

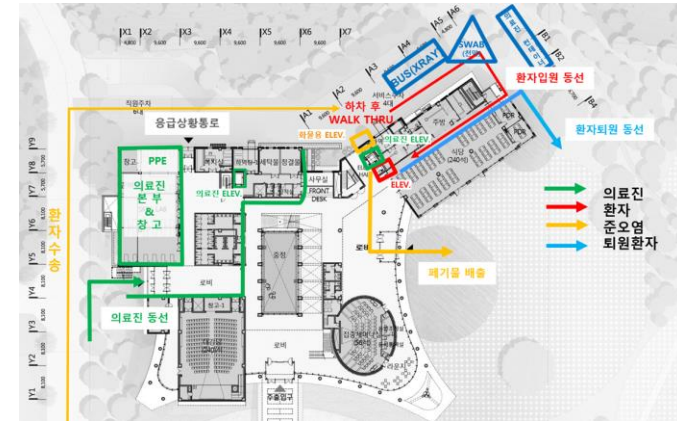


비대면 의료의 현황과 미래

서울대학교병원 공공진료센터
교수 조비룡

문경 생활치료센터

SEOUL NATIONAL UNIVERSITY HOSPITAL

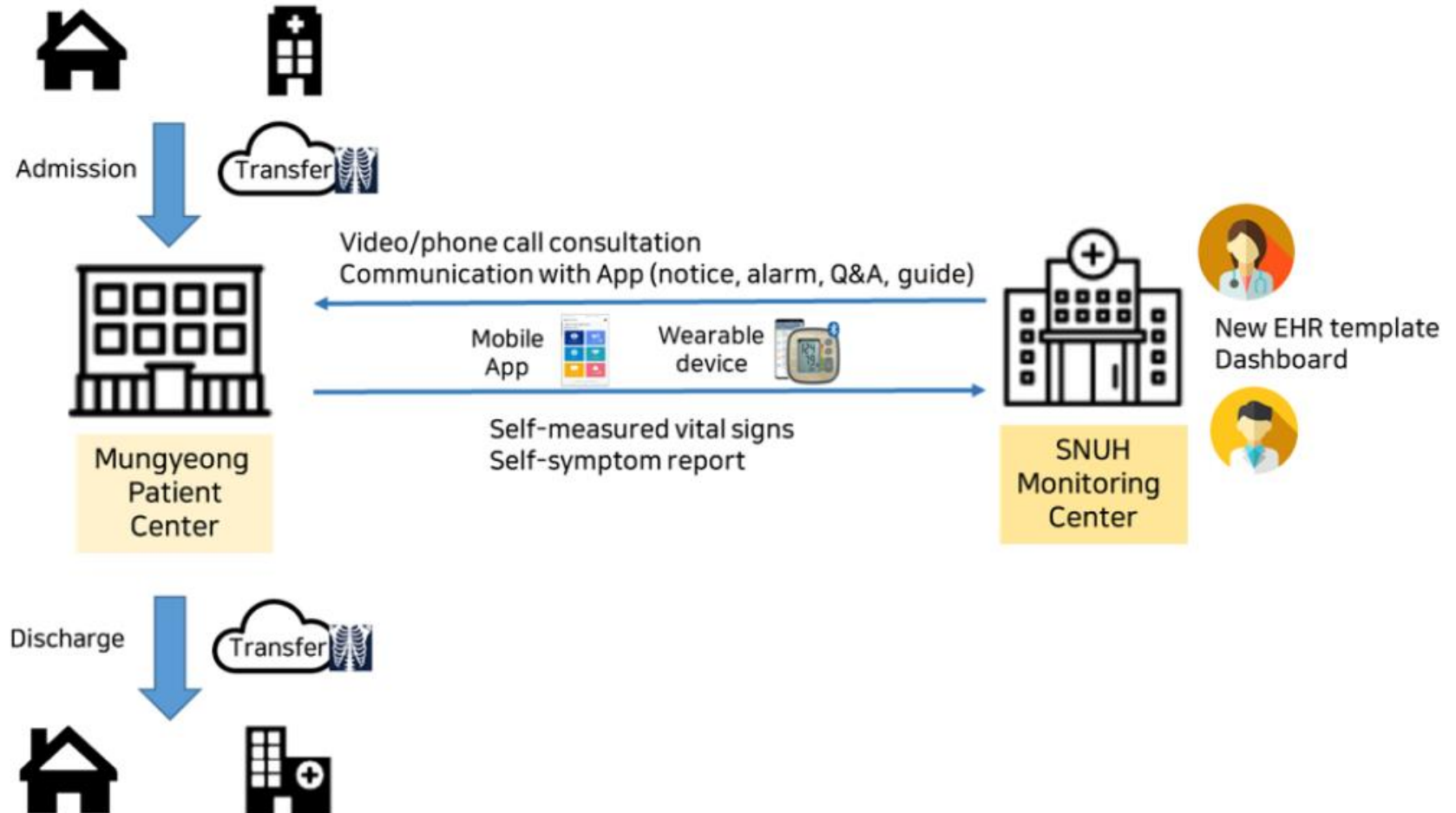


LTSC ICT operation flow

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Pre-admission
Admission
Post-admission

