

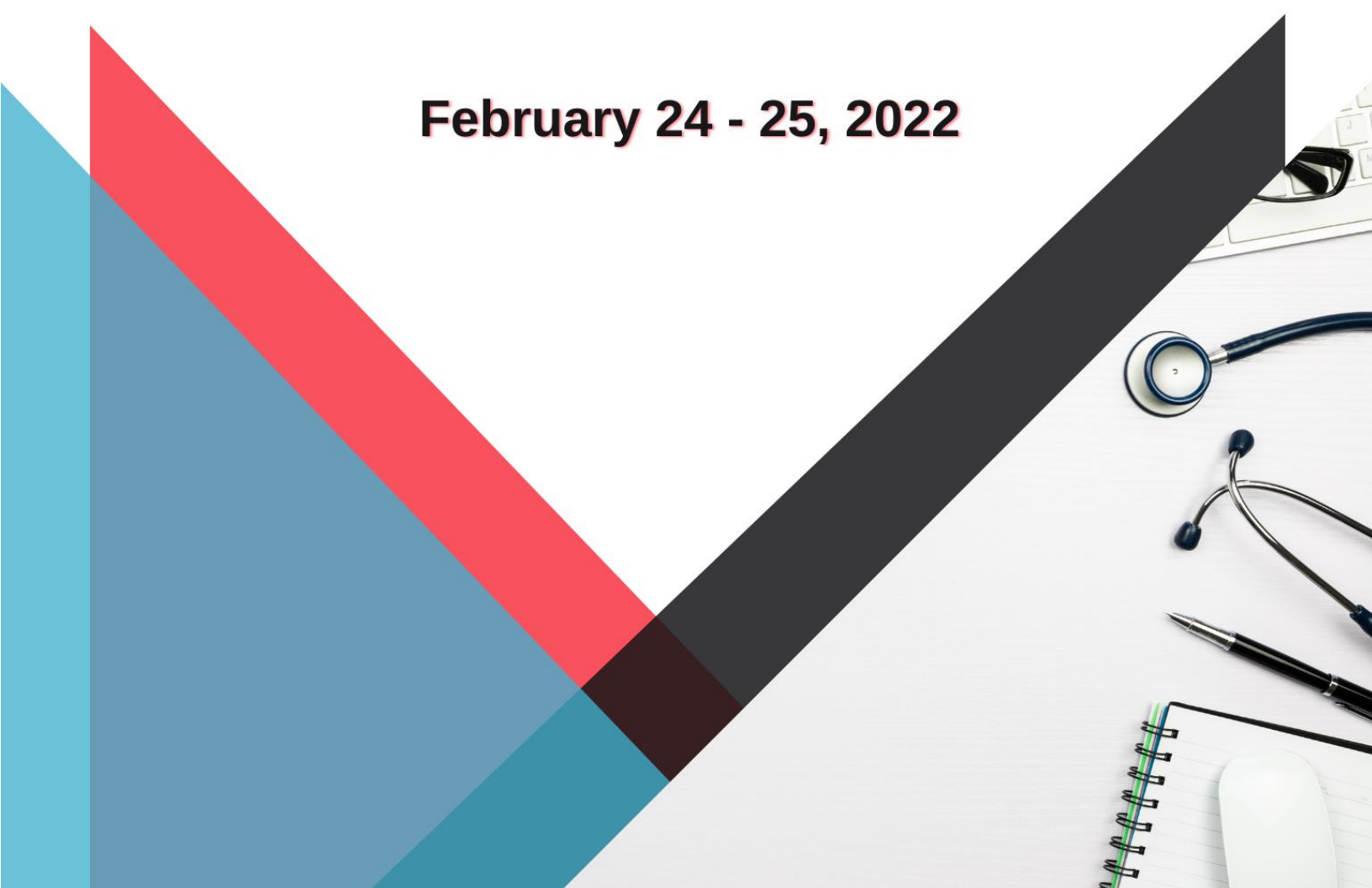


**Critical Care - Infection Diseases Network**

*2022 Inaugural Virtual Symposium*

**Life-Threatening Infections and COVID-19 Disease**

**February 24 - 25, 2022**



# ABOUT

This academic program was developed by the members of the Critical Care – Infectious Diseases Network, a group of clinicians and researchers trained in critical care medicine and infectious diseases/microbiology. This program is designed for specialists in internal medicine or surgery with an interest in severe and life-threatening infections and infections occurring in the critically ill. Critical care physicians, hospitalists and infectious diseases physicians in particular will find the material covered important in improving their clinical practice. Key topics to be discussed include optimization of antimicrobial therapy, newly introduced antimicrobials, resistance trends and, of course, the latest in COVID-19 data.

