COVID-19 & The Liver: The Trainee and Early Career Experience in Hepatology during COVID-19
Webinar Moderator

Bilal Hameed, MD

- Associate Professor of Medicine & Hepatology Clinic Chief, University of California, San Francisco
Webinar Agenda

• Housekeeping Items – Dr. Bilal Hameed
• Presenter & Panelist Introductions – Dr. Bilal Hameed
• Webinar Introduction – Dr. Bilal Hameed
• The Impact of COVID-19 on the Trainee Hepatology Educational Experience – Dr. Ani Kardashian
• Panel Discussion
• The Impact of COVID-19 on Hepatology Practice & Job Prospects – Dr. Vinay Sundaram
• Panel Discussion / Q&A
Webinar Q&A

• Submit your questions anytime during the webinar in the Q&A box at the top or bottom of your screen.

• Questions will be answered at the end of the presentations.
Webinar Presenter

Ani Kardashian, MD

• Transplant Hepatology Fellow
  07/2019-06/2020, University of California, San Francisco
Vinay Sundaram, MD, MSc

- Director, Hepatology Outcomes Research & Associate Professor of Medicine, Cedars-Sinai Medical Center
- Chair-Elect, AASLD Membership & Mentorship Committee
Charissa Y. Chang, MD
• Icahn School of Medicine at Mount Sinai (ISMMS)

Hersh Shroff, MD, MPA
• Northwestern University - McGaw Medical Center

Alyson N. Fox, MD
• Columbia University Medical Center

Jorge A. Marrero, MD, FAASLD
• University of Texas Southwestern Medical Center

Eric Esrailian, MD, MPH
• David Geffen School of Medicine at UCLA
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Bilal Hameed, MD
Associate Professor of Medicine
Clinic Chief, Hepatology
University of California, San Francisco

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COVID-19 Cases are Increasing in US

In the United States:
- 5.5+ million cases
- 1.7K+ deaths

Source: John Hopkins University
Which of the following issues concerns you as a result of COVID-19?
Which of your educational activities has been most impacted due to COVID-19

- Clinical activities
- Teaching/lectures
- Procedures
The Impact of COVID-19 on the Trainee Hepatology Educational Experience

Ani Kardashian, MD
Transplant Hepatology Fellow 07/2019-06/2020
University of California, San Francisco
Disclosures

None
Overview

• Educational experience pre- versus mid-pandemic
  • Inpatient and outpatient clinical rotations
  • Procedures
  • Formal didactics
Changes in Inpatient Clinical Rotations

**Pre-pandemic**
- Pre-rounding by intern/nurse practitioner and fellow responsible
- Multidisciplinary in-person sit rounds to form preliminary plans
- Bedside rounds with entire team to confirm daily plans

**Pandemic**
- Pre-rounding by intern/nurse practitioner and fellow responsible
- Rounds performed via Zoom videoconferencing to form prelim plans
- Attending only sees patient to confirm daily plans
Changes in Outpatient Clinics: New Workflow

1. See patient
   - Zoom room: Fellow, Patient
   - Waiting room: Attending

2. Staff case with attending
   - Zoom room: Attending
   - Waiting room: Patient

3. Bring patient back in
   - Zoom room: Fellow, Patient
Changes in Procedures

No fellow involvement for outpatient or inpatient procedures

Fellows re-started endoscopies and liver biopsies

March 2020

April 2020

May 2020

June 2020
Comparison of trainee-reported number of supervised procedures

** = P<0.001
Changes in Didactics

Pre-pandemic

Fellow core lecture series, journal clubs, Grand Rounds, Morbidity & Mortality conferences

Pandemic

Zoom
Wellbeing

• Weekly check-ins with PD and Associate PD
  • To provide feedback on programmatic changes
  • To discuss educational experiences, safety, re-deployment to other services

• Maintaining connections with friends, family, faculty
## Future Directions and New Opportunities