Self-isolation Local medical center

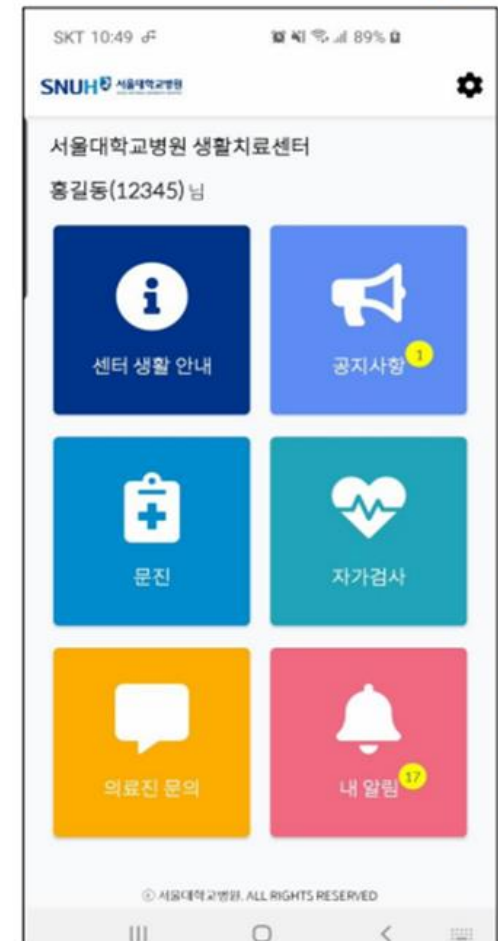


문경 생활치료센터

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생활치료센터 환자용 App



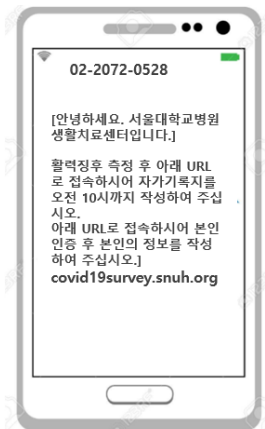
Tele-monitoring system : Symptoms

도입 필요성

모바일을 활용한 전자문진시스템을 도입하여 HIS내 데이터 자동 연동
HIS와 연동으로 의료진 업무부담 감소 / 수기 입력을 통한 정보 오류 방지

1

1일 2회 설문조사
URL 자동발송



2

본인인증



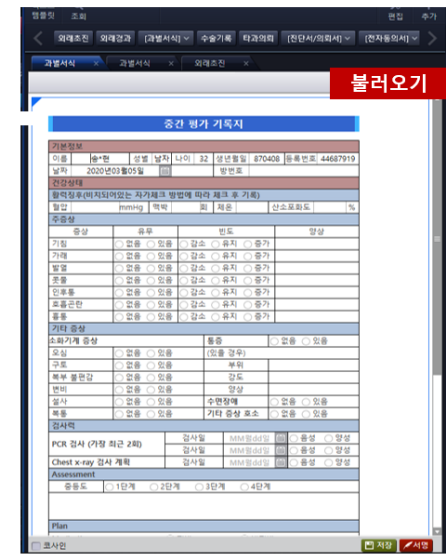
3

설문작성



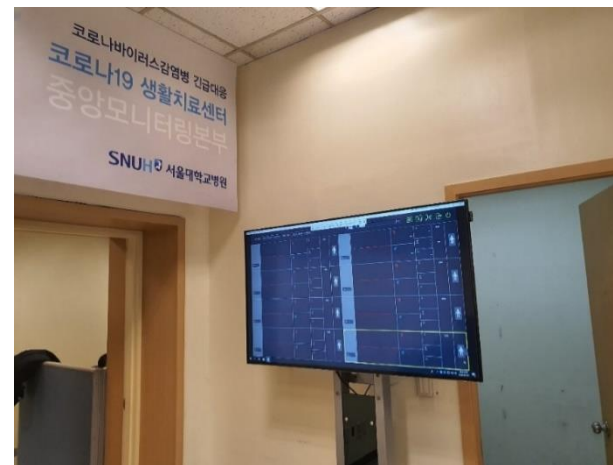
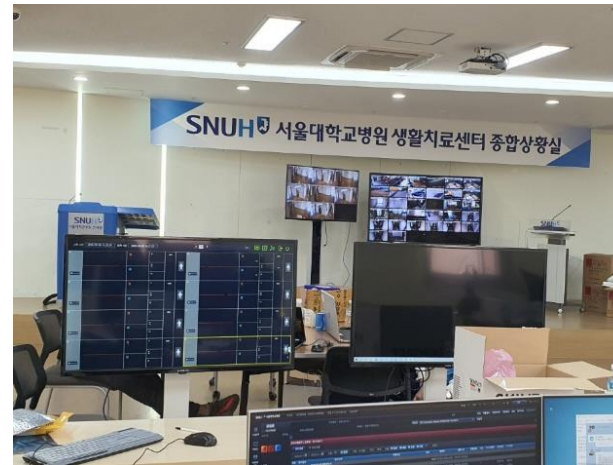
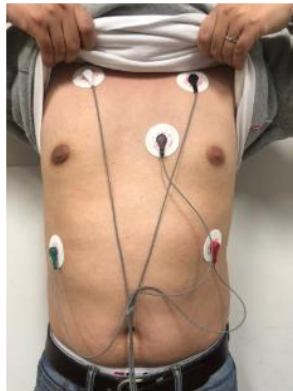
4

