



# **OHSU Board of Directors Meeting**

**Friday, May 22, 2020  
1:00-2:30pm**

**Please follow the link below for the OHSU Public Board of Directors meeting**

**<https://echo360.org/section/f1dda44c-b956-478d-b904-5d6968abbec8/public>**

Callers will be muted and will only hear the audio from the public meeting:

1-503-907-9144

Access Code: 922 624 682



**OREGON HEALTH & SCIENCE UNIVERSITY  
BOARD OF DIRECTORS MEETING  
Public Agenda**

**Friday, May 22, 2020  
1:00-2:30pm**

Live Echo360 link

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1:00pm	Call to Order/ Chairman's Comments President's Comments Approval of Minutes from March 27, 2020 <b>(ACTION)</b>	Wayne Monfries Danny Jacobs, MD Wayne Monfries
1:10pm	April Financial Results and FY21 Preliminary Budget Plan	Lawrence Furnstahl
1:30pm	State Budget Environment	David Robinson, PhD Abby Tibbs, JD
1:50pm	Bringing Back Research at OHSU	Peter Barr Gillespie, PhD
2:10pm	Key to Oregon Study	Jackie Shannon, PhD Paul Spellman, PhD
2:30pm	Meeting adjourned	

**Oregon Health & Science University  
Board of Directors Meeting  
March 27, 2020  
WebEx/ECHO 360 virtual live meeting**

Following due notice to the public, the regular meeting of the Board of Directors of Oregon Health & Science University (OHSU) was held at 11:00am via a virtual WebEx and Echo360 live link.

A transcript of the audio recording was made of these proceedings. The recording and transcript are both available by contacting the Secretary of the Board at 3225 SW Pavilion Loop, Mail Code L101, Portland, Oregon 97239. The following written minutes constitute a summary of the proceedings.

**Attendance**

Board members in virtual attendance were, Danny Jacobs, MD, Wayne Monfries, Chad Paulson, Lubna Khan, Steve Zika, Stacy Chamberlain, Prashant Dubey, Amy Tykeson and Ruth Beyer. OHSU staff presenting material on the agenda were Lawrence Furnstahl, Renee Edwards, MD, Peter Graven, PhD and Peter Barr-Gillespie, PhD. Connie Seeley, Secretary of the Board and Alice Cuprill-Comas, Assistant Secretary of the Board, were in virtual attendance as well as other OHSU staff members and members of the public.

**Call to Order**

*Wayne Monfries*

Mr. Wayne Monfries, Chair of the OHSU Board of Directors, called the public meeting to order at 11:08am and welcomed all those in attendance.

**Chairman's Comments**

*Wayne Monfries*

Mr. Monfries opened by welcoming everyone to OHSU's first completely virtual board meeting. He proceeded by sending thoughts and prayers to all who had been impacted by COVID-19. He reviewed the agenda and reiterated the bulk of the meeting would be topics covering COVID-19. He said he was proud to be associated with OHSU and the critical services being provided to the community. He thanked Dr. Danny Jacobs and other leaders for their leadership through this trying ordeal. He concluded by providing instructions on the virtual meeting protocol and then turned the meeting over to Dr. Jacobs.

## **President's Comments**

*Danny Jacobs, MD*

Dr. Danny Jacobs acknowledged how OHSU's last meeting a few months earlier was filled with talk of OHSU's successes in 2019 and plans they had for 2020 and then how quickly the university and state were addressing a health crisis of historic proportions. He mentioned the governors stay at home order and stated OHSU had moved to Modified Operations. He sadly announced the tough decision to cancel the 2020 commencement ceremony, however stated they were looking for alternative ways to recognize the career milestone for graduates. He also mentioned it was unsettling to contemplate the slow down and halting of research programs, however he said, the health of patients, healthcare workers, the community and others was paramount with the enormous challenges ahead.

He spoke of the extraordinary work being done across the institution and acknowledged multiple individuals and departments going above and beyond, including, the information technology group, MD and Nursing Students, the teaching and learning center, Dr. John Hunter, Dr. Renee Edwards and Dr. Brian Drucker just to name a few. He mentioned the support from OHSU's community Partners and thanked them for their generous donations.

He closed his comments by reminding everyone to stay home to save lives. The meeting was turned back over to Chair Monfries for the approval of the January 31, 2020 minutes.

## **Approval of Minutes**

*Wayne Monfries*

Mr. Monfries asked for approval of the minutes from the January 31, 2020 OHSU Public Board meeting. Upon motion duly made by Danny Jacobs and seconded by Lubna Kahn, the minutes were approved by all Board members in attendance.

## **COVID-19 Modeling**

*Peter Graven, PhD*

Mr. Monfries recognized Peter Graven, PhD, Healthcare Data Science Lead

Dr. Graven gave an overview of the COVID-19 modeling plan that they had been working on tirelessly to prepare. He stated numbers are critical in times of uncertainty. He discussed work that had been done, additional work that was currently happening and next steps needed in order for a positive outcome for Oregon and OHSU. He spoke about hospital demand, ICU services, virus curves and patterns and projections and interventions.

Board members asked Dr. Graven for additional information on non-pharmaceutical interventions, virus testing, Oregon's restrictions compared to other states, operational

information sharing programs and health issues and drug abuse related to the COVID-19 health crisis.

### **COVID-19 Preparation**

*Renee Edwards, MD*

Mr. Monfries recognized Renee Edwards, MD, MBA, SVP, Chief Medical Officer, OHSU Healthcare

Dr. Edwards provided an overview of OHSU's COVID-19 preparations and projected hospital capacity needs. She discussed the formation of OHSU's Incident Command, organized to prepare OHSU for the surge in patients that will require care. She discussed how Dr. Graven's modeling and projections have helped OHSU accomplish what they need to plan for. She spoke about the number of ICU beds and projections related to ICU care and as a result they are working hard to develop a critical care surge plan. She discussed the increase in the technology platform for telemedicine and telehealth services for Oregonians. She covered inpatient care and the purchasing of additional ventilators and also spoke about the supply chain of PPE for healthcare workers. She also spoke about the opening of a full COVID-19 testing lab in conjunction with the pathology department and laboratory directors. She closed her presentation by saying they are working hard to prepare for the surge and emphasized it is a community effort by every single Oregonian to endorse the governor's social distancing measures to slow the spread of the virus.

Board members asked Dr. Edwards for additional information regarding PPE, mental health for frontline workers, contact testing, EVS and food transportation, offsite housing and ventilators.

### **Meeting the Financial Impact from COVID-19**

*Lawrence Furnstahl*

Mr. Monfries recognized Lawrence Furnstahl, EVP and Chief Financial Officer

Mr. Furnstahl gave an overview of OHSU's Financial Impact from COVID-19 and the CARES act passed by congress and its impact on OHSU's financial estimates. He spoke of OHSU's strong financial condition coming into the pandemic including the refinancing of debt and the AA bond rating and the financial strength it represented. He proceeded covering approval of a line of credit, projected financial estimates and processes required to maintain OHSU's financial budget throughout the crisis.

There were no questions from the board members.

### **Approval for Line of Credit**

Mr. Monfries presented OHSU Board Resolution 2020-03-01 to approve a Line of Credit.

### **OHSU Board Resolution 2020-03-01, Approval for Line of Credit**

Mr. Monfries asked for a motion to adopt Resolution 2020-03-01. Amy Tykeson moved to approve the motion. Lubna Khan seconded the motion and it was approved by all OHSU Board members in attendance.

### **Research Community Response to COVID-19**

*Peter Barr-Gillespie*

Mr. Monfries recognized Peter Barr-Gillespie, PhD, EVP, Chief Research Officer

Dr. Barr-Gillespie gave a summary of the Research communities' response to COVID-19. He mentioned they had shut down over 1000 laboratories at OHSU to preserve resources and for the safety of the research community. He spoke of the devastating impact it will have on many of the special models and voiced that research after COVID-19 at OHSU would not be the same. He said it could take many months to many years to get the experiments up and going again. He closed by saying the research community is resilient and will work together to navigate the new landscape.

Board members asked Dr. Barr-Gillespie for additional information on research for antivirals, vaccines and antibody testing.

### **Adjournment**

*Wayne Monfries*

Hearing no further business for discussion, Mr. Monfries thanked all of the Board members and presenters for their participation. The meeting was adjourned at 12:58pm.

Respectfully submitted,

Connie Seeley  
Secretary of the Board



# Financial Impact of COVID-19 & Recession: April Results & FY21 Preliminary Budget

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OHSU Board of Directors / May 22, 2020

# Preparing for FY21 and Beyond

- The Why:

- COVID-19 is causing devastating impacts to health care systems and our communities, with economic and social repercussions of historic proportions
- OHSU, like many other organizations, is working to create a viable path forward to recover from the resulting financial losses and prepare for a global recession
- While we need to take significant measures to correct our path, we want to emphasize that our people are our priority, and our objective is to do everything possible to avoid a major reduction in force while planning for an uncertain future.