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## Learning Objectives

At the end of the conference, participants will be able to:

- understand advanced concepts in COVID diagnostics and therapeutics;
- appreciate how to optimize dosing to take advantage of PK principles in management of life-threatening infections;
- recognize the role of adjunctive and novel diagnostic techniques for serious infections;
- evaluate the relative importance of antimicrobial resistance with respect to therapy.

## Please Note

- All times listed in the program are in Eastern Time.
- A minimum of 25% of each session will be dedicated to participant interaction.



## Thursday, February 24, 2022

8:55 a.m. EST		<b>Delegates – Virtual Check-In</b>
9:00 a.m. - 9:15 a.m.	<b>LINE 1</b>	<b>Opening Address</b> Anand Kumar and CCIDN Organizing Committee with special address by Dennis Maki and Bruce Light
<b>Concurrent Sessions: Block 1</b>		
9:20 a.m. - 9:55 a.m.	<b>LINE 1</b>	<b>What's New in Antimicrobials Used in the ICU?</b> Wendy Sligl  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• identify new antimicrobials available for use;</li> <li>• interpret indications for their use;</li> <li>• identify specific prescribing considerations in the critically ill.</li> </ul>
	<b>LINE 2</b>	<b>Antimicrobial Stewardship in the Face of Suspected Sepsis</b> Sameer Kadri  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• recognize the extent of and opportunities for stewardship in patients with sepsis;</li> <li>• recognize barriers to and tools for stewardship in sepsis.</li> </ul>
<b>Concurrent Sessions: Block 2</b>		
10:00 a.m. - 10:35 a.m.	<b>LINE 1</b>	<b>What's New in Antimicrobial Resistance in the ICU?</b> Andre Kalil  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• describe current patterns in antimicrobial resistance in the nosocomial setting;</li> <li>• identify specific emerging microbial pathogens of concern in the ICU.</li> </ul>
	<b>LINE 2</b>	<b>The Modern Approach to the Diagnosis of Fungal Sepsis</b> Coleman Rotstein  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• describe the key risk factors predisposing patients to invasive fungal disease in the Critical Care setting;</li> <li>• describe methods used for diagnosing fungal infections in Critical Care patients;</li> <li>• analyze how molecular testing is advancing the diagnosis of invasive fungal infections.</li> </ul>
10:35 a.m. - 10:45 a.m.		<b>Break</b>
<b>Concurrent Sessions: Block 3</b>		
10:45 a.m. - 11:20 a.m.	<b>LINE 1</b>	<b>Options for Difficult-To-Treat Gram-Negative Infections – What to Choose and When</b> Matteo Bassetti  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• recognize antimicrobial options for difficult to treat gram negative infections;</li> <li>• identify which antimicrobial choices are preferred in specific difficult to treat gram negative infections.</li> </ul>