HIS 과별서식지 연동



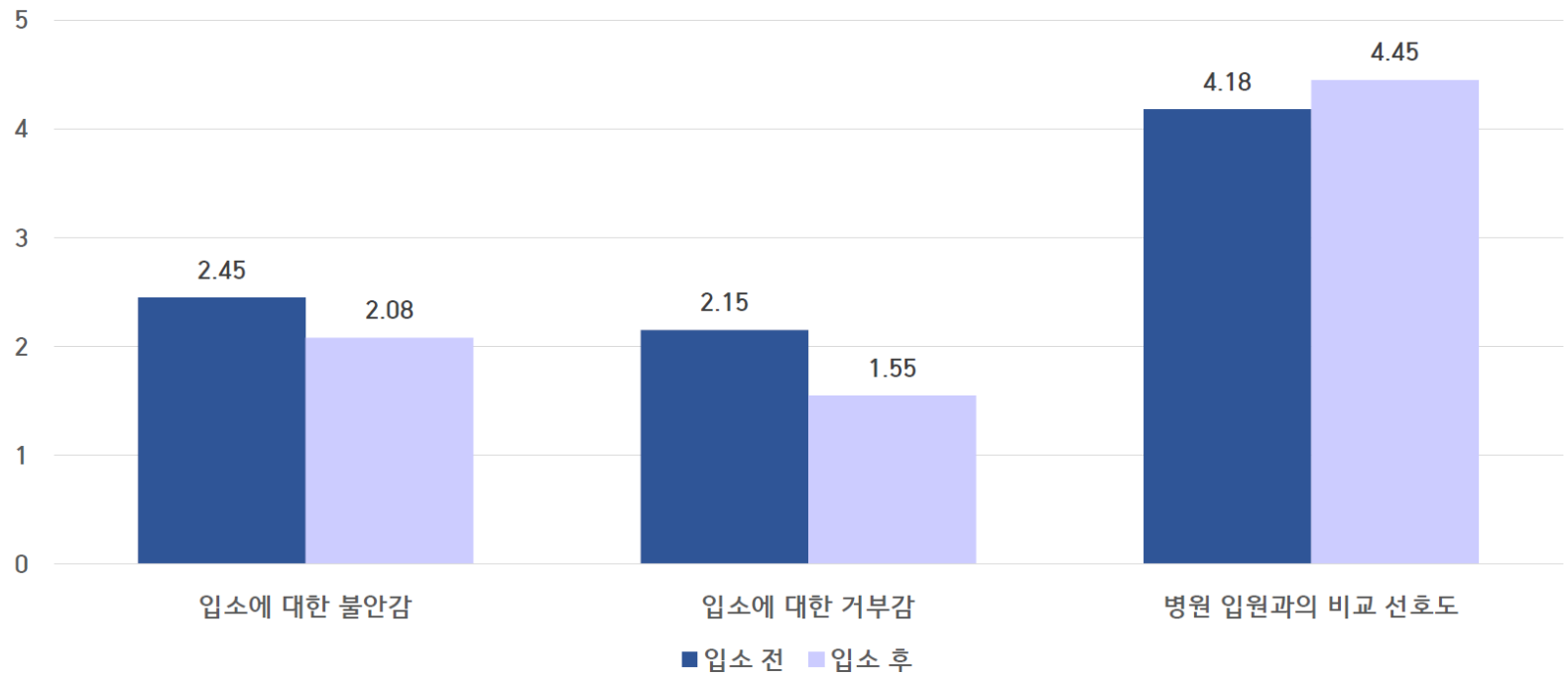
Continuous tele-monitoring systems for borderline patients : Vital Signs

Wearable Vital Sign recorder



문경 생활치료센터 환자 만족도

생활치료센터에 대한 인식 변화



전화상담 또는 처방 한시허용

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공지사항

전체	공고	공고(코로나 관련)	채용	행사
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「전화상담 또는 처방 및 대리처방 한시적 허용방안」안내

· 등록일 : 2020-03-02[최종수정일 : 2020-03-04] · 조회수 : 8770 · 담당자 : 박은비 · 담당부서 : 보건의료정책과
· 전화번호 : 044-202-2406 · 기간 : 2020-03-02 ~

[보건복지부 공고 제2020-177호]

「전화상담 또는 처방 및 대리처방 한시적 허용방안」안내

코로나바이러스감염증-19 중앙사고수습본부-311호(2020.2.23.) 및 보건의료정책과-1470호(2020.3.2.)에 따른 「전화상담 또는 처방 및 대리처방 한시적 허용방안」을 붙임과 같이 다시 공고합니다.

2020년 3월 2일

보건복지부장관

Hypertension, Diabetes care during COVID - 19

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< 주요 만성질환별 연도별 진료환자 수 변화 >

구분	환자 수(명)					'19 대비 '20 증감률	'16~'19대비 '20 증감률
	2016	2017	2018	2019	2020		
고혈압	5,141,763	5,293,438	5,484,140	5,681,562	5,861,402	3.2%	-0.2%
당뇨병	2,204,395	2,362,044	2,513,580	2,674,005	2,784,652	4.1%	-2.4%

< 주요 만성질환별 연도별 신규 환자 수 변화 >

구분	<u>신규 환자 수(명)</u>					'19 대비 '20 증감률	'16~'19대비 '20 증감률
	2016	2017	2018	2019	2020		
고혈압	334,858	332,645	357,115	380,874	369,863	-2.9%	-7.0%
당뇨병	320,740	326,123	337,000	358,534	337,967	-5.7%	-9.2%

* 각 연도별 1~7월 진료분(9월 지급분까지 반영) 실적 기준임

CMS Expansion of Telemedicine Services

(Covid-19 emergency 1135 waiver; 2020.3.6.) SEOUL NATIONAL UNIVERSITY HOSPITAL

TYPE OF SERVICE	WHAT IS THE SERVICE?	HCPCS/CPT CODE	Patient Relationship with Provider
MEDICARE TELEHEALTH VISITS	A visit with a provider that uses telecommunication systems between a provider and a patient.	<p>Common telehealth services include:</p> <ul style="list-style-type: none"> • 99201-99215 (Office or other outpatient visits) • G0425-G0427 (Telehealth consultations, emergency department or initial inpatient) • G0406-G0408 (Follow-up inpatient telehealth consultations furnished to beneficiaries in hospitals or SNFs) <p>For a complete list: https://www.cms.gov/Medicare/Medicare-General-Information/Telehealth/Telehealth-Codes</p>	<p>For new* or established patients.</p> <p>*To the extent the 1135 waiver requires an established relationship, HHS will not conduct audits to ensure that such a prior relationship existed for claims submitted during this public health emergency</p>
VIRTUAL CHECK-IN	<u>A brief (5-10 minutes) check in</u> with your practitioner via telephone or other telecommunications device to decide whether an office visit or other service is needed. A remote evaluation of recorded video and/or images submitted by an established patient.	<ul style="list-style-type: none"> • HCPCS code G2012 • HCPCS code G2010 	For established patients.
E-VISITS	A communication between a patient and their provider through an <u>online patient portal</u> .	<ul style="list-style-type: none"> • 99421 • 99422 • 99423 • G2061 • G2062 • G2063 	For established patients.

