lilly: Olanzapine
Molly A. McCord, Pharm.D.	Bristol Myers Squibb: Belatacept
Kaylee A. Clark, Pharm.D.	Various: Famotidine, Diphenhydramine
Jo Ann Leal, Pharm.D.	Various: Omeprazole, Pantoprazole, Sucralfate, Esomeprazole, Lansoprazole, Dexlansoprazole, Rabeprazole, Cimetidine, Famotidine, Ranitidine, Nizatidine
Nikitha Yagnala, Pharm.D.	Actavis Elizabeth, Boehringer Ingelheim, Teva: clonidine; Eli Lilly and Company: methadone; Pfizer: dexmedetomidine; Actavis Elizabeth, Apotex, Impax Labs Inc, Mylan, Sandoz: guanfacine, quetiapine, trazodone,
Divya A. Khandekar, Pharm.D., M.S.	Boehreinger-Ingelheim: Empagliflozin; AstraZeneca: Dapagliflozin (Farxiga); Novartis: Sacubitril/Valsartan (Entresto); AstraZeneca: Candesartan (Atacand); Varies: Spironolactone (Aldactone) Varies: Amifostine, Cevimeline, Donepezil, Doxepin, Octreotide, Palifermin

Jennifer M. Nelson, Pharm.D.	Albendazole, Amikacin, Clofazimine, Levofloxacin, Linezolid, Moxifloxacin, Paromomycin
Aeryana N. Beaudrie-Nunn, Pharm.D.	Swedich Orphan Biovitrum AB: Anakinra; Eli Lilly and Company: Baricitnib; Merck & Co., Inc; Pfizer Labs: Dexamethasone; Genentec, Inc.: Tocilizumab; Gilead Sciences, Inc.: Remdesivir; Sanofi-Aventis U.S. LLC: Sarilumab
Rachel J. Johnson, Pharm.D.	Carbamazepine, Corticosteroids, Eculizumab, Gabapentin, Immune globulin
Jai Yin Townley, Pharm.D., BCPS	Cholestyramine, Clonidine, Octreotide, Pancreatic enzymes, Pantoprazole, Omeprazole
Cassandra J. Schmitt, Pharm.D.	Merck: Molnupiravir; Pfizer: Nirmatrelvir/ritonavir; GlaxoSmithKline and Vir Biotechnology, Inc.: Sotrovimab
Rachael M. Sheehan, Pharm.D., R.Ph.	Merck Share & Dohme Copr: Aprepitant, Varies: Benzodiazepines, Capsaicin, Corticosteroids, Droperidol, Haloperidol, Eli Lilly: Olanzapine, Varies: Opioids, Propranolol, Tricyclic antidepressants
Stacy A. Bernard, Pharm.D., R.Ph.	Cyclosporine (modified and non-modified), Tacrolimus (immediate and extended release), Sirolimus, Everolimus, Prednisone
Michaela E. Wermers, Pharm.D., R.Ph.	Ferric carboxymaltose, Iron sucrose, Iron dextran, Ferric gluconate
Molly A. McCord, Pharm.D., R.Ph.	antithymocyte globulins, basiliximab, belatacept, mycophenolate mofetil, mycophenolate sodium, sirolimus, valganciclovir
Lauren M. Dolly, Pharm.D. P.Ph.	Olanzapine, Risperidone, Lithium, Lamotrigine, Liothyronine, Ketamine, L-methylfolate
Hannah M. Brokmeier, Pharm.D	Pfizer / Hospira - calcium chloride, epinephrine, methylprednisolone, sodium bicarbonate, vasopressin
Kaylee A. Clark, Pharm.D.	Imatinib, Dasatinib, Sorafenib, Midostaurin, Gilteritinib, Azacitidine
Andrew J. Jatis, Pharm.D.	Abbvie - Dalbavancin (Dalvance®), Melinta Therapeutics - Oritavancin (Orbactiv®). Various: furosemide, torsemide, bumetanide, metolazone, chlorothiazide, acetazolamide
Kyle A. Hess, Pharm.D.	Bayer – Apirin, Bristol-Meyers/Sanofi Pharmaceuticals – Clopidogrel, AstraZeneca – Ticagrelor, Eli Lilly – Prasugrel, La Jolla Pharmaceutical - Angiotensin II, Various - Vasopressin
Aeryana Nichet Beaudrie-Nunn, Pharm.D.	Bristol-Myers Squibb Company – Apixaban, Boehringer Ingelheim Pharmaceuticals, Inc. – Dabigatran, Daiichi Sankyo Co., LTD. – Edoxaban, Janssen Pharmaceuticals, Inc. – Rivaroxaban
KaShena L. Kennedy, Pharm.D.	Alexion Pharmaceuticals - eculizumab
Sarah A. Chase, Pharm.D.	Various – Ertapenem, Meropenem, Piperacillin/tazobactam
Devon S. Stonerock, PharmD	Various – Cyclosporine, Eltrombopag, Posaconazole, Fluconazole, Sulfamethoxazole/trimethoprim
Megan A. Galle, PharmD	Alexion Pharmacueticals - Eculizumab
Uzoamaka C. Abajue, Pharm.D.	Pfizer - Dexrazoxane
Mark P. Layden, Pharm.D., R.Ph.	Various - Ascorbic acid
Alejandro Del Rio Verduzco, Pharm.D.	Baxter Healthcare Corporation – Immune globulin/gammagard liquid, Amgen – Filgrastim, Epoetin Alfa, Novartis – Eltrombopag, Various – Levofloxacin, Cefdinir
Caitlin C. Schanz, Pharm.D., R.Ph.	Multiple – Dexamethasone, Hydrocortisone, Methylprednisolone, Prednisolone, Prednisone
Ming (May) M. Zhang, Pharm.D., R.Ph.	Multiple – Dalteparin, Enoxaparin, Tinzaparin, Unfractionated Heparin
Shienna Anne Braga, Pharm.D., R.Ph.	TerSera Therapeutics – goserelin, Watson Pharmaceuticals – triptorelin, AbbVie Inc - leuprolide
Christopher R. Cahoon, Pharm.D., R.Ph.	Amgen – Denosumab, Multiple – Ibandronate, Novartis Pharmaceuticals Corporation – Pamidronate, Multiple – Zolendronic acid

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Prerequisites for Participation

There are no prerequisites needed prior to participating in this education activity.

Method of Participation

Participation in this activity consists of listening to the online podcast and completing the post-test and evaluation.

How to Obtain Credit

To obtain credit, complete the post-test, evaluation and submit.

Release and Expiration Dates

Release Date:	September 2, 2020
Expiration Date:	September 1, 2024

Acknowledgement of Commercial Support

No commercial support was received in the production of this activity.

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