	<b>LINE 2</b>	<b>Treating Invasive Candida Sepsis</b> Eric Bow  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>review risk factors for C/IC in the ICU;</li> <li>discuss the approach to diagnosis of C/IC;</li> <li>examine therapeutic strategies in the ICU setting.</li> </ul>
<b>Concurrent Sessions: Block 4</b>		
11:25 a.m. – 12:00 p.m.	<b>LINE 1</b>	<b>Considerations for the Treatment of HAP/VAP in Patients at High Risk of Mortality</b> Ignacio Martin-Loeches  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>identify the impact of multidrug resistant organisms in HAP/VAP;</li> <li>recognize the association of vHAP with high mortality;</li> <li>recognize high rates of P. aeruginosa in COVID VAP.</li> </ul>
	<b>LINE 2</b>	<b>Options for MRSA Infections – What to Choose and When</b> Salman Qureshi  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>utilize optimal vancomycin dosing for MRSA bacteremia;</li> <li>list various combination therapies for MRSA bacteremia;</li> <li>identify high risk patients who may benefit from combination therapy.</li> </ul>
12:00 a.m. - 12:30 p.m. <b>Lunch</b>		
<b>Concurrent Sessions: Block 5</b>		
12:30 p.m.- 1:05 p.m.	<b>LINE 1</b>	<b>Vancomycin AUC for Serious MSRA Infections</b> Tom Lodise  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>describe the concerns associated with trough-only monitoring for patients with serious infections due to MRSA;</li> <li>discuss the rationale for AUC-guided dosing and monitoring to reduce kidney injury in patients with MRSA infections;</li> <li>illustrate the methods for vancomycin AUC estimation at the bedside for patients with serious MRSA infections.</li> </ul>
	<b>LINE 2</b>	<b>Initiating, Escalating, and De-escalating Antibiotics in the ICU Patient</b> Nick Daneman  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>discuss the importance of tailoring initial empiric therapy to the individual patient;</li> <li>describe the lack of data on approaches to antibiotic escalation;</li> <li>assess the evidence base for antibiotic de-escalation and the potential benefits of this approach.</li> </ul>
<b>Concurrent Sessions: Block 6</b>		
1:10 p.m. - 1:45 p.m.	<b>LINE 1</b>	<b>CAP Empiric Therapy and De-escalation Strategies</b> Srinivas Murthy

		<p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• review current evidence of CAP microbiology;</li> <li>• discuss empiric strategies for CAP;</li> <li>• apply de-escalation strategies for CAP.</li> </ul>
	<b>LINE 2</b>	<p><b>Use of Immunoglobulin Therapy for Infection/Sepsis in the ICU</b> Evangelos Giamarellos-Bourboulis</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• recognize the features of sepsis-induced immunosuppression;</li> <li>• assess treatment-associated differences in outcome in patients with sepsis and pneumonia;</li> <li>• recognize the adverse impact on outcome of infections by multidrug-resistant Gram-negative pathogens.</li> </ul>
<b>Concurrent Sessions: Block 7</b>		
1:50 p.m. - 2:25 p.m.	<b>LINE 1</b>	<p><b>HAP Empiric Therapy and De-escalation Strategies</b> Andre Kalil</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• discuss the importance of tailoring initial empiric therapy to the individual patient;</li> <li>• describe the lack of data on approaches to antibiotic escalation;</li> <li>• recognize the evidence base for antibiotic de-escalation and the potential benefits of this approach.</li> </ul>
	<b>LINE 2</b>	<p><b>New Perspectives on Severe Influenza and Non-influenza Respiratory Virus Infections</b> Nelson Lee</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• describe the epidemiology and disease burden of influenza and non-influenza respiratory virus infections (NIRV);</li> <li>• discuss the role and clinical utility of new diagnostic tools for influenza and NIRV;</li> <li>• assess the evidence and advances in antiviral treatments for severe respiratory virus infections and their limitations.</li> </ul>
2:25 p.m. - 2:35 p.m.		<b>Break</b>
<b>Concurrent Sessions: Block 8</b>		
2:35 p.m. - 3:10 p.m.	<b>LINE 1</b>	<p><b>Prolonged and Extended <math>\beta</math>-lactam Infusion for Critical Infections in ICU</b> Jason Roberts</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• describe the pharmacokinetic and pharmacodynamic justification for use of prolonged infusions of beta-lactam antimicrobials;</li> <li>• describe the patient groups in whom PI of beta-lactams should be prioritized;</li> <li>• describe considerations for optimal delivery of beta-lactams by PI including drug stability.</li> </ul>
	<b>LINE 2</b>	<p><b>How to Use Procalcitonin in the ICU</b> Gloria Vazquez-Grande</p>