- Approach:

- Hope for the “better” but plan for the “worse”
  - Be proactive to avoid falling behind the curve
  - Assume modified operations ease in stages over several months, perhaps with a second wave of COVID-19
  - Followed by a severe U-shaped recession.
- *This document reviews the financial impact of COVID-19 in March and April, then provides a base case (or “most likely”) projection for FY21 and FY22, with upside and downside scenarios. The base case forms the FY21 preliminary budget plan.*

# Applying OHSU 2025 Plan: Putting People First



*5,300 OHSU members contributed to the OHSU 2025 future picture with 6 goals*

# Human Resources Response to COVID-19

- On March 13<sup>th</sup> President Jacobs announced these commitments to OHSU members:
  - Maintaining a full workforce with full pay and benefits, regardless of how or when operations and schedules are modified, through June 30.
  - Providing 14 days of sick leave for those who have exhausted their sick time.
  - \$1 million hardship fund for employees facing extreme hardship from the pandemic.
- On Monday, March 16<sup>th</sup> OHSU began mandatory telework for those who are able.
- On Monday, March 23<sup>rd</sup> “modified operations” began for all OHSU:
  - All non-critical function employees are prohibited from working at OHSU locations.
  - Those whose positions allow for telecommuting are already working remotely.
  - Individuals in positions where telecommuting is not an option, will not work.
- We began giving a two-pronged budget message:
  - Every hire and expenditure required for COVID-19 response must go forward,
  - While hires and expenditures not required for COVID-19 should be deferred.

# Financial Impact from COVID-19 So Far

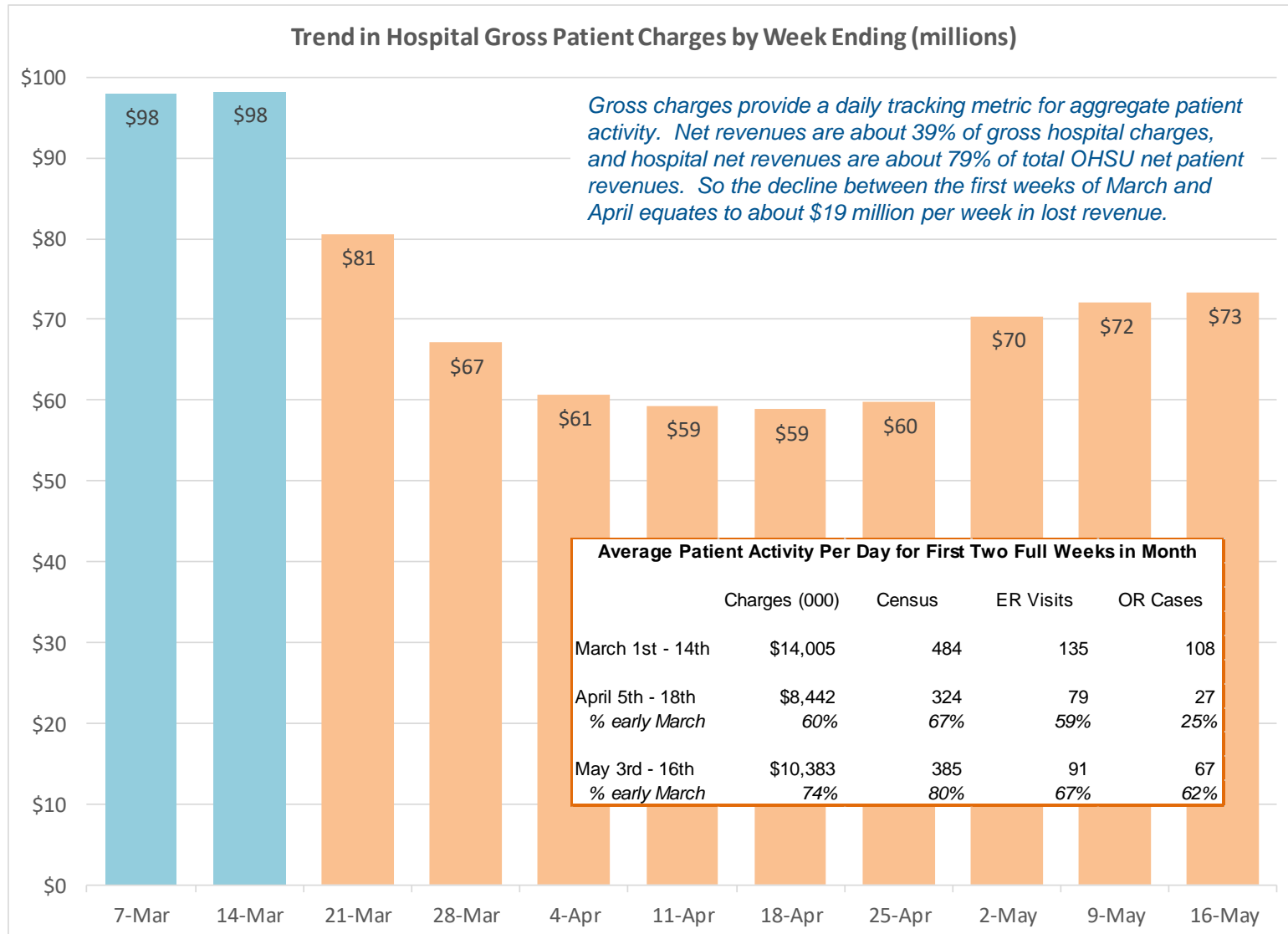
- The impact on OHSU's revenues and expenses depends on the extent and duration of the outbreak and subsequent recession, the success of government-imposed emergency measures, fiscal and monetary policy, and public response.
- At the end of March, the OHSU Board reviewed a first estimate of the financial impact of modified operations: a \$50 million per month decline in earnings from prior trend, before recoveries from the CARES Act, other government aid or OHSU's insurance.
- This relied on the assumption that cancelled procedures would be partially backfilled by a surge of COVID-19 patients, albeit at a lower dollar value.
- To date, Oregon was been successful at avoiding a major COVID-19 surge:
  - Only four states have fewer reported cases per capita than Oregon.
  - In the first two weeks of March, OHSU's census averaged 484 inpatients per day.
  - By the first full week of April, census was 324, a net decline of 160 patients per day, of which an average of 10 had COVID-19.
  - While very good news clinically and operationally, it is negative financially.
  - In the first two full weeks of May, with resumption of elective procedures, census has partially recovered to 385.

# April Patient Activity Down -40% from February

- The table below summarizes actual patient activity at OHSU Hospital for February, March and April compared to budget.
- The red line shows the swing in budget variance from February to April. For example, inpatient gross charges were 3.7% above budget in February, but -31.0% below budget in April, for a negative swing in seasonally-adjusted activity of -34.7%.
- Overall hospital activity is down nearly -40%. Census is down -35%, ER visits -44% and surgical cases -69%. Pharmacy sales are holding up the best, down only -15%.

Patient Activity Trend	Hospital Gross Charges (millions)				Average Census	ER Visits	Surgical Cases
	Inpatient	Outpatient	Pharmacy	Total			
Feb actual	\$180	\$136	\$70	\$386	490	3,881	2,828
Feb budget	174	136	62	371	462	3,846	2,878
<i>Feb act / bdg</i>	3.7%	0.2%	13.3%	4.0%	6.1%	0.9%	-1.7%
Mar actual	171	119	81	372	430	3,470	2,164
Mar budget	192	156	71	418	462	4,382	3,315
<i>Mar act / bdg</i>	-10.9%	-23.2%	14.1%	-11.2%	-6.9%	-20.8%	-34.7%
Apr actual	128	68	71	266	332	2,407	965
Apr budget	185	157	72	414	468	4,239	3,297
<i>Apr act / bdg</i>	-31.0%	-57.0%	-1.9%	-35.8%	-29.1%	-43.2%	-70.7%
<i>Feb-Apr swing</i>	-34.7%	-57.2%	-15.3%	-39.8%	-35.1%	-44.1%	-69.0%

# Trend in Patient Activity: Partial Recovery in May



# February YTD, March & April Financial Results

- Through February, OHSU recorded \$11 million per month in operating income.
- March is normally a strong month. With a partial month's impact from COVID-19, the March operating loss was \$(23) million, \$(34) million below the February YTD run-rate and \$(39) million below budget.
- With a full month's impact, April's loss was \$(68) million, \$(84) million worse than budget, and bringing year-to-date earnings to zero, prior to CARES Act recoveries.
- Patient activity is beginning to recover in May with resumption of elective procedures; April should be the bottom.

