Canadian Society of Nephrology/
Société canadienne de néphrologie
CSN/SCN

RESOLUTION:
VIRTUAL MEDICINE IS TO BECOME THE NEW STANDARD OF CARE FOR PATIENTS WITH CKD/ESRD

Coming to you in your own home!
Tuesday Nov 24th

Deb Zimmerman
Past President, CSN


VIRTUAL
MEDICINE
To be or not to be the standard of care for CKD/ESRD patients

Announcements

Dr. Sanjay Pandeya – CSN President

Canadian Society of Nephrology/
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Our 2020 Corporate Partners

Diamond Partners

AMGEN

janssen

Otsuka

Canadian Society of Nephrology/
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Our 2020 Corporate Partners

Platinum Partners

ALEXION

AstraZeneca

Baxter

Boehringer Ingelheim

Lilly

FRESENIUS MEDICAL CARE

HORIZON

SILVER PARTNERS

BAYER

SANOFI GENZYME

Canadian Society of Nephrology/
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New Year Vacancies

Director at Large - Western Provinces (2021 - 2024)
Director at Large - Province of Ontario (2021 - 2024)
Director at Large - Province of Quebec (2021- 2024)

Chair - CPG Committee (2021 - 2024)

Process for nominations and eligibility will be sent to you all shortly by email.

Deadline for Nominations:
January, 2021

Canadian Society of Nephrology/
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NOMINATE NOW!

CSN Award for Clinical Nephrology Teaching

CSN Award for Distinguished Service

DEADLINE BY FEBRUARY 2021

Canadian Society of Nephrology/
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CSN/SCN

more than a membership
IT'S A PARTNERSHIP

CSN/SCN
Community
VIEW WEBINARS NOW

LDC
London Dialysis Course

Canadian Society of Nephrology/
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CSN/SCN

SAVE THE DATE

52nd Virtual Annual General Meeting

Abstracts are to be submitted to the WCN'21 but CSN will have the accepted Canadian abstracts displayed in the ePoster session during the CSN AGM


VIRTUAL
MEDICINE
To be or not to be the standard of care for CKD/ESRD patients

Polling – Lets vote!

1. Dr Zimmerman's favorite Greek God is Adonis? (True, False)

2. Virtual Medicine is to Become the New Standard of Care for Patients with CKD/ESRD (True, False)

Agenda

Item	Debater
PRO (**20** mins)	Dr. Rigatto
CON (**20** mins)	Dr. House
Rebuttal PRO (**5** mins)	Dr. Rigatto
Rebuttal CON (**5** mins)	Dr. House
Audience Q&A (**15** mins)	all

LEARNING OBJECTIVES and ACCREDITATION

Upon completion of this program, participants will be able to:

- Understand the meaning and spectrum of "virtual care"
- Explore the current and proximate future context for virtual care
- Debate the pros and cons of widespread ongoing use of virtual care beyond the pandemic

This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada and approved by the Canadian Society of Nephrology. You may claim a maximum of 1.25 hours (credits are automatically calculated).

DISCLOSURE OF POTENTIAL CONFLICT OF INTERESTS

Dr. Claudio Rigatto	Honoraria/Consulting for Sanofi, AstraZeneca, Otsuka Potential screening gap for Fabry Disease in Manitoba -Sanofi
Dr. Andrew House	Advisory Board – AstraZeneca Speakers' bureau – Baxter Advisory Board – Horizon

PRO-VIRTUAL

VIRTUAL MEDICINE

To be or not to be the standard of care for CKD/ESRD patients

Dr. Claudio Rigatto

Outline of Argument

- Virtual care is patient centred care
- Virtual care is effective
- Virtual care saves money
- The perceived downsides of virtual care are due to poor implementation

Proposition 1: “I like doing virtual care”

- Choose your level of agreement:

1. Ughhh!
2. Sometimes its OK (I’m on the fence here)
3. Mostly I like it
4. Always (I live in my parent’s basement and play videogames all day)

Proposition 2: “My patients like virtual care”

- Same idea as before!

1. Not at all
2. Some of them do
3. About half
4. Most of ‘em!

Proposition 3: “The tech I use for virtual care is”

1. Clunky 90’s telecom
2. Zoomy!
3. Star wars baby!

What is virtual care?

- “Any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies with the aim of facilitating or maximizing the quality and effectiveness of patient care”

J Telemed Telecare 2018;24(9):608–15.

What is a “standard of care”?

“Diagnostic and treatment process that a clinician should follow for a certain type of patient, illness, or clinical circumstance”

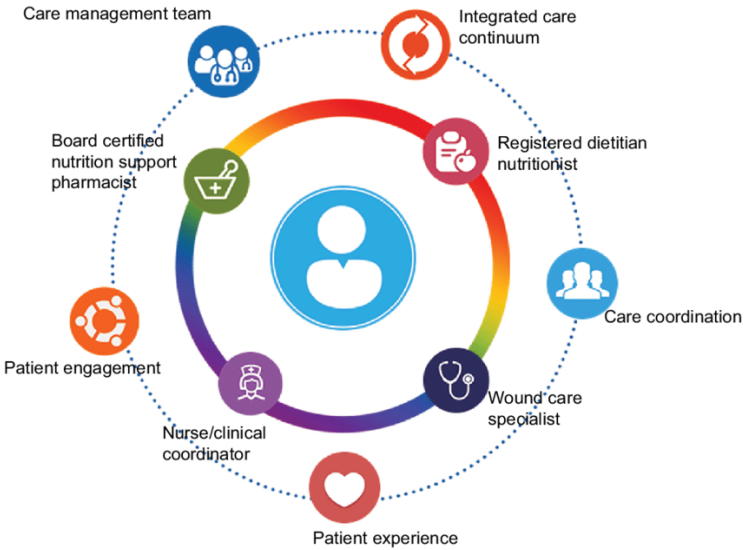
Todays resolution:

Virtual care: To be or not to be the standard of care

Means:

Virtual care will be a routine method of conducting clinic visits in most outpatients with CKD after the pandemic

Virtual care is patient centred care



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If the centre of care is the patient, then the locus of care should be the home whenever possible