Original Investigation | Health Policy

Use and Content of Primary Care Office-Based vs Telemedicine Care Visits During the COVID-19 Pandemic in the US

G. Caleb Alexander, MD, MS; Matthew Tajanlangit; James Heyward, MPH; Omar Mansour, MHS; Dima M. Qato, PharmD, MPH, PhD; Randall S. Stafford, MD, PhD

(JAMA, Oct 2020)

Table 1. Trends in Primary Care by Visit Type, 2018-2020^a

Variable	No., in thousands (%)									
	2018				2019				2020	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Total visits, No. (95% CI)	124 919 (119 697-130 141)	122 402 (117 286-127 518)	124 115 (118 927-129 303)	125 854 (120 593-131 115)	127 298 (121 786-132 810)	130 297 (124 655-135 939)	128 225 (122 673-133 777)	123 180 (117 846-128 514)	117 944 (112 648-123 240)	99 326 (94 866-103 786)
Office-based	116 614 (93.35)	114 249 (93.34)	115 780 (93.28)	117 219 (93.14)	117 741 (92.49)	121 344 (93.13)	117 936 (91.98)	114 176 (92.69)	105 911 (89.80)	58 668 (59.07)
Hospital-based	4126 (3.30)	3786 (3.09)	4189 (3.38)	4376 (3.48)	4949 (3.89)	4736 (3.63)	4951 (3.86)	4366 (3.54)	4229 (3.59)	3353 (3.38)
Telemedicine	1398 (1.12)	1194 (0.98)	1109 (0.89)	1363 (1.08)	1355 (1.06)	1611 (1.24)	1406 (1.10)	1369 (1.11)	4794 (4.07)	35 044 (35.28)
Other ^b	2780 (2.23)	3172 (2.59)	3037 (2.45)	2897 (2.30)	3253 (2.56)	2606 (2.00)	3933 (3.07)	3267 (2.65)	3009 (2.55)	2262 (2.28)

Abbreviation: Q, quarter.

^b Other includes home, nursing home, and unspecified sites of care.

^a Source: IQVIA National Disease and Therapeutic Index, 2018-2020.¹⁹

Covid-19로 인한 비대면의료의 변화

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How has COVID-19 changed the outlook for telehealth?

1 Consumer

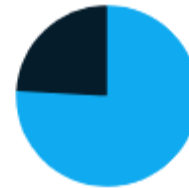
Shift from:



11%

use of telehealth in 2019

To:



74% high satisfaction

76%

now interested in using telehealth going forward

While the surge in telehealth has been driven by the immediate goal to avoid exposure to COVID-19, with more than 70 percent of in-person visits cancelled,¹ 76 percent of survey respondents indicated they were highly or moderately likely to use telehealth going forward,² and 74 percent of telehealth users reported high satisfaction.³

2 Provider

Health systems, independent practices, behavioral health providers, and others rapidly scaled telehealth offerings to fill the gap between need and cancelled in-person care, and are reporting

50–175x

the number of telehealth visits pre-COVID,⁴



In addition, **57%**

of providers view telehealth more favorably than they did before COVID-19 and

64%

are more comfortable using it.⁵

(McKinsey & Company, 2020)

Physician attitudes toward telehealth

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Physician attitudes toward telehealth, % of respondents agreeing (n = 538)



64%

I view telehealth more favorably now than before the COVID-19 challenge



57%

I am more comfortable with providing telehealth now than before COVID-19



33%

Telehealth is more convenient for providers than in-person appointments



29%

Physicians can be similarly or even more effective using telehealth than in person for the right visit types