<b>FY20 Revenue &amp; Expense</b> (millions)	February YTD	February / 8 Months	March Month	April Month	April YTD
Net patient revenue	\$1,589	\$199	\$183	\$128	\$1,899
All other revenues	765	96	99	92	955
<b>Total revenue</b>	<b>2,353</b>	<b>294</b>	<b>282</b>	<b>220</b>	<b>2,855</b>
<i>% change from Feb average</i>			-4%	-25%	
<b>Total expense</b>	<b>2,262</b>	<b>283</b>	<b>305</b>	<b>288</b>	<b>2,855</b>
<i>% change from Feb average</i>			8%	2%	
<b>Operating income (loss)</b>	<b>91</b>	<b>11</b>	<b>(23)</b>	<b>(68)</b>	<b>(0)</b>
Budgeted operating income	72	9	16	16	103
<i>Variance from budget</i>	<b>\$20</b>	<b>\$2</b>	<b>\$(39)</b>	<b>\$(84)</b>	<b>\$(103)</b>

# Federal Support, Liquidity & Investment Returns

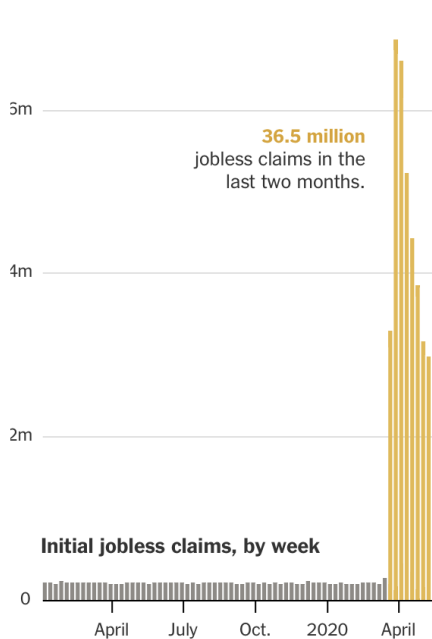
- Because OHSU collects patient revenues on an average 60-day cycle, the cash impact of COVID-19 modified operations will not hit until mid-May. Investment losses on OHSU-held cash & investments during March were largely reversed in April.
- In April, OHSU received \$189 million in federal cash support from the initial CARES Act grants to healthcare providers, as well as short-term interest free loans in the form of Medicare payment advances and deferral of FICA taxes.
- We currently estimate that OHSU will receive \$84 million in government grant support, plus \$10 million to Hillsboro Medical Center.

OHSU-Held Cash & Investments	
6/30/19 (millions)	\$1,182.0
4/30/20 before federal support	1,264.6
CARES Act grants to OHSU	36.8
Medicare advances	145.4
FICA deferrals	7.2
4/30/20 after federal support	\$1,454.0
Investment Return on OHSU-Held Funds	
February YTD (millions)	\$32.5
February monthly average	4.1
March month	(27.9)
April month	24.6
April YTD	\$29.2

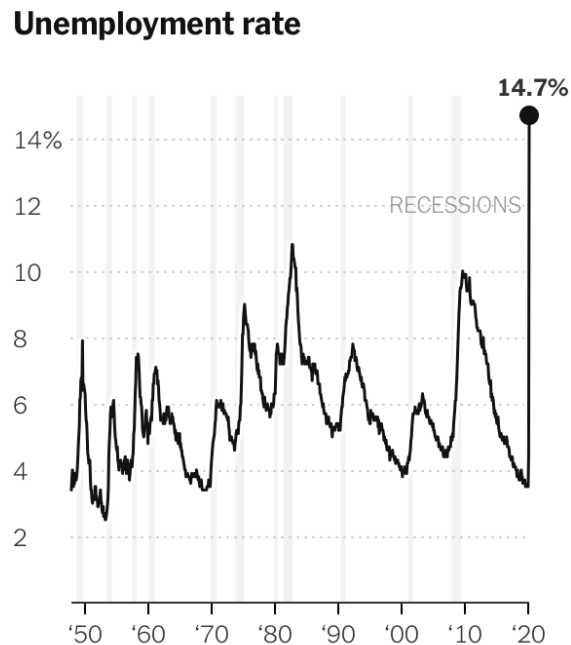
# Recession Impact

- After the COVID-19 "modified operations" period (and its net loss) eases, we expect ongoing negative impact from a global recession during FY21 and FY22.
- There is growing consensus that the downturn will be very sharp: unemployment rose from 3.5% in February to 14.7% in April, the highest since the Great Depression.
- There are a wide range of views on how long this recession will last, although the trend is away from a quick V-shaped recovery.
- Based on past downturns, the three greatest impacts on public health sciences universities and academic health centers are:
  - Loss in patient activity as people defer physician visits and medical care
  - Shift from commercial to government payer mix due to higher unemployment
  - Cuts in State funding, including general appropriations and IGT funding.
- There will also be impacts, positive and negative, on research grants, philanthropy and tuition.
- Such impacts should be smaller than those listed above simply due to the dollar scale of OHSU's revenues.

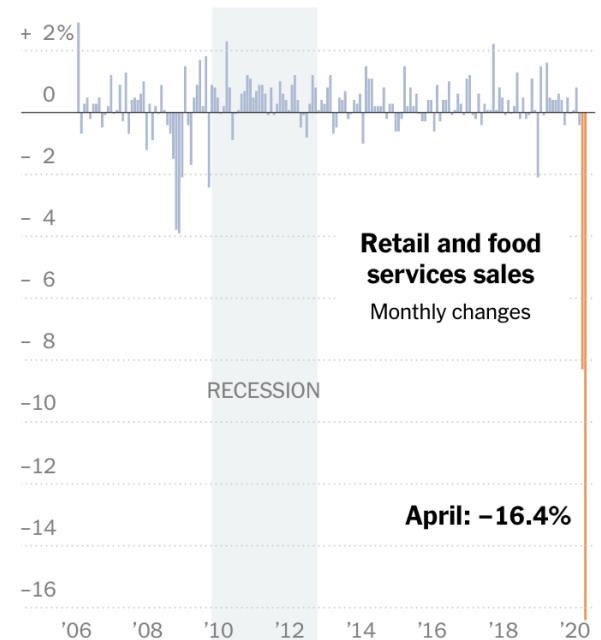
# COVID-19 Recession: Early Indicators



Note: Seasonally adjusted. • Source: Labor Department



Source: Department of Labor



Seasonally adjusted • Source: Census Bureau • By The New York Times

*Charts from the New York Times*

## Federal Reserve Chair Jerome H. Powell, May 13, 2020, Peterson Institute for International Economics

The scope and speed of this downturn are without modern precedent, significantly worse than any recession since World War II. We are seeing a severe decline in economic activity and in employment, and already the job gains of the past decade have been erased. Since the pandemic arrived in force just two months ago, more than 20 million people have lost their jobs. A Fed survey being released tomorrow reflects findings similar to many others: Among people who were working in February, almost 40 percent of those in households making less than \$40,000 a year had lost a job in March. This reversal of economic fortune has caused a level of pain that is hard to capture in words, as lives are upended amid great uncertainty about the future.

# Financial Response Plan

- Our approach is to be proactive rather than fall behind the curve; act as one University rather than a confederation of distinct units; and put people first to avoid widespread layoffs if possible.
- To offset the recessionary impact, the University Cabinet has endorsed a wide range of corrective actions, including:
  - Three-month contracts for Unclassified Administrative (UA) and Faculty positions to allow additional time to assess OHSU's financial situation.
  - No merit / cost of living increases and no leadership / management incentive plans.
  - No hiring of UAs from outside of OHSU.
  - Salary reductions for faculty and UA staff averaging 10% of current pay, on a graduated schedule based on -18% of dollars above \$50,000, with approximately 4,500 members affected.
  - Freeze on positions paid from unrestricted funds, flexed only for clinical activity.
  - Broad and deep reductions in services & supplies and capital spending.
  - Deferral of OHSU 2025 investments and some recruitment / research support.

# Base Case Assumptions: FY20 – FY22

- Patient activity falls to 60% of prior levels in April 2020, recovering to 90% in FY21 as the trend in COVID-19 cases plus robust levels of testing, surveillance and personal protective equipment allow OHSU to safely reopen.
- Volume recovers from 90% to 95% of prior levels in FY22 as the recession eases.
- Payer mix shifts 7% points from commercial to government insurance, tracking rising unemployment in FY21, before partially recovering to a 5%-point shift in FY22.
- OHSU's payer mix was 41% commercial and 59% government before COVID-19, with commercial paying 2.15x government coverage for the same case.
- State appropriated funding including Intergovernmental Transfer (IGT) support for research & education is assumed to be cut 17% in FY21 (the second year of the current biennium) and 34% in FY22, the first year of the next biennium.
- The personnel actions listed above keep total salaries & benefits flat at \$2.1 billion from FY20 to FY22, compared to the 15% growth from FY17 to FY19.
- Pharmaceutical & medical supplies increase with the recovery in patient activity, while other service, supply and capital spending not funded by grants is cut against inflation.
- The OHSU Hospital Expansion Project (OHEP) is assumed to be deferred until the financial situation is clearer.

# Base Case Projection: FY20 – FY22

The result is a gross loss of \$(134) million for FY21, followed by a return to breakeven in FY22, prior to an estimated \$94 million of CARES Act and other federal support.