Virtual care is a priority for patients

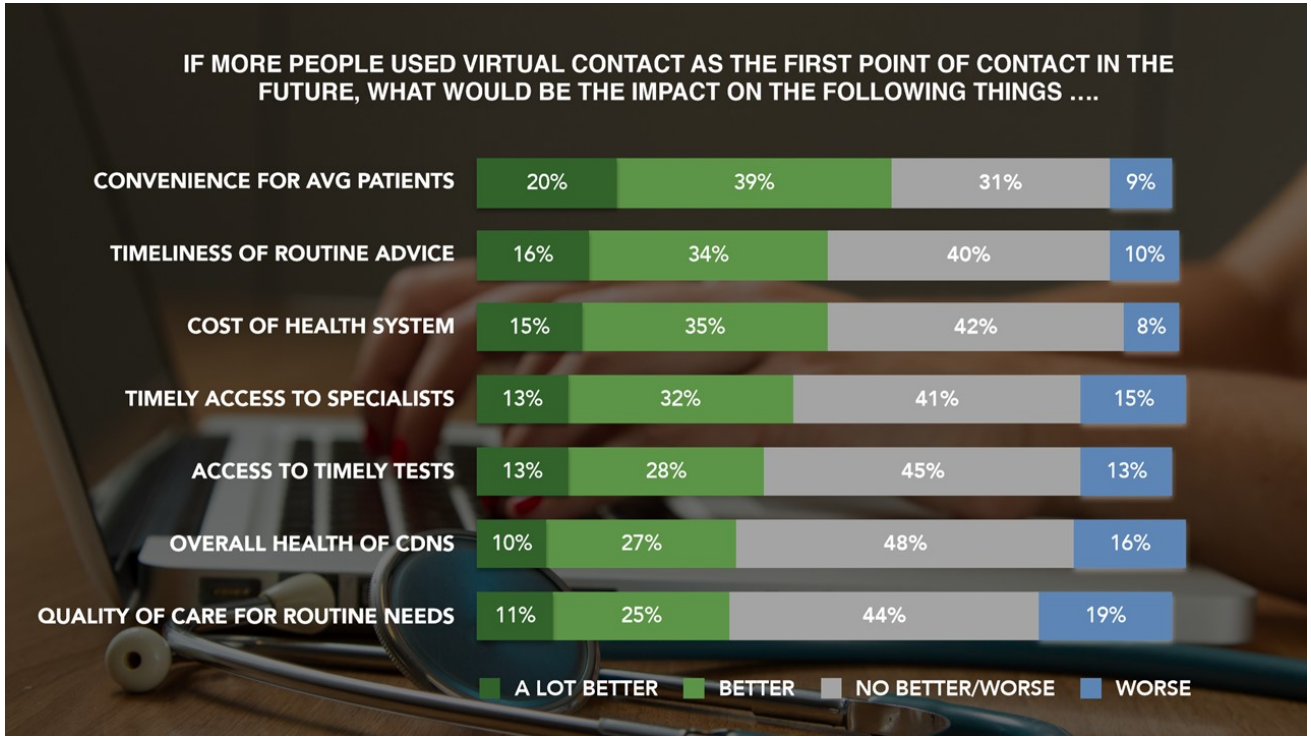
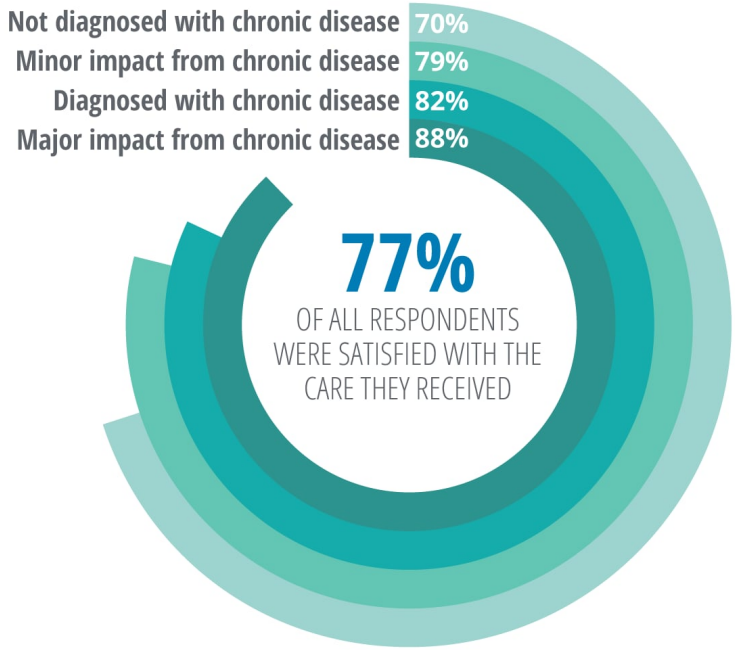


FIGURE 2

Consumers impacted by chronic conditions tend to be satisfied with virtual visits

Survey question: Overall, how satisfied were you with the care you received on your virtual visit?



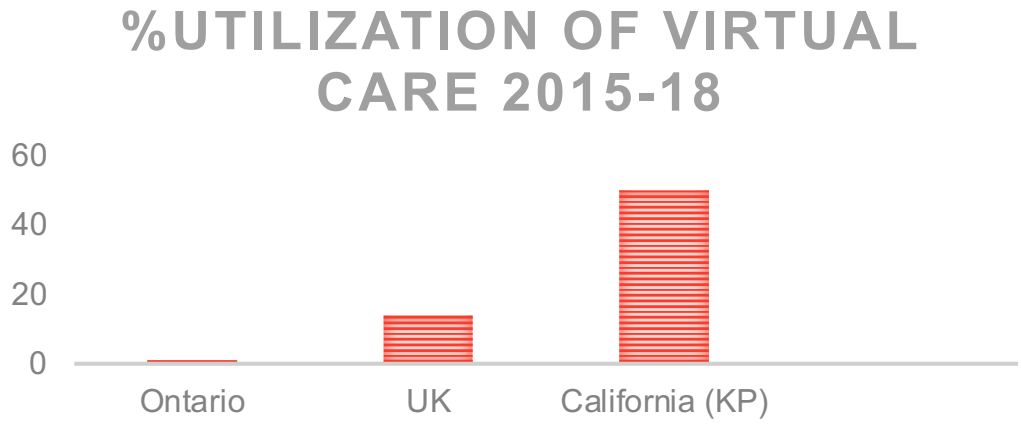
Sicker patients were more satisfied with virtual options

Note: Figure shows respondents who were satisfied, where "satisfied" is defined as answering 4 or 5 on a five-point scale in which 1 is "not at all satisfied" and 5 is "completely satisfied."
Source: Deloitte 2018 Survey of US Health Care Consumers.

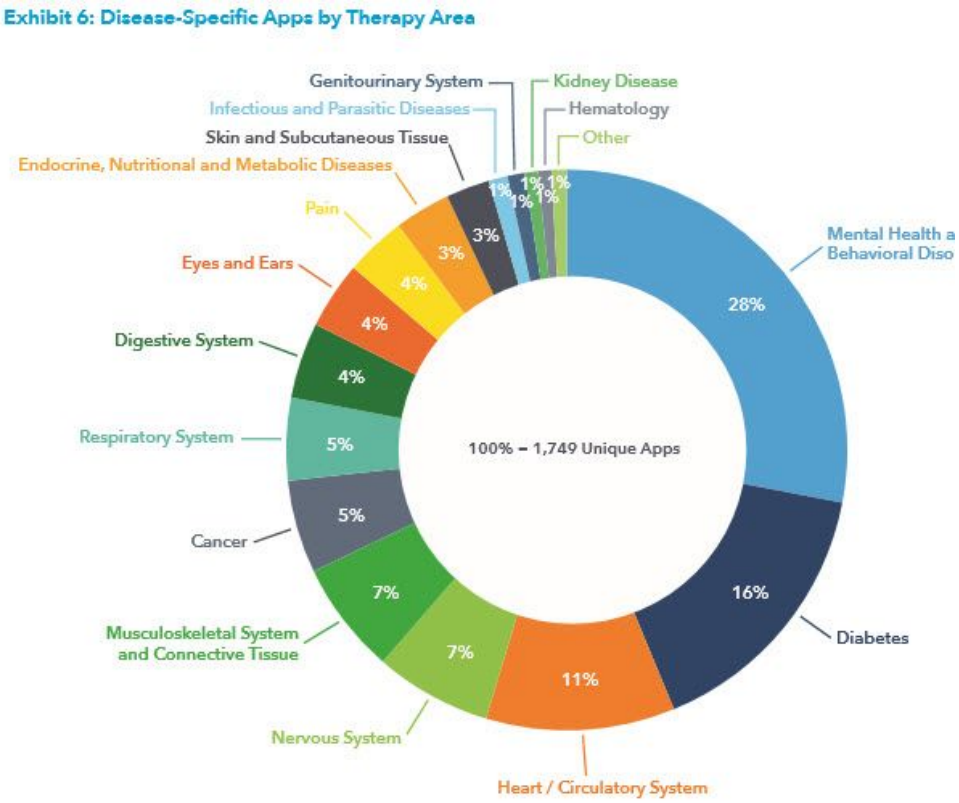
Virtual care is already here

“The future is already here, its just not evenly distributed”