24%

Telehealth visits are financially viable from a reimbursement perspective



20%

Most of my patients now prefer telehealth over in-person visits

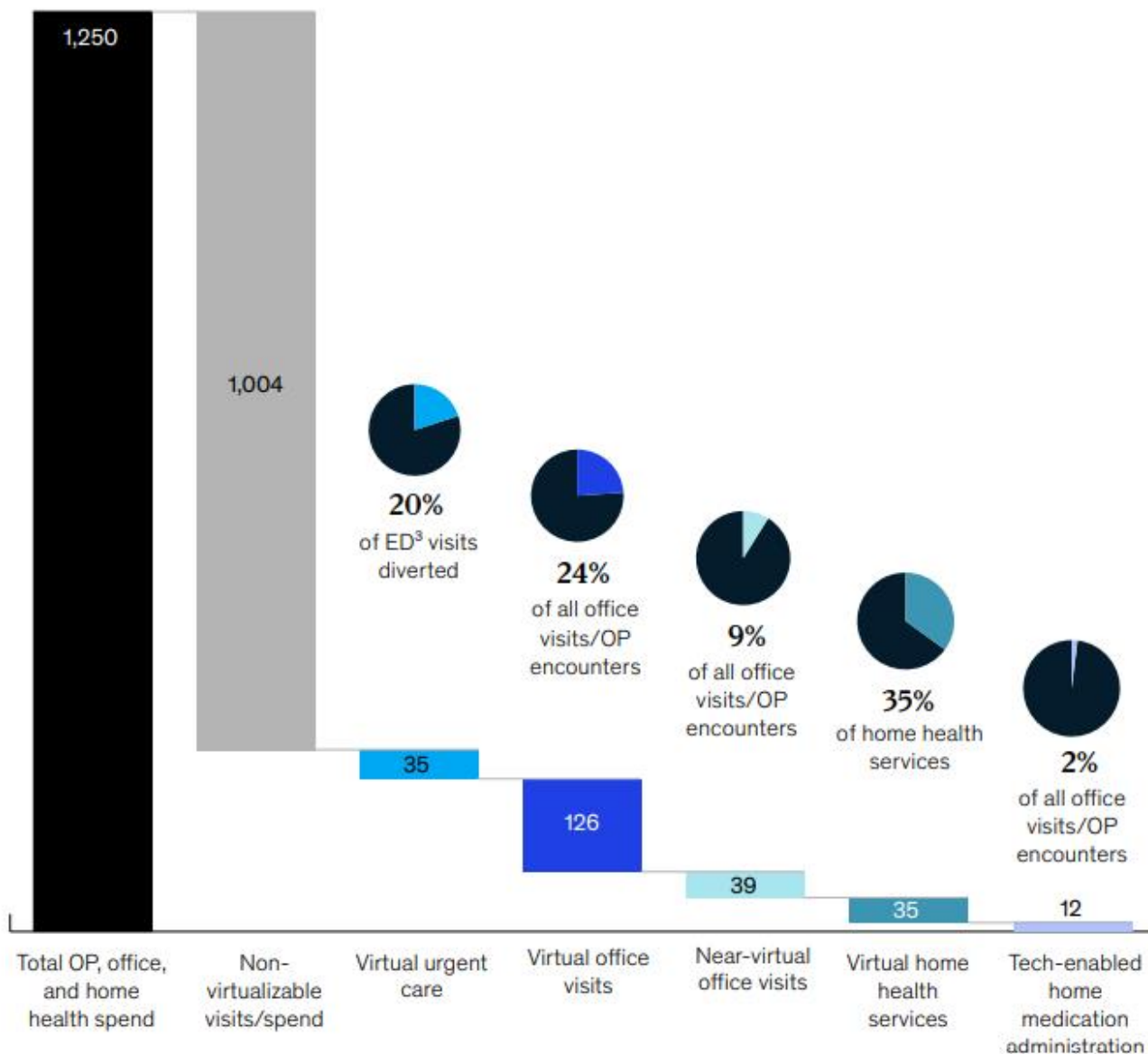
(McKinsey's Physician Survey, May 2020)

Approximately \$250 billion—or ~20%—of all Medicare, Medicaid, and Commercial OP, office, and home health spend, could potentially be virtualized.

Current OP¹ and office visits that can be virtually enabled

Commercial, Medicare, and Medicaid 2020 estimated,² billions of dollars

(Mckinsey & Company, 2020)



Original Investigation | Health Policy

Prevalence and Characteristics of Telehealth Utilization in the United States

Shira H. Fischer, MD, PhD; Kristin N. Ray, MD, MS; Ateev Mehrotra, MD, MPH; Erika Litvin Bloom, PhD; Lori Uscher-Pines, PhD

Figure 1. Proportion of Respondents Who Reported Ever Using Various Telehealth Modalities, Weighted