<b>Income Statement</b> (millions)	FY19 Actual	FY20 Budget	FY20 Estimate	FY21 Preliminary	FY22 Projected	3 Years FY20-FY22
Net patient revenue	\$2,235	\$2,379	\$2,240	\$2,111	\$2,337	\$6,687
Medical contracts	104	117	123	125	128	376
Grants & contracts - direct	353	339	357	358	374	1,089
Indirect cost recovery	98	99	103	103	108	313
Gifts applied	94	116	104	109	114	326
Tuition & fees	78	80	81	80	93	254
State appropriations	37	38	40	33	26	99
IGT funding	116	135	135	112	89	336
Other revenues	139	149	199	183	205	587
<b>Total revenue</b>	<b>3,254</b>	<b>3,451</b>	<b>3,380</b>	<b>3,214</b>	<b>3,473</b>	<b>10,068</b>
<i>Percent change</i>	<i>9.7%</i>	<i>6.0%</i>	<i>3.9%</i>	<i>-4.9%</i>	<i>8.1%</i>	
Salaries & benefits	1,885	2,028	2,086	2,056	2,088	6,230
Rx & medical supplies	453	519	569	584	648	1,801
Other services & supplies	510	541	535	487	496	1,518
HMC / AHP support	13	6	38	3	0	41
Depreciation	187	176	178	183	183	544
Interest	31	35	37	36	35	108
<b>Total expense</b>	<b>3,079</b>	<b>3,306</b>	<b>3,444</b>	<b>3,349</b>	<b>3,450</b>	<b>10,243</b>
<i>Percent change</i>	<i>8.8%</i>	<i>7.4%</i>	<i>11.8%</i>	<i>-2.8%</i>	<i>3.0%</i>	
<b>Operating income (loss)</b>	<b>\$175</b>	<b>\$145</b>	<b>\$(64)</b>	<b>\$(134)</b>	<b>\$23</b>	<b>\$(175)</b>
<i>Operating margin</i>	<i>5.4%</i>	<i>4.2%</i>	<i>-1.9%</i>	<i>-4.2%</i>	<i>0.7%</i>	<i>-1.7%</i>
<i>EBITDA margin</i>	<i>12.1%</i>	<i>10.3%</i>	<i>4.5%</i>	<i>2.6%</i>	<i>6.9%</i>	<i>4.7%</i>

# Upside & Downside Scenario Assumptions

- Although we consider the base case projection as “most likely” given current information, there is a wide range of potential variance in key assumptions.
- An upside scenario (reflecting a less severe epidemic and recession) would return to prior activity levels by FY22, with lower unemployment and smaller State cuts.
- A downside scenario (reflecting a worse epidemic and recession) would have lower levels of patient activity, greater unemployment and more severe State cuts.

	Pre-COVID	Base Case	Upside	Downside
Patient activity index:				
FY20 February YTD	100%	100%	100%	100%
FY20 March	100%	85%	85%	85%
FY20 April	100%	60%	60%	60%
FY20 May	100%	75%	75%	75%
FY20 June	100%	85%	90%	80%
FY20 weighted average	100%	92%	93%	92%
FY21	105%	90%	95%	85%
FY22	110%	95%	100%	90%
Payer mix shift to government:				
FY21	0%	7%	5%	9%
FY22	0%	5%	3%	7%
Reduction to State funding:				
FY21	0%	-17%	-17%	-17%
FY22	0%	-34%	-25%	-50%

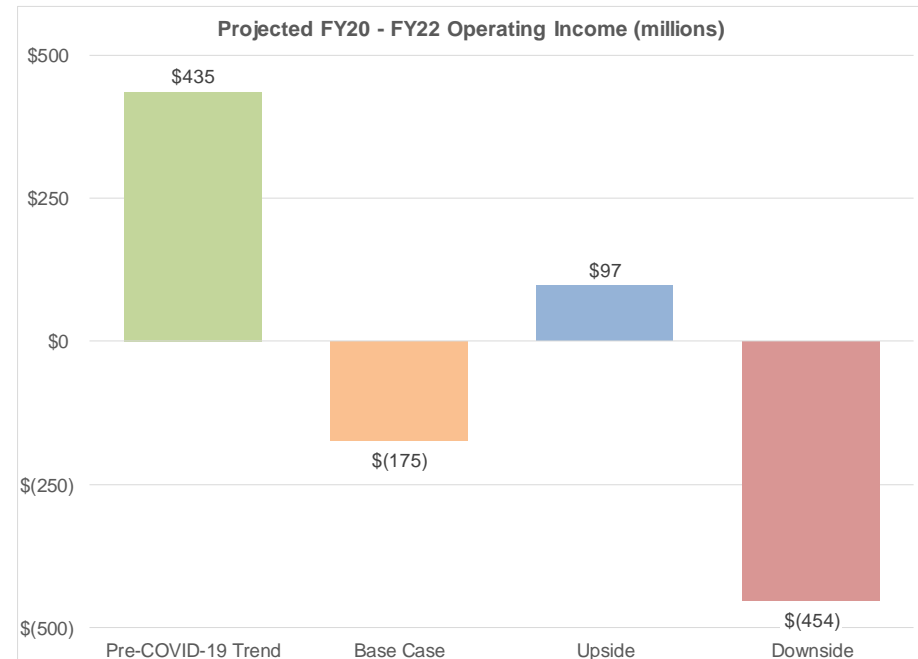
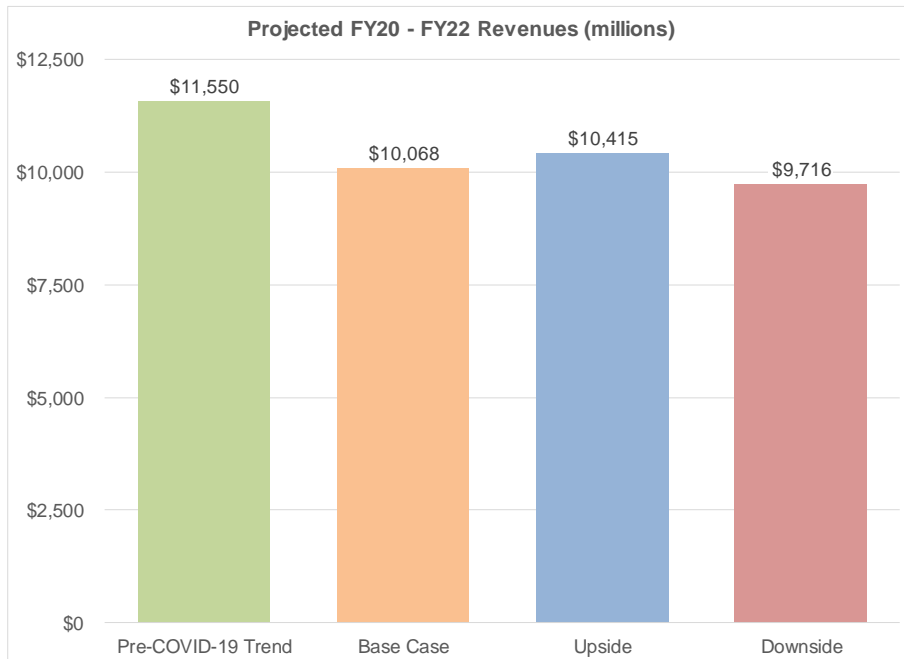
# Upside & Downside Assumption Impacts

The upside and downside assumptions impact three-year operating income by plus or minus \$270 – 280 million. Without pre-judging the decision, the upside scenario would allow most of the \$179 million in absolute salary reductions incurred by 4,500 faculty and administrators over two years to be “bought back” from positive operating income in FY22, while the downside scenario would defer that option to FY23 or later.

Upside Impacts to 3-Year Loss (millions)			
Base Case 3-year operating income			\$(175)
Volume recovers to 100% by FY22	176		
Unemployment 2% better	81		
State funding cut 25% in FY22	16		
Total upside impacts	272		
Upside 3-year operating income			\$97
Downside Impacts to 3-Year Loss (millions)			
Base Case 3-year operating income			\$(175)
Volume recovers to 90% by FY22	(179)		
Unemployment 2% worse	(73)		
State funding cut 50% in FY22	(28)		
Total downside impacts	(279)		
Downside 3-year operating income			\$(454)

# Revenue & Gain (Loss) Compared to Prior Trend

- From FY11 to FY19, OHSU's revenues rose 7% annually, and before COVID-19 were expected to total \$11.6 billion with \$435 million of operating income over three years.
- Under the base case, revenues fall \$(1.5) billion and earnings \$(610) million, with a range of \$(1.1) billion in revenue and \$(340) million in earnings on the upside, to \$(1.8) billion in revenue and \$(890) million in earnings on the downside, prior to CARES Act.



*Prior to CARES Act and other government grant support, currently estimated at \$94 million.*

# Conclusion

- The forecasts presented here are very sensitive to the depth and length of the COVID-19 pandemic and recession.
- We learn more each week.
- Based on current information, the base case projection is “most likely” and thus forms the preliminary budget plan for FY21.
- By returning to break-even by FY22, and with government support, the University would be comparatively well positioned to resume investing in our people, programs and places in 2022 and beyond.
- By tightening now and loosening later, OHSU also preserves the financial capacity to weather and adjust to the downside scenario of an even more severe recession, while the upside scenario could provide the option to buy back salary reductions sooner.
- In June we will return to the Board with a proposed FY21 budget and updated FY22 forecast, informed by May results and activity through early June.
- As the University navigates this unprecedented time, we expect to refine these plans further in the first quarter of next fiscal year.