-William Gibson



Virtual care is already here



AKIRA
by TELUS Health

Virtual care is effective

- Low risk patients: Equivalence
  - Primary care/consultation in remote communities/patients
  - Telepsychiatry care to remote communities
  - Chronic disease management (diabetes, heart disease, respiratory disease, CKD)
- High risk patients: Superiority
  - Heart failure patients
    - 35-40% reduction in readmissions to hospital
    - 35-40% reduction in death
    - Telemonitoring > Structured Telephone Support
    - Disease specificity was important

Eklund IJMI 2010
Uminski PlosOne 2017
Flodgren Cochrane 2015

E-Health in Kidney Disease

Stevenson, Cochrane 2019

Study or Subgroup	eHealth Events	Total	Control Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
1.1.1 Clinical decision-aid						
Cooney 2015	50	1070	74	1129	89.0%	0.71 [0.50, 1.01]
Subtotal (95% CI)		**1070**		**1129**	**89.0%**	**0.71 [0.50, 1.01]**
Total events	50		74			
Heterogeneity: Not applicable						
Test for overall effect: Z = 1.90 (P = 0.06)						
1.1.2 Behavioural counselling						
Ishani 2016	13	450	3	150	7.0%	1.44 [0.42, 5.00]
Subtotal (95% CI)		**450**		**150**	**7.0%**	**1.44 [0.42, 5.00]**
Total events	13		3			
Heterogeneity: Not applicable						
Test for overall effect: Z = 0.58 (P = 0.56)						
1.1.3 Self-monitoring and education						
Navaneethan 2017	2	50	4	57	4.0%	0.57 [0.11, 2.98]
Subtotal (95% CI)		**50**		**57**	**4.0%**	**0.57 [0.11, 2.98]**
Total events	2		4			
Heterogeneity: Not applicable						
Test for overall effect: Z = 0.67 (P = 0.51)						
Total (95% CI)		**1570**		**1336**	**100.0%**	**0.74 [0.53, 1.03]**
Total events	65		81			
Heterogeneity: Tau² = 0.00; Chi² = 1.25, df = 2 (P = 0.53); I² = 0%						
Test for overall effect: Z = 1.77 (P = 0.08)						
Test for subgroup differences: Chi² = 1.25, df = 2 (P = 0.53), I² = 0%						

Risk Ratio M-H, Random, 95% CI

0.001 0.1 1 10 1000

Less with eHealth Less with usual care

Risk of Bias A B C D E F G

Risk of bias legend

(**A**) Random sequence generation (selection bias)

(**B**) Allocation concealment (selection bias)

(**C**) Blinding of participants and personnel (performance bias): Blinding of participants

(**D**) Blinding of outcome assessment (detection bias): Objective outcome

(**E**) Incomplete outcome data (attrition bias)

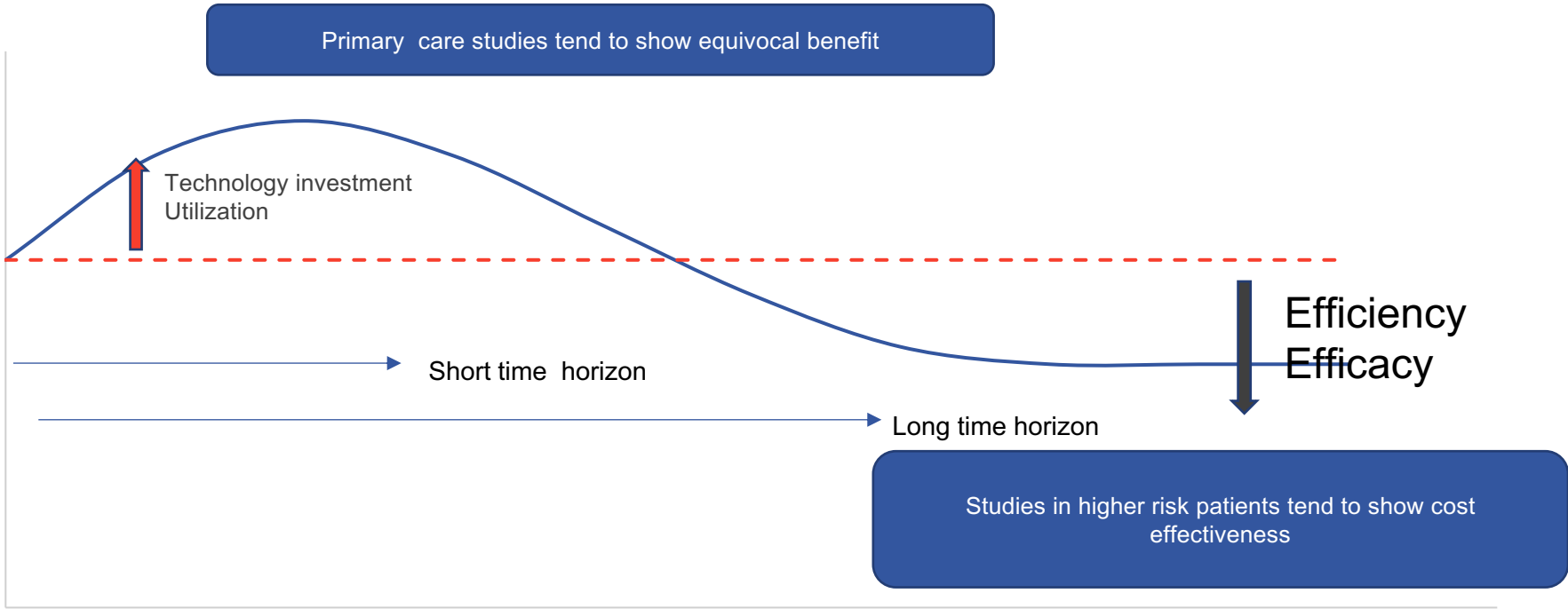
(**F**) Selective reporting (reporting bias)

(**G**) Other bias

Virtual care can reduce costs

- Payer:
  - Lower Bricks and mortar costs
  - Enhanced operational efficiencies
  - Improved patient outcomes (averted health care costs)
- Patient
  - Transportation
  - Time
  - Work loss
- Societal
  - Mitigate productivity losses due to time off work/comorbid outcomes

Virtual care is cost-effective



A Cost-Minimization Analysis of Nurse-Led Virtual Case Management in Late-Stage CKD

Virtual case management with routine measurements taken by patients of:

Weight

Dialysis Symptoms

Blood Pressure

Oxygen Saturation

Methods

Cost minimization analysis

Health payer perspective

Primary outcome:
Break-even point – maximum amount the health payer could spend on an intervention without incurring any net financial loss or gain

Results

Break-even point:
$7,339
per patient

$703.37 per month:
The potential intervention cost based on threshold analyses

75%
Of simulations produced break-even points between $3,929 and $9,460

CONCLUSION:

Nurse-led virtual home monitoring interventions in CKD patients at high risk of kidney failure have the potential for significant cost savings from the perspective of the health payer.

KI REPORTS
KIReports.org

Ferguson et al., 2020

The technology is getting better and cheaper

- Today:

VS.

The technology is getting better and cheaper

- Near Future
  - Cuffless BP tech
  - AI powered photo diagnostics
    - BSA
    - Edema
  - Breath analysis (digital stethoscope)
  - Portable Ultrasound (Butterfly iQ)
  - Cheap, high accuracy, point of care tests

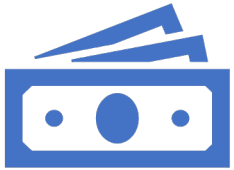
Technology can bridge the “Sensory Gap”

Virtual care for today and tomorrow

- >75% virtual visits
  - Low risk CKD 1-3
  - E-consults and virtual follow-up
- 40-60% virtual visits
  - Stable higher risk CKD (40-60%)
  - 5 year KFRE >10% (mostly stage 4/5)
- Telemonitoring in high-risk CKD patients (5 years out)

My final thoughts

Virtual care is an important patient priority



Virtual care is effective and cost effective

The technology to do it right exists now

Vote yes!