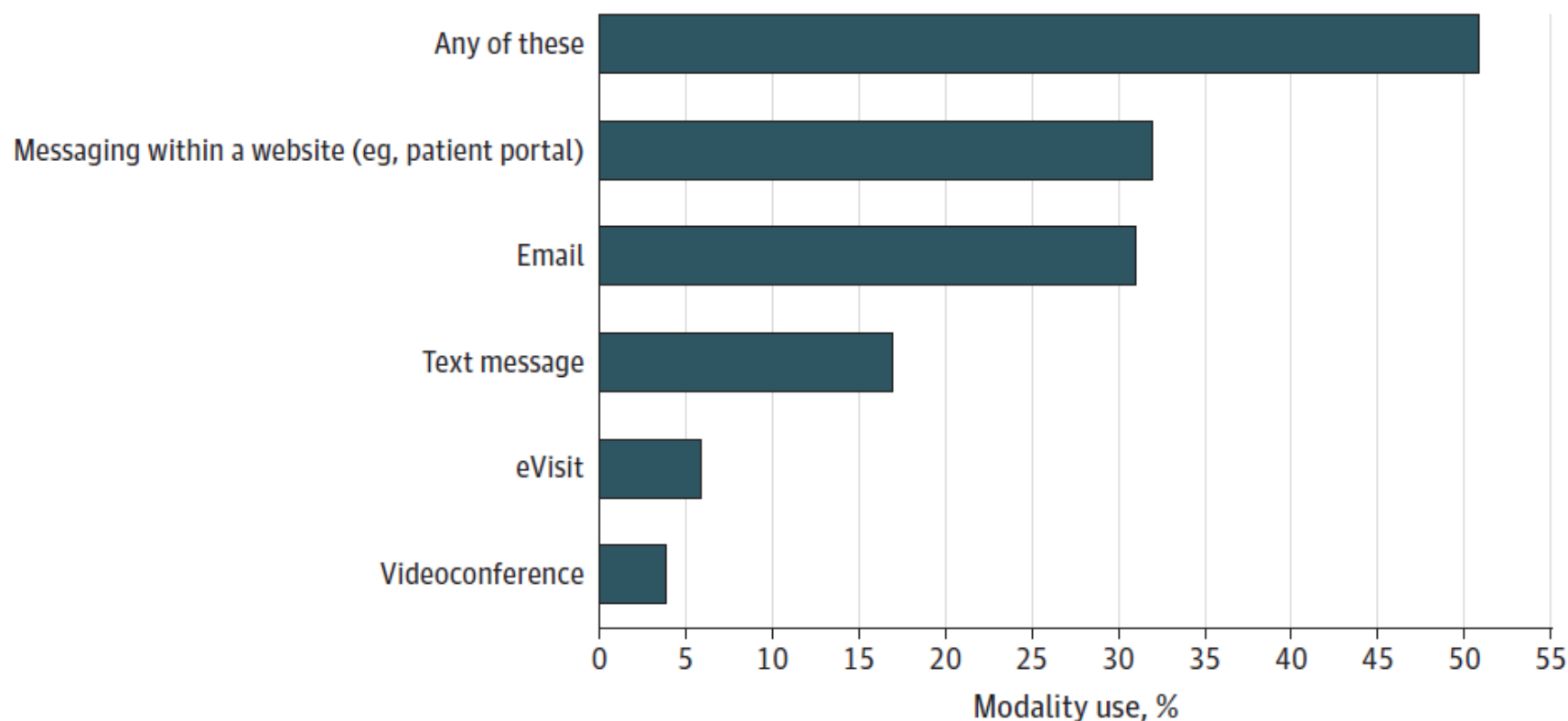
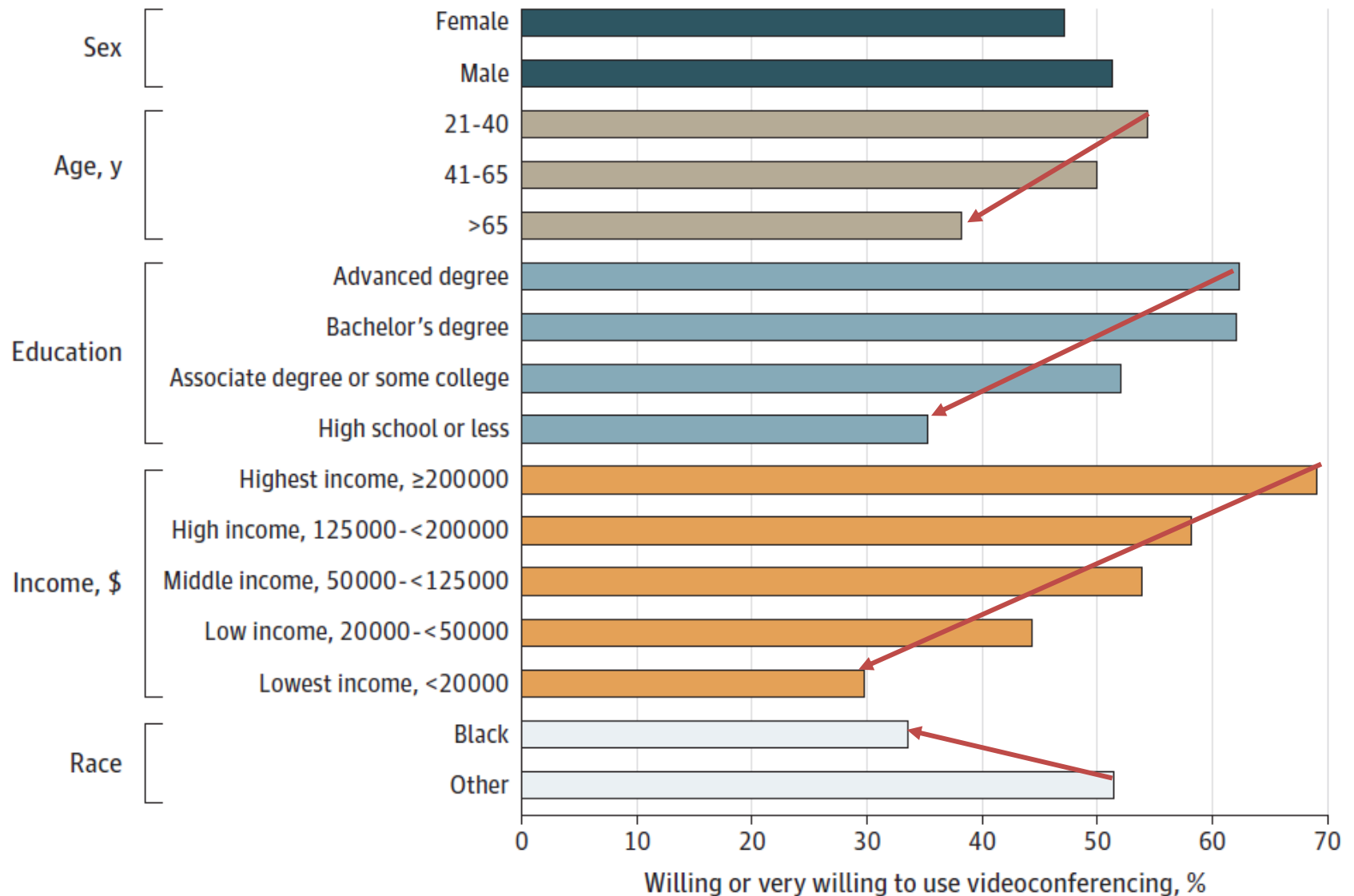
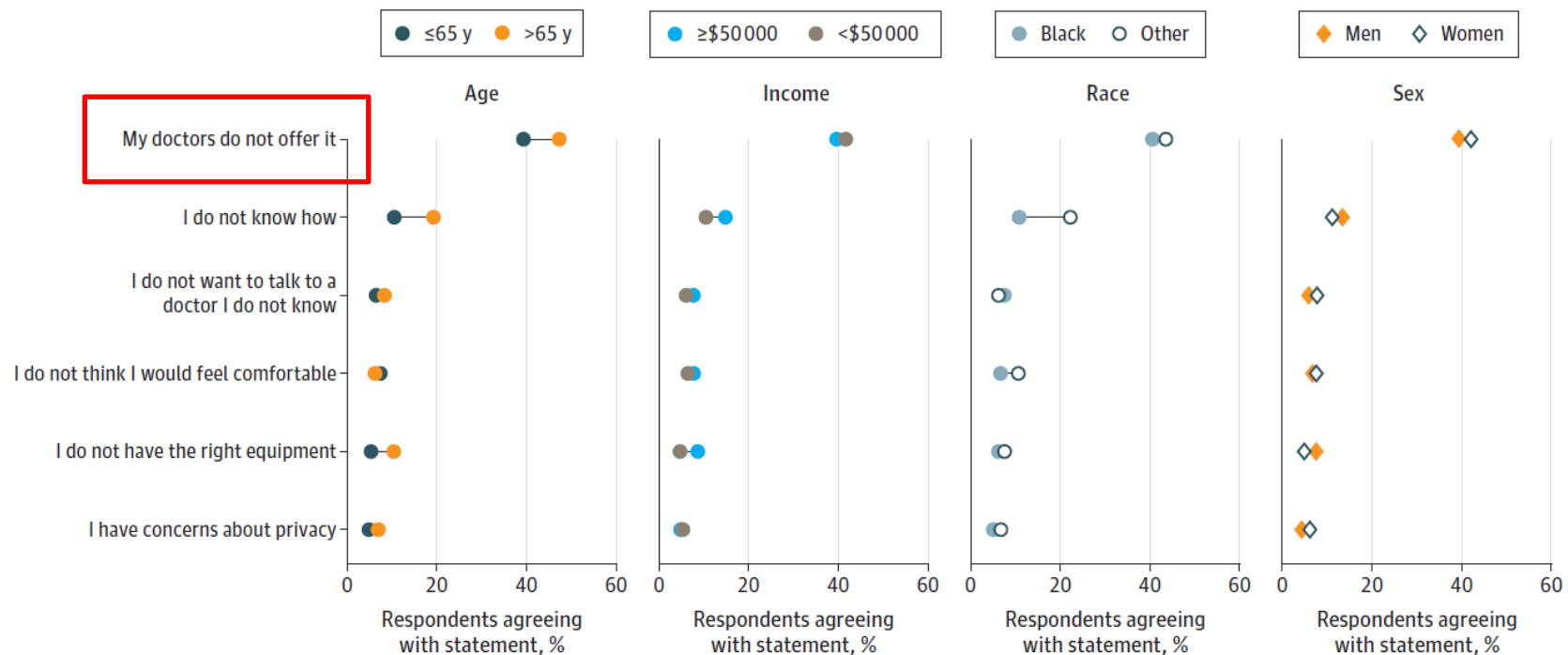