Date: May 22, 2020

To: OHSU Board of Directors

From: David Robinson, PhD, Abby Tibbs, JD

RE: State Budget Presentation: May 22<sup>nd</sup> OHSU Board Meeting

As a result of the COVID-19 pandemic and its projected effect on the state's financial position for the rest of this biennium and the next, Abigail Tibbs, Vice President for Public Affairs will provide the OHSU Board of Directors with an update on the state's budget environment. One of the tools available to the Governor in times of economic hardship is an allotment process, which allows for an across-the-board the reduction in general fund appropriations to state agencies. The Governor recently asked those entities receiving general fund appropriations to describe the impacts of an 8.5% reduction in their biennial appropriation taken entirely within FY21. Dr. David Robinson, Executive Vice Provost, will provide the Board of Directors with a summary of OHSU's response to the Governor's request. The formal document submitted to the state is included in the Board's docket.

# Impacts of an 8.5% Reduction in Appropriations

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OHSU has taken a proactive response to the mounting financial challenges associated with the COVID-19 pandemic by adopting a multi-pronged approach aimed at preserving its workforce while sustaining the university for the long term. Facing a projected loss of revenue between \$1 billion and \$1.4 billion over the next 28 months as a result of the coronavirus pandemic and the likely recession, the university took swift and aggressive action to address significant budget shortfalls in FY21, while trying to minimize widespread layoffs. These actions include reducing spending on supplies and services (15%), and capital spending (20%); and implementing compensation reductions for unclassified administrative staff and faculty.

The greatest portion of OHSU's budget comes from employee salaries, which means the university cannot correct its financial position without addressing employee salary expenditures. Effective July 1, 2020, OHSU is instituting university-wide salary reductions for all executive leadership, unclassified administrative staff, faculty, and staff scientists. The salary reductions are graduated with a formula applied that results in higher paid employees taking a larger percentage reduction, and those making less than \$50,000 a year taking no salary reduction at all. OHSU also suspended all incentive plans and merit increases across the institution resulting in an additional impact to the total annual compensation of many employees. The reductions include OHSU executives, and many will take a reduction of between 30% – 40% of their total compensation. Despite efforts to minimize the impact through graduated reductions, these changes amount to a significant financial sacrifice for OHSU employees.

Being keenly aware of the local and global financial outlook, OHSU had also started to consider how it would respond to state budget reductions while mitigating the impact to students as much as possible. However, given the significant impact that the coronavirus pandemic response has had on all of OHSU's missions and revenue streams, other financial mitigation strategies are already being utilized to a large degree across the institution. As a result, an 8.5% reduction in the biennial state appropriation applied entirely in FY21 would unfortunately have a much larger impact on OHSU students and programs than we would have hoped.

## **Tuition and the Tuition Promise**

In 2013, OHSU introduced the Tuition Promise for students matriculating into many of its health profession programs, including those funded directly by state appropriations. Through this program, the tuition rate paid by matriculating students is "locked in" with no rate increases for the remainder of their studies, as long as they complete the degree within the timeframe specified by the degree program.

OHSU has also worked extremely hard to keep annual tuition increases as low as possible. In academic year 2019-20, the OHSU Tuition Promise increase for new students ranged from 0% to 2.6% for Oregon residents and from 0% to 3% for non-residents, depending on the academic

program. The impact of the Tuition Promise and limiting tuition increases for first year students since 2013 has had a notable positive effect on the rate at which OHSU graduate debt is increasing. Indeed, in some health education programs students are now graduating with less debt than their counterparts two years ago.

With an 8.5% reduction in the biennial state appropriation applied entirely in FY21, OHSU would no longer be able to continue the Tuition Promise program and would need to increase tuition for all incoming students between 5% and 7.5%. This would have a deep and lasting impact on our students and their families and could lead to further health inequities in rural and underserved Oregon as graduates would have to balance this increased education debt.

Additional impacts specific to each program supported by State appropriation are outlined below:

### **School of Dentistry (SOD)**

The OHSU School of Dentistry is a safety net clinic that provides low cost care for thousands of patients every year. Nearly 40% of the dental school patients are funded through the Oregon Health Plan and many of the rest of its patients have limited means. State funding is critical to helping the School achieve its mission of ensuring graduates can provide safe, high quality dental services to Oregonians. The School also sends students all over the state as part of the university's Rural Health Initiative to provide care to underserved Oregonians. With significant housing and program coordination costs, the ability to continue this program for dental students will be jeopardized by an 8.5% cut to the state appropriation.

The School does not have infrastructure that can be cut further. The School of Dentistry already runs a lean operation, spending 20% less per student on education than the average dental school in the U.S.

An 8.5% cut in the biennial state support entirely in FY21 would likely lead to reductions in class sizes and an increase in tuition for Oregon's dental students by as much as 7.5%. The tuition rate at OHSU is already ranked third highest for cost of degree of all public dental schools in the U.S. (ADEA Survey 2017-2018). Due to the Tuition Promise discussed above, the burden would be placed on newly matriculating students. Dental students are already graduating with dental school debts of approximately \$300,000/student, and a tuition increase will only exacerbate the situation. As with other schools, this could lead to reduced access to dental care in rural Oregon as more students choose to remain in urban parts of the state as a result of high debt loads.

### **School of Medicine (SOM)**

Between 2014 and 2017, the OHSU School of Medicine increased its class size from 140 to 160 per year to help meet the healthcare workforce needs of Oregon. With an 8.5% reduction in biennial funding, the School would likely have to reduce its M.D. class size. It costs an estimated \$115,000 annually to train each medical student with expenses being largely associated with employing highly-trained faculty and instructional staff, and providing appropriate clinical

learning environments at OHSU and around the state. Revenue generated from tuition and state appropriations presently only covers about 55% of the cost of educating each medical student, with the difference being funded from the reallocation of revenue generated from other sources at OHSU. A state appropriation reduction of 8.5% coupled with other sources of revenue including clinical revenue at historically low levels due to our response to the COVID-19 public health crisis, maintaining class size will be very challenging.

This magnitude of reduction in state appropriations would also result in a decrease in the number of medical students rotating in community settings because of the additional costs of providing housing and paying clinical sites for preceptorships. These experiences for M.D. students in caring for rural and underserved Oregonians are critical to increasing the likelihood that medical students ultimately choose to work in rural and underserved areas of Oregon.

This reduction in state support would also result in up to a 7.5% increase in tuition for incoming students, and an increased proportion of out-of-state students being admitted. Each of these actions would have a potential negative impact on Oregon's future physician workforce and access to health care for Oregonians.

### **School of Nursing (SON)**

An 8.5% cut in the biennial appropriation entirely in FY21 would challenge the School of Nursing as it continues to address the demand for baccalaureate and higher degree prepared nurses. This level of reduction would require as much as a 7.5% increase in tuition for incoming nursing students.

OHSU's state appropriation helps to support the nursing baccalaureate program on all five of its nursing campuses which span across the state, and a reduction in state support would require the university to evaluate its ability to provide nursing education at each of these locations. The School of Nursing would also need to consider reducing the amount of higher cost clinical education, especially in the baccalaureate programs. Clinical education is a hallmark of the School's programs, and a signature element of the quality of its graduates who are prepared to meet workforce and practice needs in urban and rural Oregon.

OHSU is the single educator in Oregon for PhD and most DNP tracks, such as midwifery, nurse anesthesia, adult gerontology, pediatric, and psych-mental health (with only the University of Portland offering the DNP in one family practice specialty), and for an online Master in Nursing Education. An 8.5% reduction in state appropriations would necessitate reductions in its PhD and DNP programs that would have an immediate impact on the conduit of nursing faculty, affecting the ability for nursing programs in the state of Oregon and the surrounding communities to fill vacant faculty positions.

### **Rural Health Programs (Office of Rural Health and Area Health Education Centers)**

The Oregon Office of Rural Health (ORH) will have to reduce direct technical assistance to rural practice sites, including provider recruitment and retention services. ORH currently works with

approximately 50 rural health clinics, 25 Critical Access Hospitals, and 10 rural EMS sites. Technical assistance includes support in recruiting for roughly 100 open positions. With an 8.5% reduction to its biennial state appropriation, ORH will need to reduce travel to sites.

With an 8.5% reduction in its biennial budget applied entirely to FY21, the Area Health Education Center (AHEC) would have to significantly reduce pathway programs it provides in rural Oregon. At a time when rural health disparities are growing, the reductions in programming could impact the health of rural Oregonians for years to come. Specifically, the pathway at risk is the AHEC Scholars rural and underserved training program designed to put health profession graduates into rural and underserved areas in Oregon. In addition, the AHEC would also need to reduce, and in some cases eliminate, the support for continuing education and professional development in rural communities. Lastly, the coordination of rural placements for healthcare professions students from universities across the state would be significantly affected.

### **Academic, Administrative and Facilities Program Support**

Allocated overhead is built into program budgets and would be reduced proportionately. As a result of an 8.5% cut, OHSU would reduce all but extramurally funded health and science pathway programs. There will also be an elimination of library titles and a reduction in staffed library hours, which are already significantly lower than at peer institutions. Services to support students could also be negatively impacted as a result of FTE reductions in academic and student affairs departments tied to program overhead. In the long-term, these negative impacts cause erosion in the quality of OHSU's educational programs and facilities, which can, in-turn, erode the quality of its faculty and student population.