CON-VIRTUAL

VIRTUAL MEDICINE

To be or not to be the standard of care for CKD/ESRD patients

Dr. Andrew House

Outline of my position

- What is (and what is not) virtual care?
- What patient populations are disadvantaged by broad application of virtual care?
- What do patients and providers really think of virtual care?
- What are some additional limitations of virtual care in the CKD population?

Virtual Care

- *Virtual care has been defined as any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies with the aim of facilitating or maximizing the quality and effectiveness of patient care*

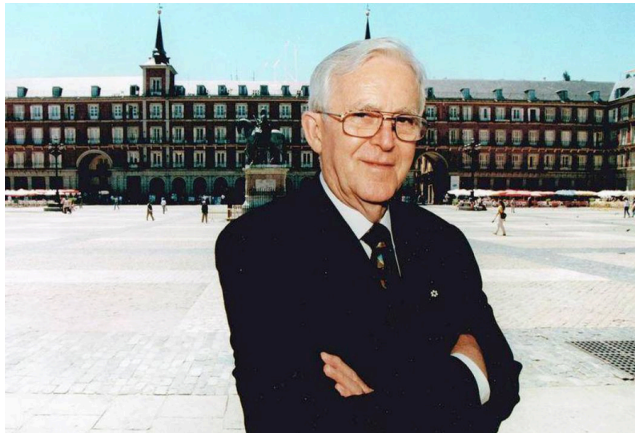
Question 1

Which of the following most accurately describes your practice with regards to multi-disciplinary Multi-Care Kidney Clinics (MCKC) for patients with advanced/advancing CKD:

1. the majority of my MCKC patients are seen in-person / face-to-face
2. the majority of my MCKC patients are seen via virtual care
3. about half of my MCKC patients are in-person, half virtual care

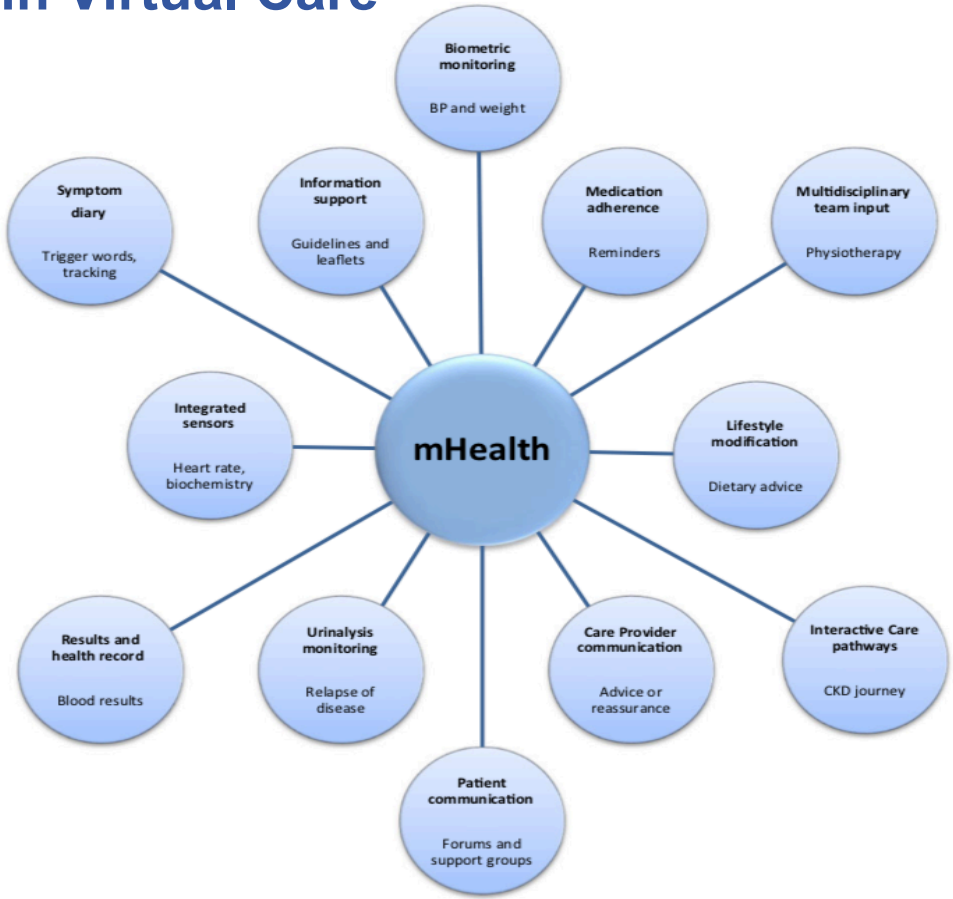
A touch of Canadiana

Canada was an early pioneer in the development of virtual care through the work of the late Dr. Maxwell House of Memorial University of Newfoundland in the 1970s; he used telephone technology to provide virtual consultations to remote sites throughout the province



The Ultimate Ideal in Virtual Care

- Imagine a world where individuals with advancing CKD had all of these resources available through their smartphone



Stauss et al. Telenephrology review in CKJ 2020

Question 2

Regarding the patients in your multi-disciplinary MCKC clinic seen by virtual care, which of the following would be most correct:

1. the majority of my virtual care visits are done by videoconference
2. the majority of my virtual care visits are done by telephone
3. my virtual care visits are fairly evenly split between video and telephone
4. Other (e.g. I use a lot of online portal, e-mail, SMS or other communications)

The Reality of VC for CKD today: CSN COVID-19 Rapid Response Team

- ***Clinic Visit Type***; ***Telehealth Use***:
- All programs have converted to telehealth visits except for a small number of urgent patients deemed to require an in-person visit.
- Telephone call visits predominate, with little uptake of videoconferencing. Several programs have attempted videoconferencing, but report the current technology to be challenging for this patient population.
- One program responded that videoconferencing is the preferred method of assessment, and has provided significant training to staff and patients.

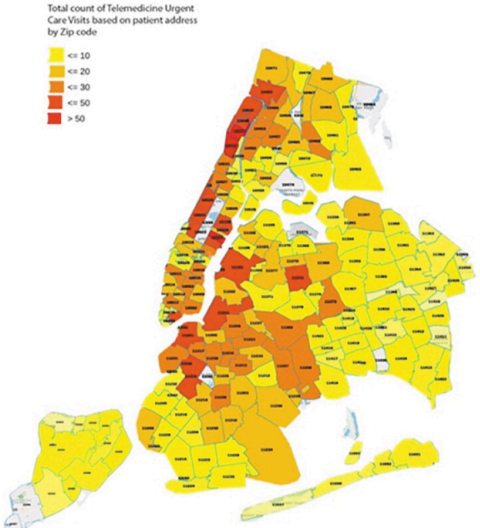
White et al. Canadian Journal of Kidney Health and Disease, June 2020

What about Access to Virtual Care? The "Digital Divide"

- Describes differences in Internet 'access' between urban, educated and wealthy on one side and underserved populations on the other
- This concept now includes eHealth literacy
- Attempts to empower patients by digital means will only ever reach the "haves" who are already tech savvy and engaged, whereas the "have-nots" (the elderly, non-users of the internet, the less well-off) are ignored
- Think of Rigatto v. House