		<p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• apply the best available evidence to the use of procalcitonin to guide antibiotic stewardship;</li> <li>• interpret procalcitonin values/trends depending the type of patient.</li> </ul>
<b>Concurrent Sessions: Block 9</b>		
3:15 p.m. – 3:50 p.m.	<b>LINE 1</b>	<p><b>Therapeutic Drug Monitoring in the ICU</b> Jason Roberts</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• describe patient groups most likely to benefit from antimicrobial dose optimization;</li> <li>• describe the organizational challenges with successfully implementing a therapeutic drug monitoring service;</li> <li>• describe current international approaches to delivering antimicrobial TDM in ICUs.</li> </ul>
	<b>LINE 2</b>	<p><b>Clinical Management Guidelines for Pandemics: Are They Worth the Effort?</b> Henry Masur</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• assess how guidelines are created;</li> <li>• recognize the infrastructure needed;</li> <li>• identify the research and work behind each recommendation.</li> </ul>
<b>Concurrent Sessions: Block 10</b>		
3:55 p.m. – 4:30 p.m.	<b>LINE 1</b>	<p><b>Emerging Rapid Molecular Microbiologic Diagnostic Technologies</b> Donna Wolk and Shravan Kethireddy</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• describe the current state of molecular diagnostics of serious infections;</li> <li>• discuss the future of informatics aligned with evidence-based diagnostic interventions;</li> <li>• explore the link between laboratory and critical care informatics.</li> </ul>
	<b>LINE 2</b>	<p><b>Antimicrobials In Critical Illness: How Fast Is Fast Enough?</b> Mike Klompas</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• critically analyze the literature on associations between time-to-antibiotic and mortality in sepsis;</li> <li>• describe how the association between time-to-antibiotics and outcomes may vary by clinical syndromes.</li> </ul>
<b>Concurrent Sessions: Block 11</b>		
4:35 p.m. - 5:10 p.m.	<b>LINE 1</b>	<p><b>Antimicrobials in Sepsis and Septic Shock: How Fast is Too Fast?</b> Chris Seymour</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• determine if antibiotics should be given rapidly to patients in sepsis;</li> <li>• understand which patients subgroups deserve antibiotic treatment right away.</li> </ul>
	<b>LINE 2</b>	<b>Primer on Coronavirus Infections in Humans</b>

	<p>Sylvain Lother</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• review coronavirus biology and its evolutionary potential as a zoonotic pathogen;</li> <li>• compare the clinical impact of SARS, MERS, and COVID-19.</li> </ul>
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## Friday, February 25, 2022

8:20 a.m. – 8:25 a.m. EST	<p><b>Delegates – Virtual Check-In</b></p>
8:25 a.m. – 8:30 a.m.	<p><b>Welcome</b></p> <p>Anand Kumar</p>
8:30 a.m. – 9:10 a.m.	<p><b>SARS</b></p> <p>Robert Fowler</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• identify effects on the patients, health workers and the healthcare system during outbreaks;</li> <li>• compare key differences among infectious outbreaks;</li> <li>• recognize the challenges in initiating clinical trials during outbreaks.</li> </ul> <p><b>MERS</b></p> <p>Yaseen Arabi</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• identify transmission patterns of MERS and the related epidemiological links that should raise the possibility of a diagnosis of MERS;</li> <li>• recognize the clinical and laboratory manifestations of severe MERS;</li> <li>• recognize the evidence base for therapeutics for severe MERS.</li> </ul>
9:10 a.m. - 9:40 a.m.	<p><b>Through a Glass Darkly: Measuring Prognosis in COVID-19</b></p> <p>Ryan Maves</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• review the limitations of older physiologic scoring systems, such as SOFA and NEWS, in assessing prognosis in severe COVID-19;</li> <li>• review the evidence underlying newer scoring systems for COVID-19 and to compare them with traditional means of assessing prognosis.</li> </ul>
9:40 a.m. - 10:10 a.m.	<p><b>COVID-19: The Pediatric Perspective</b></p> <p>Angela Bates</p> <p>At the end of this session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• describe the current landscape of COVID-19 in pediatric patients;</li> <li>• review common and rare manifestations of COVID-19 in pediatrics;</li> <li>• summarize current management of severe COVID-19 in pediatrics.</li> </ul>