### **Child Development & Rehabilitation Center (CDRC)**

For more than 100 years, the CDRC has provided unique, high quality, medically based interdisciplinary evaluative and treatment services to youth with complex special health care needs and disabilities, and their families. Greater than 11,000 unique patients are served annually. The State of Oregon has funded CDRC over the years to ensure that Oregon's most medically vulnerable youth have access to critically needed services delivered in a coordinated care system to minimize family disruption and promote optimal outcomes.

The proposed reduction of 8.5% of the biennial appropriations entirely in FY21 would require substantial reduction in care and care coordination services for Oregon's most vulnerable children, inclusive of both Portland and Eugene CDRC campuses. Services impacted would include therapeutic services offered by CDRC occupational therapists, physical therapists, and speech-language pathologists in order to retain focus on interdisciplinary evaluation care. This would severely impact many specialized and unique treatments not available elsewhere in the community. Also impacted would be CDRC's social work and registered dietitian services.

### **Oregon Poison Center**

More than 10 years ago, the state appropriation for the Oregon Poison Center became insufficient to maintain operations as a designated certified poison control center. This would have necessitated closing the Center but additional financial assistance was obtained through the federal matching funds available from the State Children's Health Insurance Program (SCHIP). The Oregon Poison Center received approval from the Centers for Medicaid Services (CMS) via this Health Service Initiative but the SCHIP funding has been gradually decreasing over the years. The SCHIP uses state appropriations for the matching rate.

The federal match rate for the Oregon Poison Center funding is 84.36%. Due to COVID-19 the rate is increased by another 4.34%, bringing the total federal match rate to 88.7%. The Oregon Poison Center receives approximately \$750,000 of federal funding through this mechanism each year. With an 8.5% biennial reduction annualized to a 17% decrease in state general fund available to be used to leverage these federal funds, the amount of federal funds received by the Oregon Poison Center through this mechanism would go down by approximately 70% or \$520,000 annually. With such a reduction, the Oregon Poison Center would be unable to sustain the staffing levels and service requirements needed for its accreditation and continued service to the public and healthcare providers throughout Oregon.

Now more than ever, the Oregon Poison Center continues to be a vital service to the Oregonians. The Oregon Health Authority asked the Oregon Poison Center to be partners in managing the COVID-19 phone calls from Oregon clinicians. Although the primary expertise of the Oregon Poison Center's front-line staff (nurses and pharmacists) includes preventing and managing toxic exposures, they are highly capable of handling public health emergencies. In the past, the Center fielded calls from the concerned public and clinicians regarding H1N1 and swine flu, the Mt. Saint Helens eruption, and the Japanese nuclear fallout on our coast. Because the Oregon Poison Center already have the infrastructure and expertise, it is able to mobilize quickly – within hours – to respond in the event of a region-wide emergency. If the Oregon Poison Center closed, Oregon would lose a valuable resource.



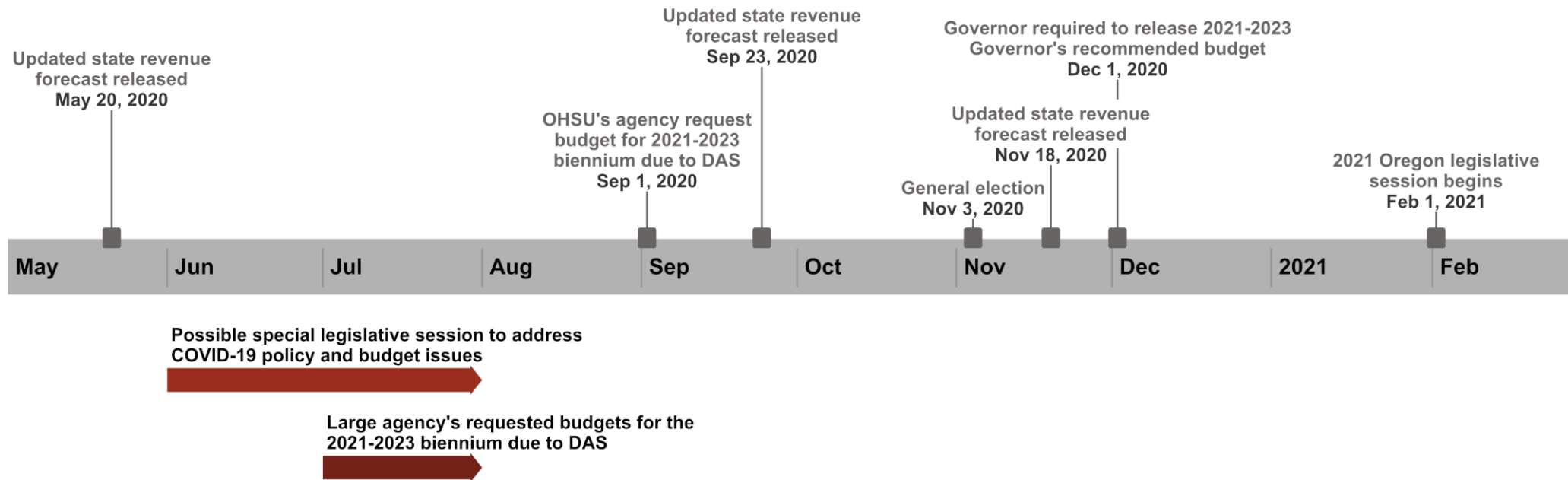
# State Budget & Allotment Impacts on OHSU Programs

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DATE: May 22, 2020   PRESENTED BY:

Abigail Tibbs, Vice President Public Affairs  
David W. Robinson, PhD, Executive Vice Provost

# Timeline



# State Budget Environment

## 2019-2021 biennium challenges

- State constitutionally required to balance budget
- Possible reduction of up to \$3 billion in state revenue, approximately 15% of total state general fund budget for the 19-21 biennium
- Current unemployment is more than double what Oregon experienced during the height of the great recession
- Need for state services is increasing (Medicaid enrollment, food and housing support, social services, job training) while state revenues to support those services are decreasing
- Unfinished business from 2020 legislative session left some state agencies facing budget deficits prior to COVID-19 crisis

# State Budget Environment

## 2019-2021 biennium options

- Federal funding: Additional federal funding for state and local governments and Medicaid – to date federal funding has had limited flexibility to apply to lost state revenues
- State Reserves: \$3.5 billion in state reserves
- Allotment authority (across the board cuts) provides Governor ability to withhold general fund in order to balance budget
- Governor requested impact scenarios from agencies for 8.5% reduction in general fund (17% when taken entirely in FY 21)
- Special session would allow for the legislature to rebalance agency budgets.
- More targeted approach
- Challenging logistically with social distancing requirements
- Requires bipartisan negotiations

# State Budget Environment

## 2021-23 biennium

- State revenues could be down \$4 - \$6 billion, or 20 - 30%, for the biennium
- Increased Medicaid enrollment - 340,000 new enrollees projected
- Increased need for state services especially among vulnerable populations and underserved communities
- State workforce furloughs or reductions have been part of past budget reconciliation strategies

# OHSU State Appropriations

	19-21 LAB	8.5% Allotment
<b>Education &amp; General</b>	<b>\$65,757,797</b>	<b>\$5,589,413</b>
School of Medicine	\$26,869,476	\$2,283,905
School of Nursing	\$23,237,434	\$1,975,182
School of Dentistry	\$10,890,046	\$925,654
AHEC/ORH	\$4,760,841	\$404,671
<b>CDRC</b>	<b>\$8,639,192</b>	<b>\$734,331</b>
<b>Poison Center</b>	<b>\$2,764,543</b>	<b>\$234,986</b>
<b>Children's Integrated Health Database</b>	<b>\$2,000,000</b>	<b>\$170,000</b>
Total	<b>\$79,161,532</b>	<b>\$6,728,730</b>

# Tuition

In 2013, OHSU introduced the Tuition Promise for students matriculating into many of its health profession programs, including those funded directly by state appropriations

Through this program, the tuition rate paid by matriculating students is "locked in" with no rate increases for the remainder of their studies

OHSU has also worked extremely hard to keep annual tuition increases as low as possible. In academic year 2019-20, the OHSU Tuition Promise increase for new students ranged from 0% to 2.6% for Oregon residents and from 0% to 3% for non-residents

These two approaches have had a notable positive effect on the rate at which OHSU graduate debt is increasing. Indeed, in some health education programs students are now graduating with less debt than their counterparts two years ago

# Allotment Impact on Tuition

OHSU will suspend the Tuition Promise program for academic year 2020-21

Program	% Increase	FY20 Tuition		FY21 Tuition	
		Resident	Non-Resident	Resident	Non-Resident
DMD	7.5	\$45,216	\$72,976	\$48,608	\$78,452
MD	7.5	\$43,488	\$66,844	\$46,752	\$71,860
Undergraduate Nursing - Acc Bacc <sup>1</sup>	7.5	\$32,700	\$43,620	\$35,160	\$46,920
Undergraduate Nursing - OCNE <sup>2</sup>	7.5	\$13,035	\$23,859	\$14,025	\$25,674
Undergraduate Nursing - RN to BS <sup>3</sup>	7.5	\$9,504	\$9,504	\$10,230	\$10,230
Adult Gerontology Acute Care NP <sup>2</sup>	7.5	\$17,808	\$23,100	\$19,152	\$24,836
Family Nurse Practitioner <sup>2</sup>	7.5	\$22,260	\$28,875	\$23,940	\$31,045
Nurse Anesthesia <sup>1</sup>	7.5	\$43,560	\$45,375	\$46,860	\$48,785
Nurse Midwifery <sup>2</sup>	7.5	\$23,532	\$30,525	\$25,308	\$32,819
Pediatric Primary & Acute NP <sup>2</sup>	7.5	\$20,352	\$26,400	\$21,888	\$28,384
Psy Mntl Hlth Nrs Practitioner <sup>2</sup>	7.5	\$21,624	\$28,050	\$23,256	\$30,158

<sup>1</sup> Tuition based on first year program of study with a Summer start.