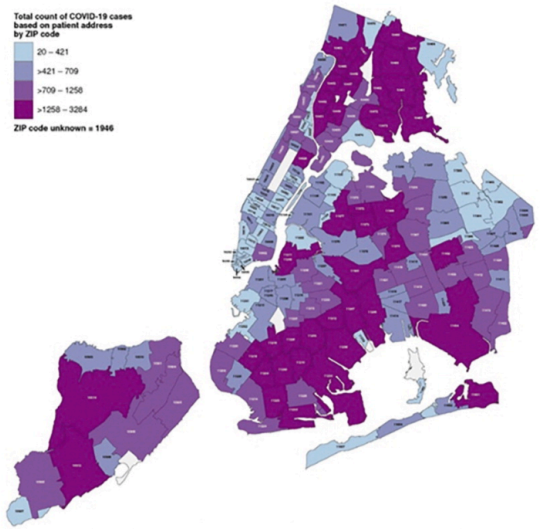
Geocode maps demonstrate inequality in application of virtual care (the digital divide)

a Map-1: Total count of Virtual Urgent Care visits based on patient address by ZIP code



(N=3,568 total cases as of April 26, 2020)

b Map-2: Total count of COVID-19 cases based on patient address by ZIP code[2]



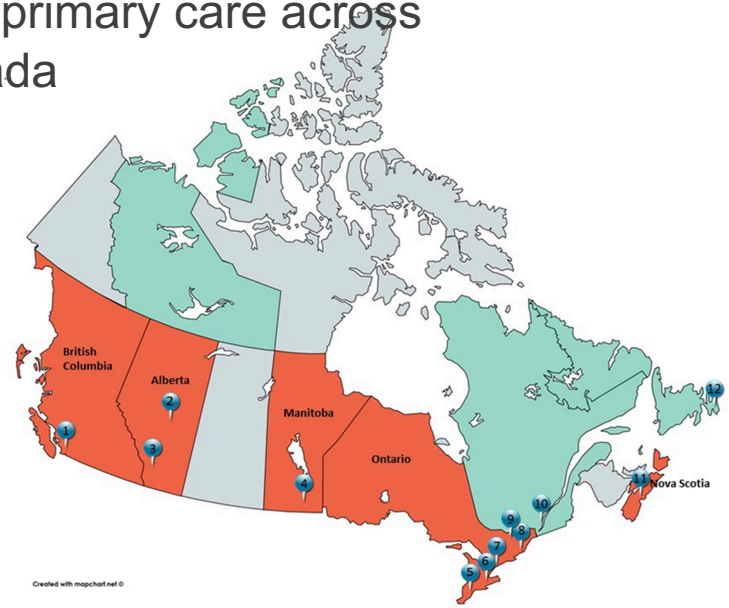
(N=15,5451 total cases as of April 26, 2020)

Authors cited issues around broadband availability, language, cost and digital literacy as barriers to access

Lame et al. Telemedicine & e-Health Aug 2020

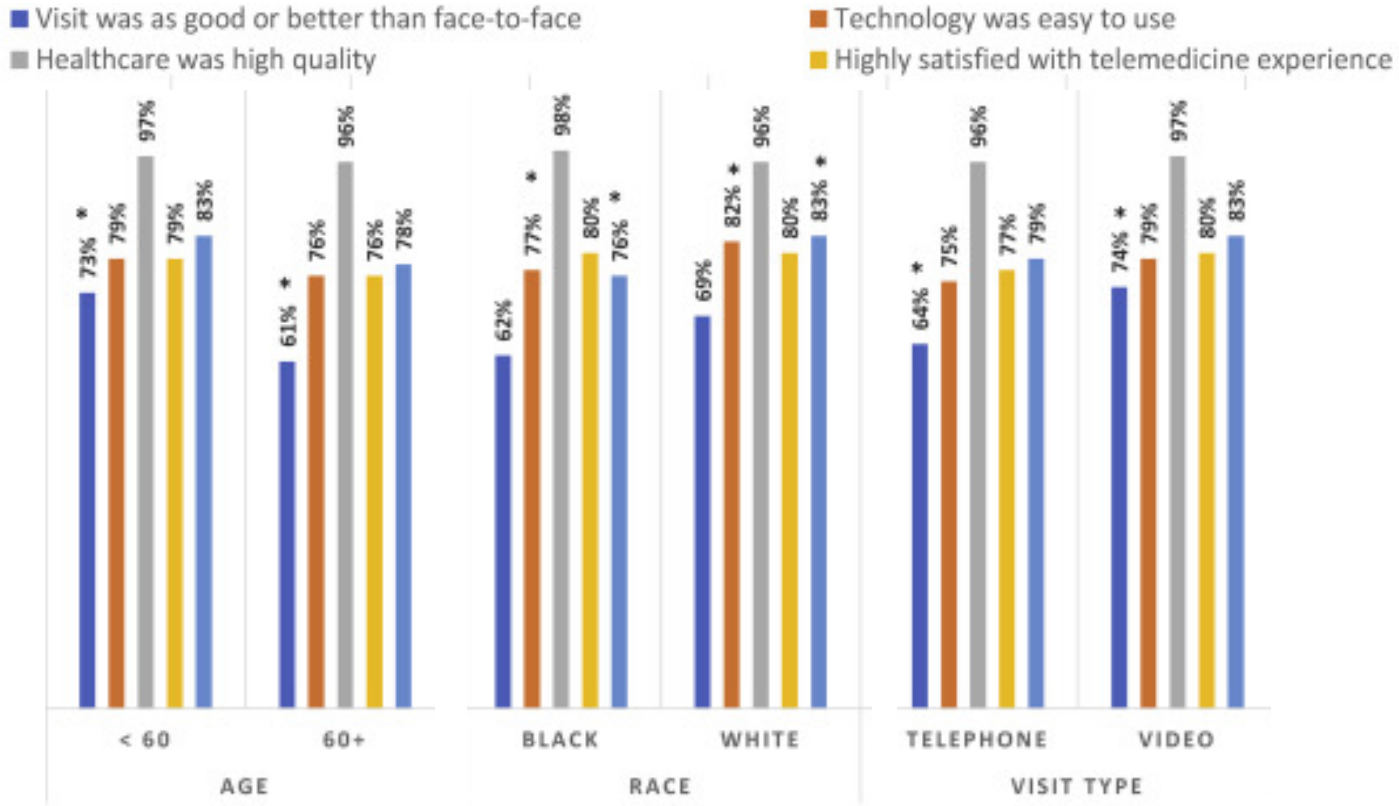
The “Digital Divide” and CKD Demographic

- 54% of incident ESKD are 65 or older, and half of these are 75 or older (CORR 2019)
- Bello et al in KI Reports, Jan 2019 examined prevalence and demographics of CKD3+ in a survey of primary care across multiple provider networks across Canada
- Highest prevalence in those with high deprivation index, rural vs. urban, comorbidities and age >75
- Numerous studies document high prevalence in Indigenous communities



What do patients think of Virtual care vs F2F

Survey of specialty care patients and providers (GI/hepatology)



Serper et al. Gastroenterology Oct 2020

What about providers?

