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# MEDHACKS

*Johns Hopkins Medical Campus | September 8-10*



JOHNS HOPKINS  
UNIVERSITY

## INFORMATION PACKET

# Welcome

## ***Dear MedHacks 2017 Participant,***

Welcome! We at MedHacks are excited to host you for the third annual MedHacks medical and healthcare hackathon at the Johns Hopkins University, from September 8th to September 10th 2017.

We are currently putting the finishing touches on preparations for the event, and are looking forward to an exciting weekend of problem solving, teamwork, and hacking. Let's will change the way we look at medicine and technology together!

To help you make the most of your time at MedHacks, please review the information in this packet. Included are answers to a variety of questions about accommodations, food arrangements, and the schedule for the weekend.

As the MedHacks weekend gets closer, pay attention to our website, Facebook Hackers group, and twitter for updates and final details. As always, we are happy to answer any questions via email at [info@medhacks.org](mailto:info@medhacks.org).

Looking forward to seeing you on campus!

Best,

### **The MedHacks Team**

*[medhacks.org](http://medhacks.org)*

*[facebook.com/medhacks](https://facebook.com/medhacks)*

*[twitter.com/medhacks](https://twitter.com/medhacks)*

*[instagram.com/medhacks](https://instagram.com/medhacks)*

# FAQs

## ***What is a medical hackathon?***

Drawing on the increasingly popular concept of hackathons, MedHacks challenges innovators to design solutions to the most pressing medical issues of our day, all within 36 hours. Hackers will work (and play) in interdisciplinary teams over the weekend, utilizing the unique skill sets of each team member to build the best solution to a critical medical problem. Along the way, hackers will eat together, code together, learn together, and design together before presenting their finished product (together) to a panel of judges.

## ***Why MedHacks?***

MedHacks is a student-run event that focuses on innovating at the crossroads of medical entrepreneurship and technological development. By working hand in hand with students from various disciplines and mentors from the forefront of medicine and technology, hackers at MedHacks will gain unique opportunities to learn and to integrate their learning into real solutions to pressing medical challenges.

## ***Transportation***

### ***Where is MedHacks being held?***

MedHacks 2017 will be held on the Johns Hopkins Medical Campus in the Ross Research Building and Turner Auditorium. The exact address is 720 Rutland Avenue, Baltimore, MD 21205.

### ***How do I get to MedHacks?***

For students coming from the Johns Hopkins Homewood campus, we recommend taking the MedHacks shuttle or the free JHMI shuttle. or students coming from Baltimore-area schools, we recommend taking the free CollegeTown Shuttle or the free UMD bus that we have arranged. For students coming from DC-area schools, we highly recommend taking the MARC train to Penn Station. Students arriving at Penn Station (serviced by MARC and Amtrak trains) can take either the free JHMI shuttle, the Charm City Circulator (pick-up and drop-off locations), or a taxi/Uber to campus. For students arriving at BWI airport, we recommend taking a taxi/Uber to campus (~\$30 one-way).

# FAQs cont.

## ***MedHacks shuttle information (Homewood/Medical Campus):***

***9/8 going to MedHacks*** - buses depart from MSE library (top of the Beach) at 5 pm, 5:30 pm, 6 pm

***9/10 departing MedHacks*** - buses depart from the Hospital at 5 pm, 6 pm (2x)

## ***UMD bus information:***

There is ONLY space for 56 PEOPLE, so it is first come, first serve! At UMD, the bus will pick up hackers at parking lot XX2, next to the Energy Research Building. The official address is 8279 Paint Branch Dr, College Park, MD 20740.

***Departing to MedHacks:*** the bus will arrive at 3:00 PM and depart at 3:30PM.

***Leaving MedHacks:*** the bus will leave at 5:00 PM after the closing ceremony.

## ***Is there parking available?***

For those who wish to drive to MedHacks, there is free parking available at the Washington Street Parking Garage, 701 N Washington St, Baltimore, MD 21205. The parking garage closes at MIDNIGHT on Friday and is open FREE of charge on Saturdays and Sundays from 7am - 7pm, both Saturday and Sunday. We repeat, parking is FREE, you just HAVE to pull a ticket on entry Friday and drive out on Saturday or Sunday before 7pm. The gates will be raised on the weekend.

## ***The Event***

### ***Who is participating in MedHacks?***

Talented students and professionals at MedHacks 2017 come from all over the world with a wide variety of backgrounds and disciplines. Some are industry experts, others students – but everyone shares a commitment to changing the future of health.