<sup>2</sup> Tuition based on first year program of study with a Fall start.

<sup>3</sup> Tuition based on full-time, one-year program of study with a Fall start.

# Program Specific Impacts

## School of Dentistry

- Reduce the size of the incoming class
- Reduce the number of rural rotations for dental students
- Dental students are already graduating with dental school debts of approximately \$300,000/student, and a tuition increase will only exacerbate the situation
- These actions will lead to reduced access to dental care in rural Oregon as more students choose to remain in urban parts of the state as a result of high debt loads

## School of Medicine

- Reduce the size of the incoming class
- Reduce the number of medical students rotating in community settings
- Increase the proportion of out-of-state students being admitted
- Each of these actions would have a potential negative impact on Oregon's future physician workforce and access to health care for Oregonians

# Program Specific Impacts

## School of Nursing

- Reduce the amount of clinical education especially in its undergraduate programs
- Reduce the number of students in its DNP and PhD programs
- Evaluate the continued ability to provide nursing education on all five of its nursing campuses which span across the state

## Rural Health Programs

- Office of Rural Health (ORH) will need to reduce direct technical assistance to rural practice sites, including provider recruitment and retention services.
- ORH currently assists 50 rural health clinics, 25 Critical Access Hospitals, and 10 rural EMS sites
- Area Health Education Center (AHEC) would have to significantly reduce its pathway programs in rural Oregon
- reduce, and in some cases eliminate, the support for continuing education and professional development in rural communities

# Program Specific Impacts

## Child Development and Rehabilitation Center (CDRC)

- Substantial reduction in care and care coordination services provided in Portland and Eugene
- Services impacted would include therapeutic services offered by CDRC occupational therapists, physical therapists, and speech-language pathologists
- Social work and registered dietitian services provided by CDRC would also be reduced

## Oregon Poison Center

- The state appropriation is used as a match for the State Children's Health Insurance Program (SCHIP)
- The federal match rate for SCHIP is estimated to be 88.7% in FY21 and a reduction in state appropriations of \$235,000 will result in a further \$520,000 from SCHIP
- Oregon Poison Center would be unable to sustain the staffing levels and service requirements needed for its accreditation and continued service to the public and healthcare providers throughout Oregon



# Questions



Date: May, 22, 2020

To: OHSU Board of Directors

From: Peter Barr-Gillespie, PhD, EVP Chief Research Officer

RE: Bringing Back Research at OHSU

Like at most universities across the US, research at OHSU was largely shut down in March in anticipation of a wave of COVID-19 cases. Fortunately the stay-home orders in Oregon and elsewhere mitigated that wave, for the time being at least.

As COVID-19 cases have leveled off, we have begun the slow process of restarting research programs. It is worth noting that research never fully stopped at OHSU; ~200 research projects focused on COVID-19 were initiated, clinical research that was coupled with essential care continued, and some laboratory experiments deemed essential were completed.

Still, most of the ~1200 research labs at OHSU are only conducting work at home, which limits research activities to data analysis, some remote data collection, manuscript and grant preparation, literature reviews, 1:1 and group meetings over video, and other activities. In-person human subjects research and laboratory research has largely been on pause the last two months.

Restarting research is much more complex than shutting it down, however. Research labs do not operate in a vacuum; they depend on many services at OHSU, including order, shipping, animal care, parking, public safety, custodial services, and much more. We cannot just restart research without simultaneously having these support services ready.

Moreover, research will not be conducted under conditions like those of two months ago for any time soon, at least until SARS-CoV-2 has disappeared, a vaccine is available, or herd immunity is acquired. We expect to need to conduct research under conditions of distancing, mask-wearing, and other measures to prevent virus spread. We are looking into how we can test employees more widely in a manner that leads to enhance public safety.

We developed the idea of a “trial run” to determine whether OHSU is ready to more broadly restart research. During the trial run, each department or center will pick one lab to begin research—about 30 in all. In addition, the University Shared Resources cores will open. Each lab in the trial run will submit a lab restart plan to be vetted by my office, and then we will monitor these labs over about two weeks to learn about their experiences.

If all goes well, we will propose to the University Cabinet and ultimately Dr. Jacobs that we be allowed to move the rest of the research labs at OHSU to Level 2, which has a quite restrictive set of guidelines but allows research to be conducted at significant levels. We will work with the Governor's office to ensure that we comply with all executive orders, although Order 20-09 specifies that research is a critical function that does not need to be stopped when other university activities are stopped.

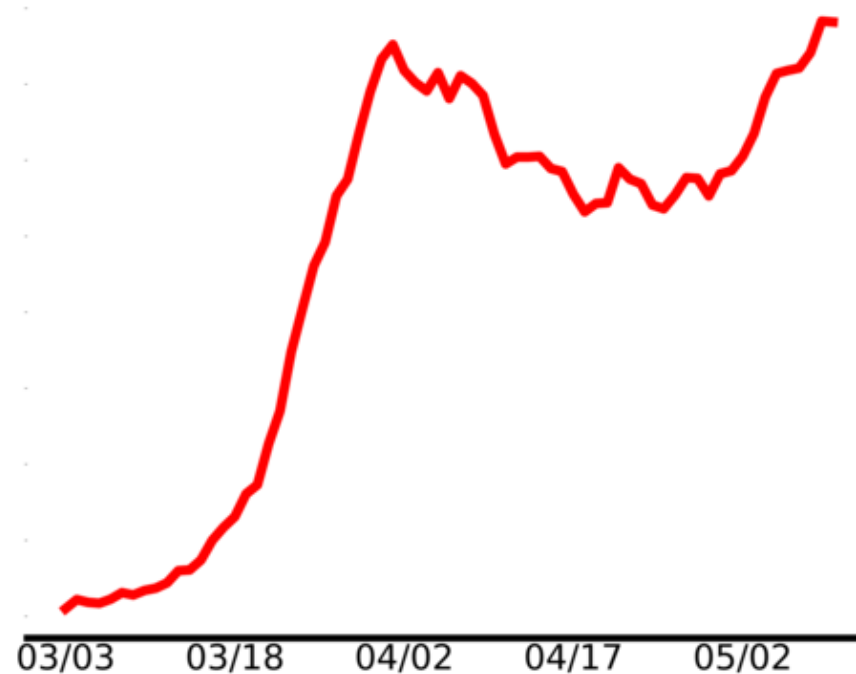
We are optimistic that these steps will allow us to bring research back on line at OHSU and get the many exciting projects back to generating data.

# Bringing Back Research at OHSU

Peter Barr-Gillespie  
Chief Research Officer

2020-05-15

# COVID-19



Oregon

total cases: 3226



*Oregon has slowed COVID-19 but we are not out of the woods*

# Research Levels Established in March

## **Level 0**

- Normal operations

## **Level 1**

- Teleworking encouraged
- Distancing required

## **Level 2**

- Initially (March): no new experiments
- Now: research at 1/3 to 1/2 previous levels
- Risk reduction strategies

## **Level 3**

- ALL experiments/studies stopped that can't be performed remotely or are non-essential to patients
- Very few researchers on campus
- Key resource maintenance allowed
- Separate policies for nonhuman primate research
- Separate policies for COVID-19 research

## **Level 4**

- NO LAB STAFF OR PI BUILDING ACCESS AT ALL
- Separate policies for COVID-19 research



*Levels allow us to align actions by labs to OHSU, local, and state directives*

# Research Shutdown

- Laboratories warned of upcoming changes, moved to **Level 1 on March 17, 2020**
- OHSU went to Modified Operations on March 23, 2020
- Triggered simultaneous move to **Level 2**
- Kate Brown released "Stay Home, Save Lives" order on March 23, 2020
- Triggered move to **Level 3 on March 23, 2020**
- We remain in Level 3



*Research shut down to protect researchers, conserve PPE, prevent logistics clashes*

# Level 3 Exception Processes

- COVID-19 research: 188 projects approved
- Clinical research exceptions: 65 exceptions approved
- Animal research exceptions: 106 exceptions approved
- Other exceptions: 76 exceptions approved