- In the same study of GI/hepatology virtual care versus F2F
  - 27.1% felt video was worse than F2F
  - 53.2% felt telephone was worse than F2F
  - 83.8% were somewhat/very satisfied with the care they provided
  - Top concerns were the “lack of physical exam”
  - Clinicians also had concerns about privacy, workflow, and technology

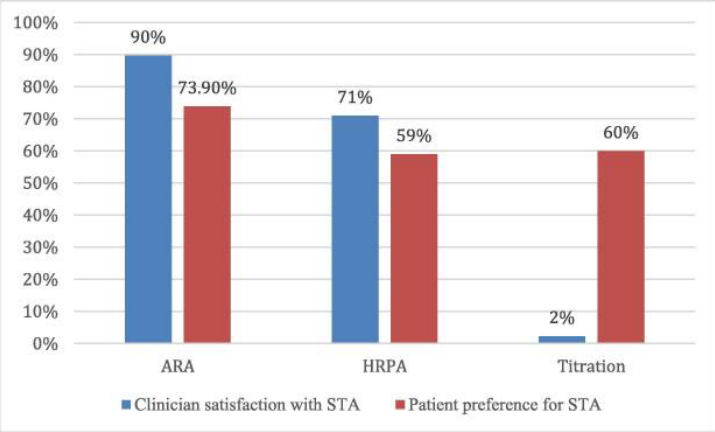
Serper et al. Gastroenterology Oct 2020

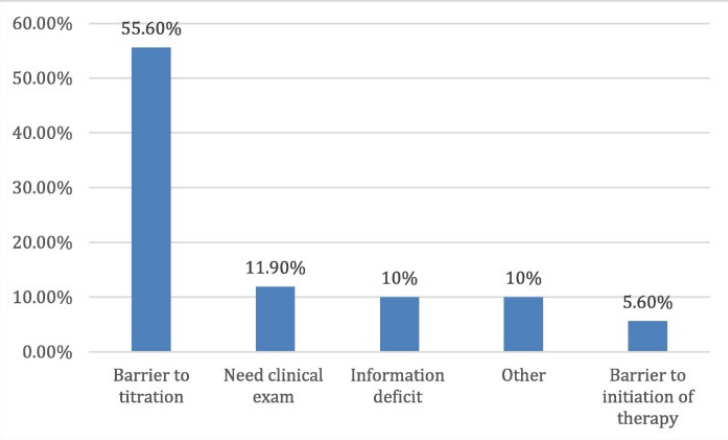

Gastroenterologist
DOG M.D.
I feel awful doc...
okay bend over.
:sniff:
Damn, I love my job.
seebangnow

Dog M.D.

Providers and patients differ in their opinions of virtual visits

Randomly selected group of patients in HF clinic in Dublin who were followed with a mix of F2F and structured telephonic assessment (STA)





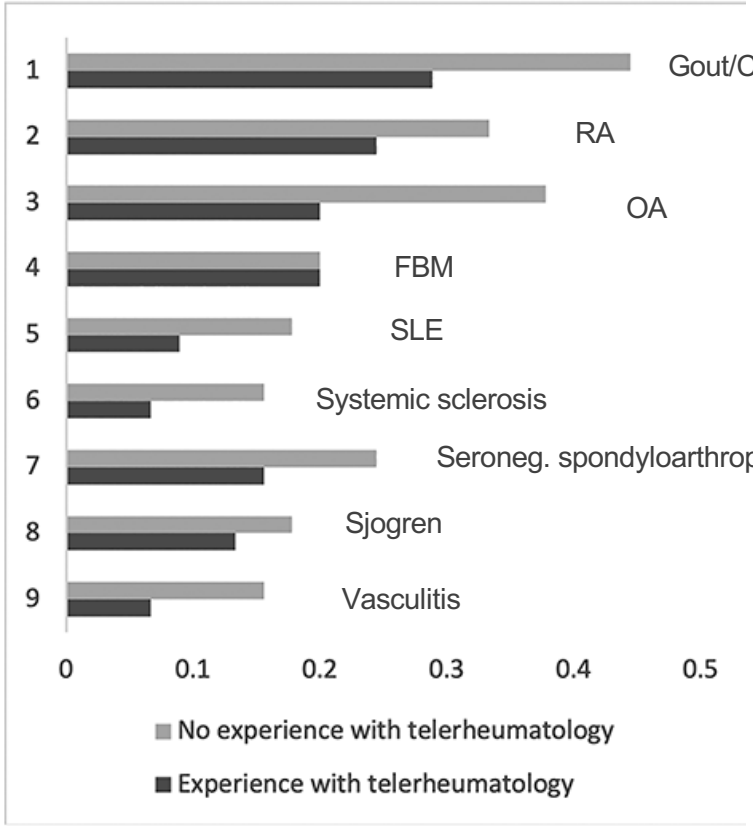
Providers and patients were fairly satisfied with Annual Review Appt, less so with High Risk Patient Appt, and providers completely dissatisfied with appts for drug Titration

Kerr et al. Int J Cardiol Heart Vasc Dec 2020

Are prescribers comfortable with changing or prescribing medications?

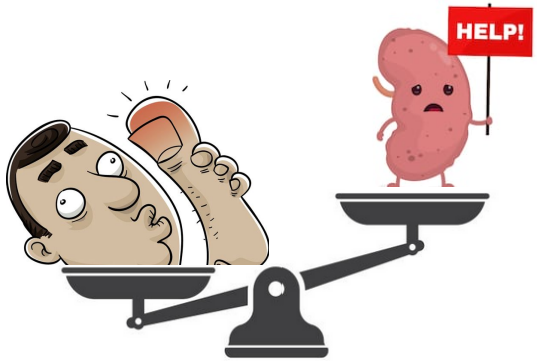
- There may be a greater tendency to more “conservative” prescribing using telemedicine
- This may lead to less titration of medications for blood pressure or heart failure
- May lead to more prescribing of antibiotics “just in case”
  - In one study of eVisits for symptoms of UTI, Mehrotra et al, JAMA Int Med 2013, found that virtual encounters led to antibiotic prescription in 99% of cases versus 49% of F2F visits ($p<0.001$)

How to providers feel about managing chronic diseases?



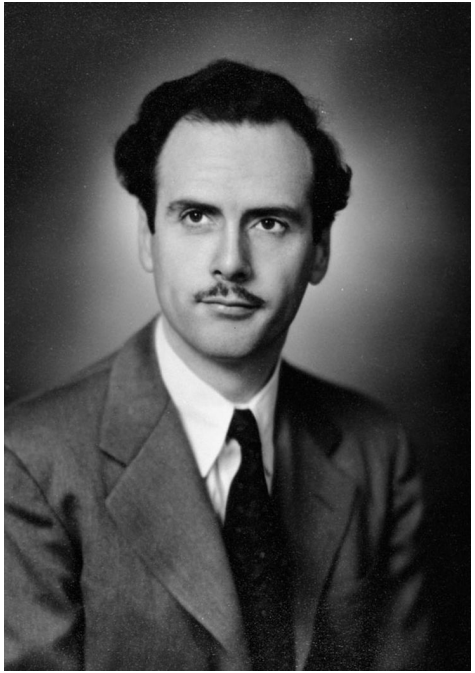
Matsumoto et al. Mil Med Aug 2020

- In this study of VA rheumatologists, those with and without significant experience with virtual care were surveyed as to appropriateness of VC in ongoing management of several diagnoses
- The majority felt that VC was inappropriate for initial diagnosis
- Is advancing CKD more like Gout or Vasculitis?



“The Medium is the Message”

- Canadian communication theorist Marshall McLuhan in Understanding Media: The Extensions of Man, published in 1964
- a communication medium itself, not the messages it carries, should be subject of focus
- In our CKD care, the way we communicate the information is probably more important than the information itself

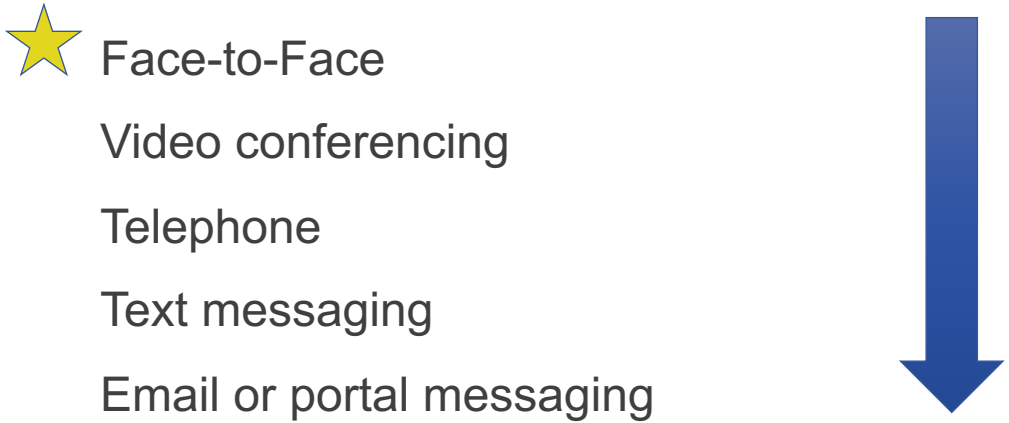


What gives “richness” to communication media?