Figure 2. Univariate Comparisons of Willingness to Use Videoconferencing by Demographic Characteristic



(S. Fischer et al, JAMA, Oct 2020)

Figure 3. Reasons for Not Using Videoconferencing by Demographic Group



Respondents could answer with more than 1 reason.

사례1) Pediatrics

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- Seattle children's hospital
- 전체진료의 80%가 비대면 진료
- 추적 진료의 대부분
- 보호자와의 대화
- Video 녹화 전송

COVID-19 Advisory: Visitors limited to only one parent/caregiver at all clinics and no siblings allowed: [learn more](#). [Telehealth update](#).

+ How to use MyChart for your video visit using a phone or other mobile device

Get Ready for Your Virtual Visit

1 Day Before Your Visit



Install Zoom on a personal device that has a camera



Make sure you can sign in to your MyChart account



Write down any questions you want to ask your doctor

45 Minutes Before Your Visit



Sign in to MyChart and complete the eCheck-In



Write down your Clinic's phone number



Charge and plug in your device

15 Minutes Before Your Visit



Sit in a quiet, private spot with good light and signal



Make sure the patient is present



Go to MyChart to begin video visit



Turn on your audio and video and test that it works

사례2) OBGY

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UW Medicine

[eCare Patient Portal](#) / [For Providers](#) / [Research](#) / [School of Medicine](#) / [Contact Us](#)

[Find care](#) ▼ / [Make an appointment](#) ▶ / [Find health & patient resources](#) ▼ / [I want to...](#) ▼



COVID-19 (coronavirus) Information

We're committed to creating the safest possible environment in our hospitals and clinics.

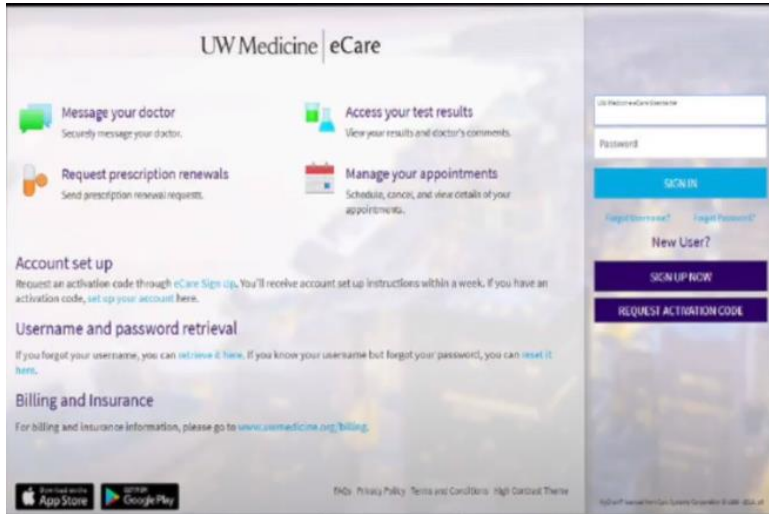
[Patient safety](#) | [Care and services](#) | [Visitor policy](#)

TeleOB Program

Now enrolling. Please talk to your doctor to see if this is right for you.