*Significant research has proceeded even during Level 3*

# Trial Run for Testing Restart

- One lab per department or institute allowed to restart under Level 2 guidelines; plan must be submitted and reviewed by chair or director, then OHSU Research & Innovation
- Research cores allowed to open under Level 2 guidelines
- The West Campus will move to Level 2 (all labs) on their time frame
- Limited additional access to animal facilities for all labs
- Staggered start depending on readiness; first labs started May 12, 2020
- Will survey labs to determine success of trial run
- The review process for the lab plans gave us much information for initiating restart more broadly



*The trial run will allow us to restart research thoughtfully*

# New Level 2 Guidelines

- Monitor symptoms before coming to work
- Minimize risk through alternative transportation, masks, hand-washing
- Maintain >6 ft distancing in labs, shared spaces, etc.
- May require labs to work in shifts
- Only some types of experiments are practical
- University Shared Resources (cores) are opening, but at lower capacity
- Expectation is that experiments proceed at 1/3 to 1/2 rate



*We will continue to adjust these guidelines to keep researchers safe yet allow research*

# Concerns

- Senior graduate students trying to finish, including MD-PhD students trying to avoid missing a year
- Junior faculty are most vulnerable, especially those trying to get their first major grant and who may be running out of startup money
- All faculty are concerned about data generation for papers and grants
- Some experiments will take months if not years to recover
- Unclear how long NIH can continue to support researchers when activity is reduced significantly
- Financial stress on the university and impacts to faculty dramatically amplify anxieties



*Uncertainties about careers adds to the stress during this time of COVID-19*

Date: May 22, 2020

To: OHSU Board of Directors

From: Jackie Shannon, PhD, Paul Spellman, PhD

RE: Key to Oregon: A Data-Driven Strategy to Support Re-Opening Oregon, and Keeping it Open

Once again in the course of this global pandemic, we find ourselves at a turning point. To chart the best course forward, we are forced to balance two priorities that are, in many ways, in opposition: saving lives and getting Oregonians back to work and school. A responsible solution to this dilemma must be based on reliable, real-time, population-level data that enables us to track and respond proactively to changes in COVID-19 infection rates throughout Oregon.

The Key to Oregon study will test, track and map the COVID-19 symptoms and new infections of up to 100,000 Oregonians in real time. Study data will help state and local officials safely and responsibly ease physical distancing measures, allowing Oregon to reopen as safe and fast as possible while effectively managing outbreaks with the least restrictive measures.

The research study strongly supports the gating criteria Governor Brown has identified for counties or regions considering relaxing distancing measures. These criteria include testing, availability of sufficient personal protective equipment (PPE), contact tracing, and isolation. These elements will be critical throughout each phase of reopening. The Key to Oregon study will be an indispensable resource for decision-makers to make determinations based on the Governor's guidelines and supported by scientific information that is meaningful, non-political, and specific to each county. It is likely this approach will be required until a vaccine is available.

Recent calls to action from top U.S. and global public health experts align with our shared belief in a strategy based on scientific evidence. Providing reliable, actionable evidence to inform decision making at the state and local level requires large-scale random sampling fully representative of the state's population. Gathering this data will help us better understand what is happening in any given community, in real time. We will be able to identify emerging hotspots in time for local public health authorities to implement contact tracing and isolation before local outbreaks can turn into a statewide "second wave" of disease.

#### **Data that matters to Oregonians**

The Key to Oregon study support the Governor's objective to protect the physical and financial health of Oregonians by:

- Identifying new COVID-19 cases at their earliest stages so that officials can swiftly enact contact tracing and isolation to control the spread of the disease. OHA will be an essential partner in this effort.
- Providing an early warning system that will save lives. Population-level, real-time data will identify emerging hotspots so that we can intervene before hospitals and health systems become overwhelmed by patient surges in a second wave of infection.
- Precision mapping to identify outbreaks wherever they may occur throughout the state, enabling a targeted local response. If it is necessary to reactivate physical distancing measures, this can be done at the minimum necessary level for the shortest time.

- Providing a more accurate understanding of the true rate of infection in Oregon by incorporating testing of asymptomatic patients – a significant but otherwise invisible factor in the spread of COVID-19.

Because Oregon has been successful in flattening its coronavirus infection curve through early and decisive action, the state is actually at heightened risk of a “second wave” of infections if we relax physical distancing restrictions without monitoring. Our state’s success in flattening the curve means relatively few Oregonians have acquired immunity to the virus. A relatively high percentage of our state’s population remains susceptible to the disease. As we re-open workplaces, schools, and small gatherings, more and more of us will risk exposure. The fears of a COVID-19 resurgence are well-founded. To make sound policy decisions, we must replace fears with facts.

The Key to Oregon study is a powerful tool for local and state decision makers who must respond to the specific conditions in their communities and economies. National and global trends can provide valuable insights, but Oregon leaders need to know what’s happening here and now.

COVID-19 testing in Oregon has thus far been limited to patients and health care workers experiencing clear symptoms of infection. By the time a patient is that sick, it is too late to protect them and their contacts. This study is a way to measure much earlier indicators of new infections and to pinpoint locations of new outbreaks on a county-by-county basis to provide local leaders with real-time data on which to base difficult policy decisions.

### **Program Overview**

Through two approaches – symptom monitoring and precision mapping of COVID-19 cases – Key to Oregon will gather data from tens of thousands of randomly selected Oregon households who fully represent the state, including our diversity in geography, socioeconomic status and communities of color. The study uses a population-based random sampling approach at the household level to extrapolate study data to the state as a whole. The study seeks to enroll 100,000 Oregonians – a sample size large enough to estimate infection rates with high confidence. The goal is to alert health officials when infection rates appear to rise as little as 0.03% in 2 weeks statewide or 0.25% in any given community. These thresholds give local leaders as much time as possible to reinstate distancing measures before a resurgence can take hold and overwhelm the local health system.

### **Data collection strategies**

Developing a complete and accurate understanding of COVID-19 infection rates in Oregon requires two strategies, enacted simultaneously:

***Symptom monitoring:*** Elevated body temperature is one of the earliest warning signs of coronavirus infection when combined with other characteristic symptoms. Key to Oregon will collect daily temperature measurements and other symptom information from thousands of participants for up to 12 months, using an internet-connected thermometer provided to them at no cost. Working with the thermometer’s manufacturer, Kinsa, the study will use this data to identify individuals who need testing and to locate areas with new outbreaks. This system will provide local public health authorities with an ongoing gauge of viral outbreaks through the duration of the coronavirus threat and beyond.

This study is not a substitute for health care. Anyone with symptoms of COVID-19 should contact a health care provider.

***Precision mapping of COVID-19 cases:*** The study will offer COVID-19 testing to 10,000 randomly selected asymptomatic participants of the 100,000 participating Oregonians at regular intervals. OHSU will report positive results to the Oregon Health Authority to initiate contact tracing and other local public health measures. This will provide Oregon leaders with vital insights that are currently missing from our current COVID-19 response, by identifying individuals with no outward symptoms who may be unknowingly exposing others to the virus.

### **Tactics and technology**

All aspects of the study are designed to the highest safety and privacy standards. No in-person contact between researchers and study participants is necessary to collect the data. The protocol considers provisions to engage underserved communities and equip populations who lack cell service.

### **A study for all Oregonians**

Key to Oregon will recruit randomly selected Oregonians who fully represent the state, including our diversity in geography, socioeconomic status and communities of color. Also, because we recognize the limitations of statewide random sampling, we will follow this initial approach with a community engaged process whereby we work with our community partners to review incoming data, develop and implement adaptive strategies to ensure diverse representation in the study.

### **Funding**

The state of Oregon has made an initial investment of \$6 million to fund the study. OHSU and Gov. Brown are seeking more funding through public-private partnerships.

### **Conclusion**

Just as Oregon was a national leader in slowing the initial spread of the virus, the state has an opportunity to show the nation a sensible, systematic way to get people back to work and school safely. The Key to Oregon study provides an early warning system so that we can carefully ease physical distancing measures without backsliding into the dangerous surge scenario that Oregon worked so diligently and sacrificed so much to avoid. By gathering reliable data from a representative prospective sample of our population, the study will help us, over time, to replace well-founded fears with facts, so that we can balance Oregon's economic and social needs with our mandate to protect human health and save lives.

### **The Research Team**

OHSU is leading the study in partnership with the OHSU-PSU School of Public Health and in collaboration with the Oregon Health Authority. The research team includes:

- OHSU President Danny Jacobs, M.D., M.P.H., FACS
- David Bangsberg, M.D., M.P.H., founding dean of the OHSU-PSU School of Public Health
- Brian Druker, M.D., director of the OHSU Knight Cancer Institute
- Principal investigators: Jackie Shannon, Ph.D., M.P.H., and Paul Spellman, Ph.D.
- Consultants: OHSU Chair of Pathology Donna Hansel, Ph.D., M.D.; OHSU infectious disease experts; and researchers across OHSU including from the Vaccine and Gene Therapy Institute.

Slides will be presented at the board meeting