1. The ability to provide immediate feedback;
2. The provision of multiple cues (eg, words, numbers, graphic symbols, body language, and intonation);
3. Language variety (eg, numbers provide greater precision; natural language is better for concepts and ideas);
4. Personal focus (eg. exchange of personal opinions and emotions).

Daft and Lengel. Multiple publications in 1980s

Hierarchy of “richness”



- Complex or sensitive issues require more richness (multiple cues, immediate feedback, language variety and personal focus)

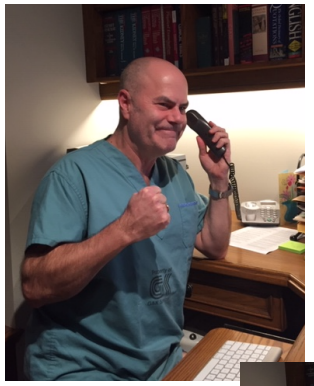
Question 3

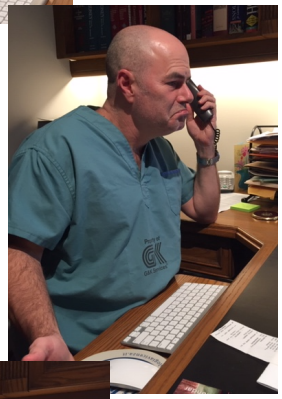
Which of the following statements most accurately describes your feelings after completing most MCKC virtual visits:

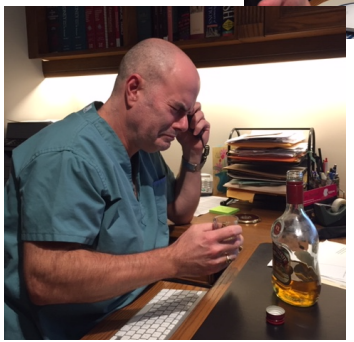
1. I feel like I did a really thorough job, I optimized medical therapies safely and effectively, I covered all of the bases I had wanted to, I engaged my patient in some sensitive discussions and I feel really good about that visit

2. I feel like I did a “reasonable job” under the circumstances, though I took a few shortcuts, didn’t push too hard on medication changes, and left the difficult conversations until next time

3. I feel like I was flying by the seat of my pants for that whole MCKC clinic and I am an exhausted, soulless shell of a human being







Summary

- CKD management is hard
- The sensitive topics discussed and education provided require the most effective communication medium possible, and complicated medical interventions prescribed should be guided by clinical examination
- Patients and providers “like” the convenience of virtual care, but the evidence does not show superiority, and in many ways both groups feel it is lacking
- The demographics of CKD are such that patients on the wrong side of the ‘digital divide’ are over-represented in our MCKC clinics and won’t benefit from virtual care

This debate is RIGGED and I will NEVER CONCEDE

#MMCKCF2FA #HOUSE2020

PRO-VIRTUAL

VIRTUAL MEDICINE

To be or not to be the standard of care for CKD/ESRD patients

Dr. Claudio Rigatto
Rebuttal


VIEWER
Viewer Study
USER GUIDE
1 Tap eQOL icon
eQOL
2 Log into eQOL with your username and password
eQOL
Log Vital
ESAS Survey

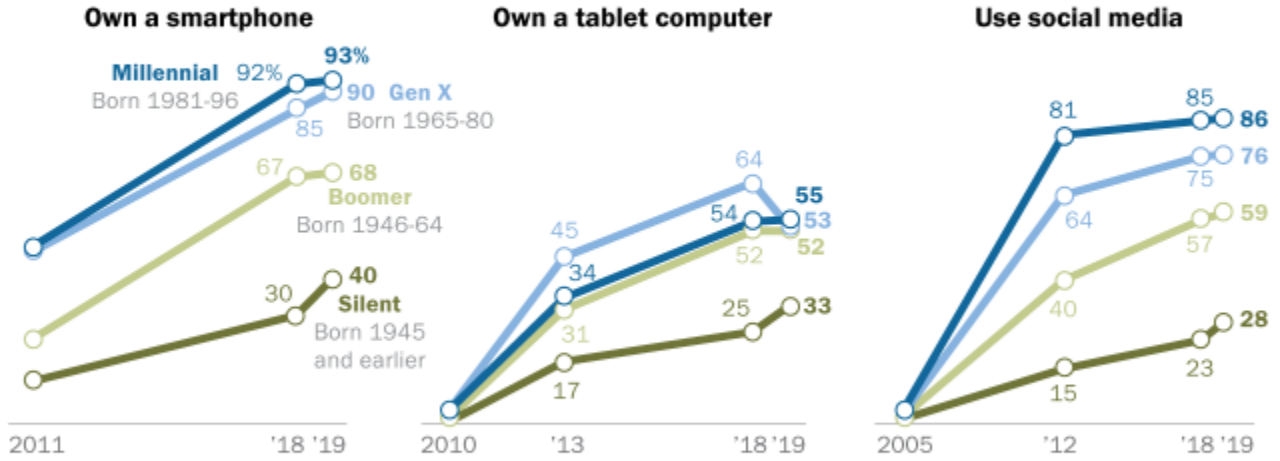
Viewer feasibility study

- N=36, 3 month follow-up
  - mean age 74 y
  - 80% DM
  - 46% F
- High acceptability/patient satisfaction
  - 90/100 on SUS scale
- Good adherence
  - >80% used VIEWER 2 or more times per week
- 77% Wanted to continue using Viewer after the study period

"I felt more in control of my kidney disease"

Millennials lead on some technology adoption measures, but Boomers and Gen Xers are also heavy adopters

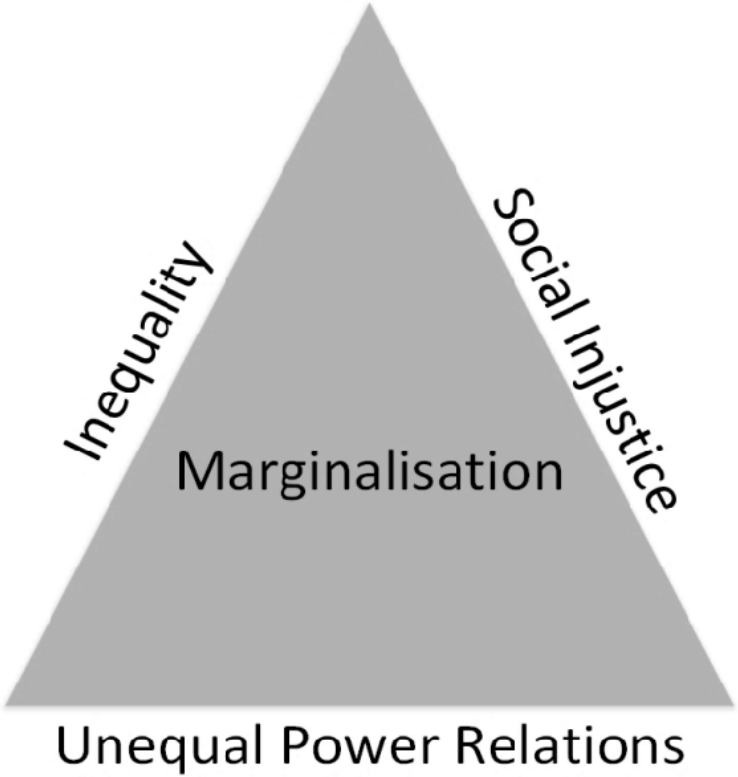
% of U.S. adults in each generation who say they ...