<table>
<thead>
<tr>
<th>Affected area</th>
<th>New opportunities for learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient rotations</td>
<td>• Assess when physical exam may change management</td>
</tr>
<tr>
<td>Outpatient clinics</td>
<td>• Become effective in telemedicine and billing</td>
</tr>
<tr>
<td></td>
<td>• Learn to triage urgency of clinic visit</td>
</tr>
<tr>
<td>Procedures</td>
<td>• Learn to triage urgency of endoscopies and liver biopsies</td>
</tr>
<tr>
<td>Didactics</td>
<td>• Virtual conferences are accessible to broader audience</td>
</tr>
<tr>
<td></td>
<td>• More opportunities for formal teaching with greater ease</td>
</tr>
</tbody>
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Table adapted from Shah *GIE* 2020
Please submit your questions to the Q&A Chat now.

Panel Discussion
Impact of COVID-19 on hepatology practice and job prospects

Vinay Sundaram, MD, MSc
Director, Hepatology Outcomes Research
Associate Professor of Medicine
Cedars-Sinai Medical Center
Disclosures

Vinay Sundaram is on the speaker’s bureau for Gilead, Abbvie, Intercept and Salix
Clinical Demand for Hepatology

• Estimation of 4.5 million adults with chronic liver disease in US

• Despite significant advances in the treatment of hepatitis C, the prevalence of liver disease expected to rise

• Study by AASLD performed to assess current and future demand for hepatology
Main findings

• Prevalence of liver disease expected to increase by 33% between 2018-2033, primarily driven by rise in NAFLD

• There will be a significant and widening deficit of adult and pediatric hepatologists over the next 15 years

• Significant maldistribution of hepatologists away from rural areas, leading to potential for private practice in certain regions
<table>
<thead>
<tr>
<th>Demand</th>
<th>Baseline</th>
<th>2023</th>
<th>2028</th>
<th>2033</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected supply</td>
<td>6,132</td>
<td>5,694</td>
<td>4,942</td>
<td>4,279</td>
</tr>
<tr>
<td>Projected Need</td>
<td>6,010</td>
<td>6,345</td>
<td>6,408</td>
<td>6,592</td>
</tr>
<tr>
<td>Excess Demand</td>
<td>122</td>
<td>-651</td>
<td>-1,466</td>
<td>-2,313</td>
</tr>
<tr>
<td>Percent deficit</td>
<td>-10.1%</td>
<td>-22.9%</td>
<td>-35.1%</td>
<td></td>
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</tbody>
</table>
Impact of COVID on GI practice

• Survey of 73 individuals across 62 US and 11 Canadian centers

• 63/73 centers were academic/teaching hospitals

• Responses submitted in March/April 2020
Changes in Endoscopy

• 65% of centers were operating at ≤10% of their normal volume.

• 25% of centers were operating at 25% of normal volume.

• 97% of centers had postponed elective procedures, including screening colonoscopies.
A

Percentage of respondents (N = 71)

No defined plan
Adding weekends or evenings
Stool-based CRC screening
Hiring additional staff
Endoscopy/clinic ratio adjustments
Increase room/resource capabilities

Forbes and Smith et al. Gastroenterology, 2020
Changes in Clinical Practice

• 55% of centers had partially closed clinics

• 21% of centers had fully closed their clinics

• 47% of centers had changed clinics to operate at > 75% via telemedicine
Percentage of ambulatory clinic visits being performed via telemedicine
Summary

• Although COVID has negatively impacted the practice and finances of gastroenterology overall, the demand for hepatology remains high.

• As hepatology is more visit based rather than procedural, clinic volume can remain high.
  • Cedars Sinai: Work RVU’s for hepatology increased compared to 1 year ago.

• Liver transplantation is not an elective procedure but a life-saving surgery, and therefore transplant volume will likely remain stable.
Please submit your questions to the Q&A Chat now.

Panel Discussion