10:10 a.m. - 10:40 a.m.	<b>Co-infections and Complications</b> Josh Douglas  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• identify COVID-19 hospitalized patients at risk of opportunistic infections based on local, regional and therapeutic factors;</li> <li>• describe the various pathogens based on organ system involvement, degree of host immunosuppression and time from symptom onset;</li> <li>• apply methods of screening for these pathogens to allow for early identification and management;</li> <li>• distinguish the complications that can arise from these pathogens in hospitalized patients.</li> </ul>
10:40 a.m. - 11:00 a.m.	<b>Break</b>
11:00 a.m. - 11:30 a.m.	<b>COVID-19 Vaccine Efficacy and Disease Severity among Immunocompromised Patients</b> Kelly MacDonald  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• recognize the degree and significance of decreased COVID-19 vaccine immune responsiveness among immunocompromised patients, and how best to overcome it;</li> <li>• recognize the specific immune conditions that present the highest risk for severe outcomes with COVID-19 and the best approaches for prophylaxis, pre-emptive therapy and treatment.</li> </ul>
11:30 a.m. - 12:00 p.m.	<b>Respiratory Injury and Mechanical Support</b> Salman Qureshi  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• describe the basic pathophysiology of Covid-19 ARDS;</li> <li>• identify acceptable invasive ventilatory strategies and targets for Covid-19 respiratory failure;</li> <li>• recognize the role of Extracorporeal Support for severe Covid-19 respiratory failure.</li> </ul>
12:00 p.m. - 1:00 p.m.	<b>Lunch</b>
1:00 p.m. - 1:30 p.m.	<b>The Nature of Extra-Pulmonary Organ Injury and Support</b> Ken Wood  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• review the pathophysiology of COVID-19;</li> <li>• apply the pathophysiology to specific organ systems;</li> <li>• discuss organ specific dysfunction and treatment.</li> </ul>
1:30 p.m. - 2:00 p.m.	<b>What We Know About Genetic, Clinical and Racial Predisposition</b> Ken Baillie  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• recognize the role of heritable features in susceptibility to infection;</li> <li>• describe the evidence in support of specific genetic variants in Covid-19;</li> <li>• distinguish the role of genetics in therapeutic development in critical illness.</li> </ul>



2:00 p.m. - 2:30 p.m.	<b>Heparin Therapy of COVID-19...Theory and Data</b> Ryan Zarychanski  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• discuss mechanisms of immunothrombosis in COVID-19;</li> <li>• summarize the rationale for the use of therapeutic-dose heparin in COVID-19;</li> <li>• demonstrate the evidence to support the use of therapeutic-dose heparin in patients with COVID-19 according to baseline severity of illness.</li> </ul>
2:30 p.m. - 2:45 p.m.	<b>Break</b>
2:45 p.m. - 3:15p.m.	<b>Inpatient Passive Immune Therapy for COVID-19</b> John Beigel  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• summarize the latest studies for anti-SARS-CoV-2 monoclonal antibodies and describe where these agents have the most benefit;</li> <li>• review the data for polyclonal antibodies for COVID-19 including IVIG and plasma.</li> </ul>
3:15 p.m. - 3:45 p.m.	<b>Immune Modulation Therapy of Severe COVID-19</b> Srinivas Murthy  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• review current biology on COVID19 immunopathogenesis;</li> <li>• discuss the latest evidence on the use of immunomodulators in COVID19;</li> <li>• describe what's next for COVID19 immunomodulation.</li> </ul>
3:45 p.m. - 4:15 p.m.	<b>Inpatient Antiviral Therapy for COVID-19</b> John Beigel  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• review the latest data on remdesivir, molnupiravir, and PF-07321332 in COVID-19;</li> <li>• discuss the populations where antivirals are likely to be most effective.</li> </ul>
4:15 p.m. – 4:55 p.m.	<b>COVID-19: Where We've Been and Where We're Going</b> Amesh Adalja  At the end of this session, participants will be able to: <ul style="list-style-type: none"> <li>• assess the context in which COVID-19 became a pandemic;</li> <li>• recognize how pandemic preparedness can be optimized with a new proactive focus.</li> </ul>
4:55 p.m. – 5:00 p.m.	<b>Closing Remarks</b>

*This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of The Royal College of Physicians and Surgeons of Canada, and approved by the CPD Medicine Program, University of Manitoba for a maximum of 13.5 hours.*

*Participants should only claim credit for the actual number of hours attended.*

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