### ***Am I working alone?***

Of course not! Participating at MedHacks means working alongside some of the best and brightest from all over the country. We encourage that you come to MedHacks without a prearranged team - instead, meet hackers with similar interests and goals. There will be solution/problem pitching sessions to aid in your team formation. The current team size limit is 5 people, but if you think you need a larger team, talk to a team members on site.



# FAQs cont.

## ***What can I win?***

MedHacks is not about winning - it's about learning, having fun, and starting the renaissance of medical innovation! However, if you're really passionate about winning, don't worry! Winners will be chosen by a judging panel based on criteria such as technical difficulty, creativity, and impact. Many sponsors will also give out cool prizes for hacks that excel in specific categories.

## ***Who else will be at MedHacks?***

We are excited to be hosting two amazing keynote speakers at MedHacks 2017 - Dr. Peter Pronovost, director and founder of the Johns Hopkins Armstrong Institute for Patient Safety and Quality, and Benjamin Jealous, a candidate for governor of Maryland and the former president and CEO of the NAACP. We also have a great group of mentors and judges including, but not limited to, Landon King, the executive vice dean of the Johns Hopkins School of Medicine, Patricia Davidson, the dean of the Johns Hopkins School of Nursing, and Jeff Keating, the senior vice president of Engineering of Healthcare and Education at Elsevier.

## ***What are the tracks & how do I choose one?***

This year, the projects created at MedHacks will fall under three tracks - Medication Adherence, sponsored by CVS Health, Access to Care, sponsored by Blue Cross Blue Shield, and Patient Safety and Quality, sponsored by the Johns Hopkins Armstrong Institute. We will have an idea pitching session for each track, and teams will submit projects to one of the three tracks. The top two winners in each track will be eligible for the MedHacks grand prizes, and additionally, the first-place winner of each track will win track-specific prizes.

### **Medication Adherence - CVS Health**

1 in 2 Americans has a chronic condition such as Diabetes or Asthma and will face 5x the healthcare costs of someone who doesn't. One of the best ways to help patients manage their health and keep costs in line is to effectively treat and manage their chronic conditions including managing their prescribed medication regimen. Yes 25% of patients who are prescribed a medication never pick up the first fill and among those who do, 50% will stop taking the medication within the first year. This leads to more hospital admissions, poor health, and adverse events like heart attacks. CVS is committed to helping patients solve this challenge.

The causes of non-adherence are varied and specific to patients' circumstances. Some patients may be forgetful and skip doses or neglect to order/pick up refills; others may not realize what health benefit their medications will drive; some may struggle with cost concerns or have so many medications that they find it difficult to keep track of them all.

In each of these areas CVS Health has existing programs that make tremendous progress towards improving medication adherence, but the issue of poor medication adherence persists. CVS Health wants your help in ideating and developing new programs and services to solve the adherence challenge and keep patients on their path to better health.



# FAQs cont.

## Access to Care - Blue Cross Blue Shield

Blue Cross Blue Shield believes that very often, your zip code is a greater determinant of your health than your genetic code. If you live in an area where accessing necessary care is hard or even impossible, your health will reflect that. In an attempt to eliminate the social and regional determinants from one's health, Blue Cross Blue Shield has made many strategic moves including a partnership with Lyft to help patients get to their necessary appointments.

And now, Blue Cross Blue Shield challenges you - the hackers of MedHacks 2017 - to come up with your own solutions the problem of accessing care. Several Blue Cross Blue Shield members will be present at MedHacks to help you along the way.

## Patient Safety and Quality - The Armstrong Institute

The Armstrong Institute's goal is to eliminate preventable harm to patients and to achieve the best patient outcomes at the lowest cost possible, and then to share knowledge of how to achieve this goal with the world.

Help us reach this goal by participating in this special track within MedHacks. The three focus areas that are being highlighted in this track this year include:

- 1) Enhancing Patient Experience
- 2) Improving Healthcare Productivity
- 3) Decreasing Healthcare Costs

## Logistics

### Slack

MedHacks will use Slack as another channel of communication, as well as a mentor portal. Each of the channels have a specific purpose in their description ie #questions is for any logistical questions you might have for MedHacks organizers. You can join the channel at <http://tinyurl.com/medhacks2017slack>.