TeleOB U Washington

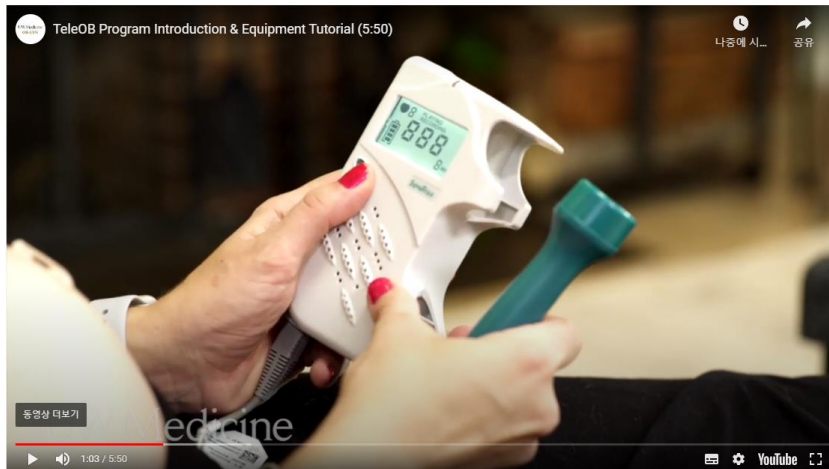
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TeleOB Program Introduction & Equipment Tutorial



TeleOB Program Introduction & Equipment Tutorial



사례3) Behavioral Health

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- Corona Blue, Angry
- Washington State Health Care Authority
 - Washington Listens
- Zoom licenses

질병관리본부 보건복지부 국가트라우마센터

코로나19로 스트레스 받을 때
혼자 힘들어하지 말고
전문가의 도움을 받으세요

위기상담전화

확진자 및 가족
02-2204-0001~2
(국가트라우마센터)
055-520-2777
(영남권트라우마센터)

격리자 및 일반인
1577-0199
(정신건강복지센터)

누리집

국가트라우마센터 | <https://nct.go.kr>
질병관리본부 | <http://www.cdc.go.kr>

2020.3.6. 6/6

사례4) Primary Care, Geriatrics

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- **Washington State**
 - 10배 ~ 20배 증가
 - 모든 초진 Video Chat
 - Triage, Pre-visit services
 - 하루 진료인원 : 18 ~ 20/day



HOME > 보험·제도

전화상담·처방건수 22만건 넘어...청구액 28억 6000만원

☎ 고신정 기자 ksj8855@doctorsnews.co.kr | © 승인 2020.05.15 18:30 | 💬 댓글 0

사례5) Physical Therapy

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Founder



Locations

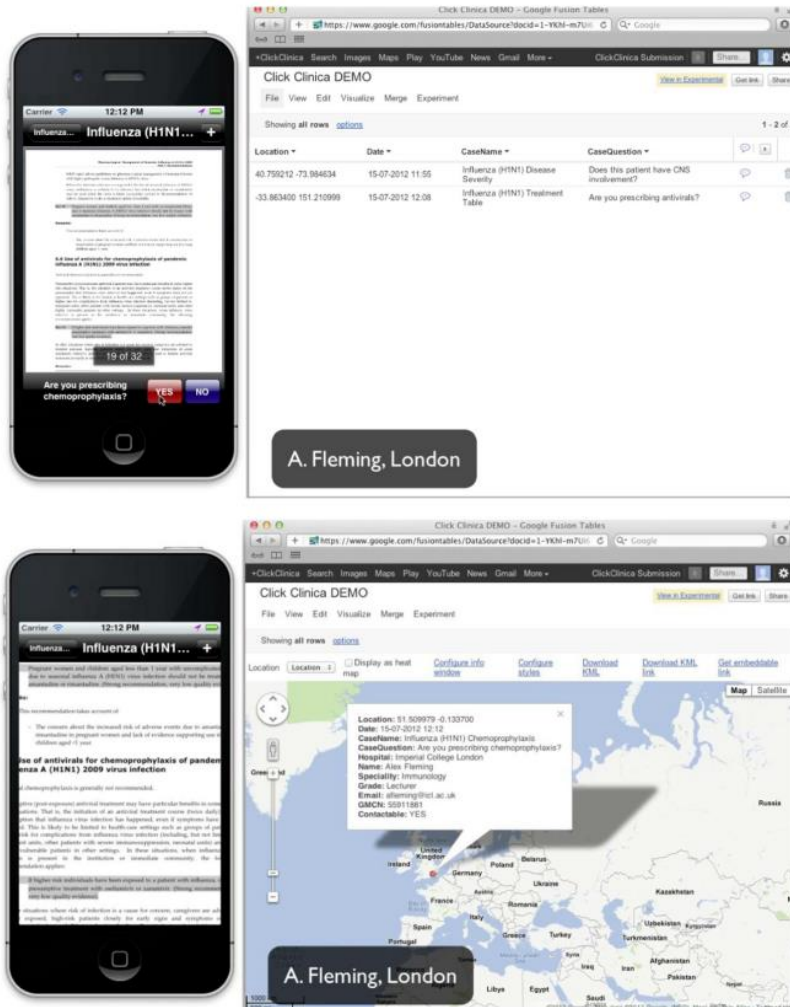


Team



사례6) Disease and epidemic outbreak tracking

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- App을 통한 질병감시를 시도
- 질병발생 시 GPS와 연계하여 정보를 제공하면, 해당 질병의 가이드라인이나 정보를 제공, 진료에 도움을 줌

고려해야할 점

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- **환자 중심 통합 시스템**
 - E-triage, Scheduling, Visits, Records
- **대상자, 질병별 모듈**
 - Potential Option
 - Clinical Trial
- **Value based payment**
 - Cost benefit
 - Outcome measure

비대면 의료의 한계와 과제

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- **Technology issue**
 - 대면진료의 질 대비 정확성, 유용성, 효과성
 - Device
- **대면진료가 필요한 경우**
 - 조직검사, 영상검사, 신체 검진
- **법적 문제**
- **비용 – 형평성**
- **의료진, 환자의 기술 익숙 정도, 가치관**
- **Privacy**

비대면의료의 전망

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- **지속적으로 확대 예상**
 - 기술, 법적 문제, 수가(보상)
- **대면진료와 혼합**
 - Hybrid
 - 대상, 질병에 따른 효과 근거 필요
- **전 국가적 협력 필요**
 - Infra 지원
 - 제도적 Flexibility, Innovation

Thank You !