### Mentor Portal

MedHacks has a dedicated mentor portfolio that can be accessed at <https://goo.gl/xJu7MN>. It has their availability and skill set described. You can use the channel in Slack called #findamentor to ask for mentors or directly message them on slack for more pressing questions. Again, please remember that mentors availability varies throughout the weekend and they may not be checking slack throughout. You can also walk to the genius bar and talk to available mentors there.

### Project Submissions

All submissions are due on September 10th at 10:30:00 AM EST. Late submissions can not be accepted. The link is [medhacks2017.devpost.com](http://medhacks2017.devpost.com). If you are having issues submitting, talk to a MedHacks organizer or speak with devpost support on the #devpost\_support channel on Slack.



# Schedule

## Friday- September 8th, 2017

### 5:00 PM - 6:00 PM

Individual student/participant registration  
Sponsor Fair

### 6:00 PM - 7:30 PM

Opening Ceremony  
Remarks from Keynote Speaker **Dr. Peter Pronovost**, Director of the Armstrong Institute for Patient Safety & Quality  
Remarks from Keynote Speaker **Benjamin Jealous**, Maryland Government Candidate, former CEO of NAACP, and Senior Partner with Kapor Capital  
Remarks from MLH

### 7:30 PM - 8:30 PM

Dinner

### 8:30 PM - 10:00 PM

Problem Pitching Session (Broken up by Project Track)  
Remarks from Title Sponsor of Project Track (Video and In Person)

### 9:30 PM

Team Registration

### 10:00 PM

Hacking Begins

## Saturday- September 9th, 2017

### 8:30 AM

Breakfast

# Schedule cont.

**10:30 AM - 11:30 AM**

**Workshop:** Building Android Apps without Coding using *Sketchware*

**12:00 PM**

Lunch

**1:00 PM - 2:00 PM**

**Workshop:** Unlock the Potential of Virtual Reality with the *HTC Vive*

**2:00 PM - 3:00 PM**

**Workshop:** How to Land Awesome Startup Jobs in Silicon Valley and Beyond

**3:00 PM - 4:00 PM**

**Workshop:** Insights into the Medical Device Development Process

**4:00 PM - 5:00 PM**

**Workshop:** Evaluating the Innovation and Design Process with *Oracle*

**6:00 PM - 7:00 PM**

**Workshop:** Harnessing the Power of Machine Learning in *iOS* using *CoreML*

**6:30 PM**

Dinner

Team Registration Due

**7:00 PM - 8:00 PM**

**Workshop:** *JHTV* resources for Student Entrepreneurs at JHU

**8:00 PM - 9:00 PM**

**Workshop:** Applying Arduino for Medical Applications with *HMDN*

# Schedule cont.

## Sunday- September 10th, 2017

**8:30 AM**

Breakfast

**10:00 AM**

Hacking ends

**9:30 AM - 10:30 AM**

**Workshop:** Pitching 101 with *Texas Medical Center*

**10:30 AM - 1:00 PM**

Preliminary Round of Judging (Separated by Project Category)

**1:00 PM - 1:30 PM**

Judges/MedHacks Team decide winners to move onto next round

**1:00 PM**

Lunch

**1:30 PM - 2:00 PM**

Teams in final round have time to practice  
Teams not moving on can look at each other's projects

**2:00 PM - 3:00 PM**

Final round judging  
Likely will be 6 teams, 5 min presentation, 3 min questions, 2 min rotation

**3:00 PM - 4:00 PM**

Closing Ceremony  
Judges will choose winners during first half of closing ceremony  
Award the top 3 teams  
Team Photoshoot in front of sponsor backdrop

Note: this schedule is abbreviated and subject to change. Please see <http://medhacks.org/medhacks2017.html> for the most updated schedule.



# Resources

## MedHacks Website

The most up-to-date information on the event, schedule details, sponsors, and more! [www.medhacks.org](http://www.medhacks.org) and <http://medhacks.org/medhacks2017.html>

## Facebook

Connect with other participants and start brainstorming your medical innovation!  
[www.facebook.com/medhacks](http://www.facebook.com/medhacks)

## Twitter

Updates on sponsors, hardware, and the latest news in biotech!  
[www.twitter.com/medhacks](http://www.twitter.com/medhacks)

## Instagram

See live pictures from our event and get featured with the use of #medhacks2017  
[www.instagram.com/medhacks](http://www.instagram.com/medhacks)

## Campus Map



# Building Blueprint

- ★ Turner Auditorium
- Concourse
- Tilghman
- ★ West Room
- Miles Room
- G01-G07