Note: Those who did not give an answer are not shown.
Source: Survey conducted Jan. 8 - Feb. 7, 2019.

PEW RESEARCH CENTER

Bridging the Digital Divide



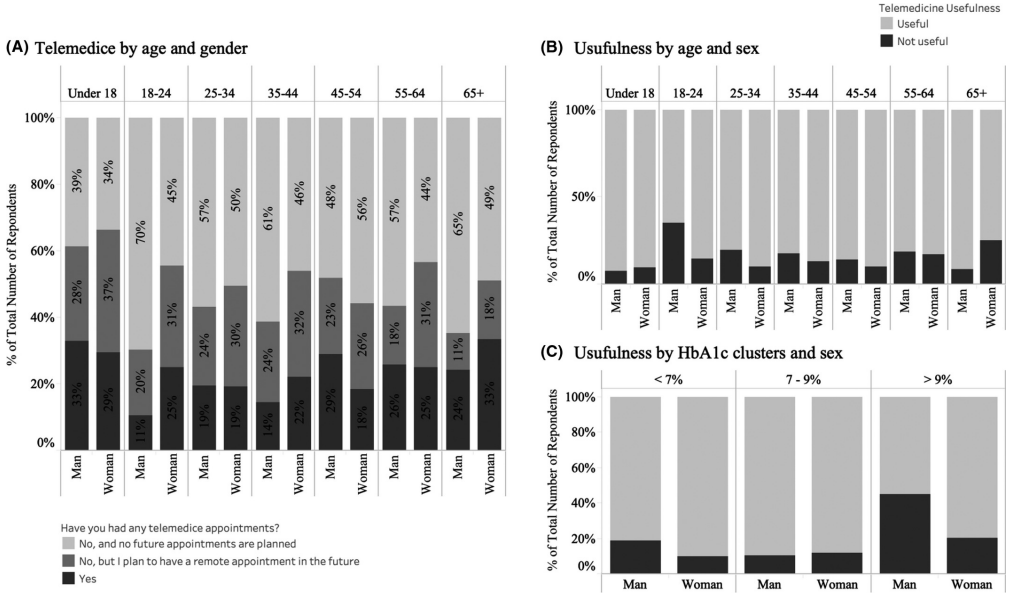
Why wasn't virtual care more widely used before the pandemic?

- Tradition/Resistance to change
- Data safety concerns
- Technology unavailable/expensive (not anymore!)
- Remuneration
- Legislation

Basic Virtual CKD Care Model in Manitoba

1. Telephone based appointments
   - From home
   - From local health center
2. Labs obtained beforehand
   - Home lab service
   - Local community labs
3. BP and weights using home devices, pharmacy, or local health centers/FP offices
4. Virtual visit conducted according to our standard protocols
   - Solo nephrologist for low risk patients (KFRE<20% at 2 years, stage 1-3 patients)
   - Multidisciplinary team for stage 4-5 (KFRE>20%, stage 4-5)
5. Unstable patients, rapid progressors, or those not able to access 1-3 were brought in for face to face assessments
6. Stable patients continue with virtual follow-up visits

Use and perception of telemedicine in people with type 1 diabetes during the COVID-19 pandemic—Results of a global survey



Endocrinology, Diabetes & Metabolism, First published: 29 August 2020, DOI: (10.1002/edm2.180)

CON-VIRTUAL

VIRTUAL MEDICINE

To be or not to be the standard of care for CKD/ESRD patients

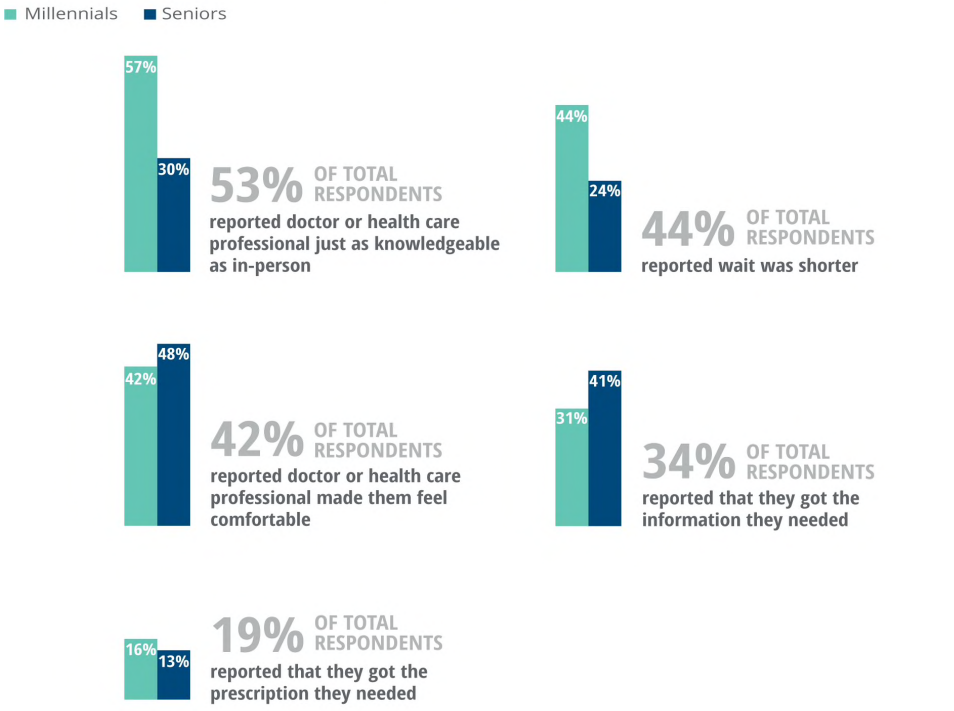
Dr. Andrew House Rebuttal

Deloitte Survey of US Health Care Consumers 2018

- Most consumers who have tried virtual visits report a high level of satisfaction (77%)
- However they have concerns:
  - 28% thought the personal connection with physician could be compromised (40% of seniors)
  - 28% thought quality of virtual visit would be lower (37% of seniors)

Consumers report mixed experiences with virtual visits, demonstrating opportunities for health systems and health care providers to improve services

Survey question: How did the actual virtual care visit go?



Source: Deloitte 2018 Survey of US Health Care Consumers.

“Millenials lead on some technology adoption measures, but Boomers and Gen Xers are also heavy adopters”

- Remember, it isn’t necessarily Millenials, Boomers and Gen Xers who make up the bulk of advanced CKD patients
- In US Census data, >30% of households headed by a person 65 or older ***lack any*** desktop or laptop computers
- In the same survey, >50% of this age group lacked a smart phone
- If we want to outfit our MCKC and dialysis patients with smart eHealth technology, it will need to be affordable and designed with “the greatest generation” in mind

Does VC affect quality of communication?

- Small study in Japan with video analysis of participants found:
  - less time spent on virtual encounters
  - fewer words (provider and patient)
  - fewer conversational turns
  - more requests to repeat information
- Patient satisfaction similar for virtual and F2F but poor for providers
- Providers rate communication with patients as “good” in 40% of VC vs 90% of F2F ($p<0.01$)
- Providers felt they “understood what was on the patient’s mind” in 45% virtual vs 85% F2F ($p<0.05$).

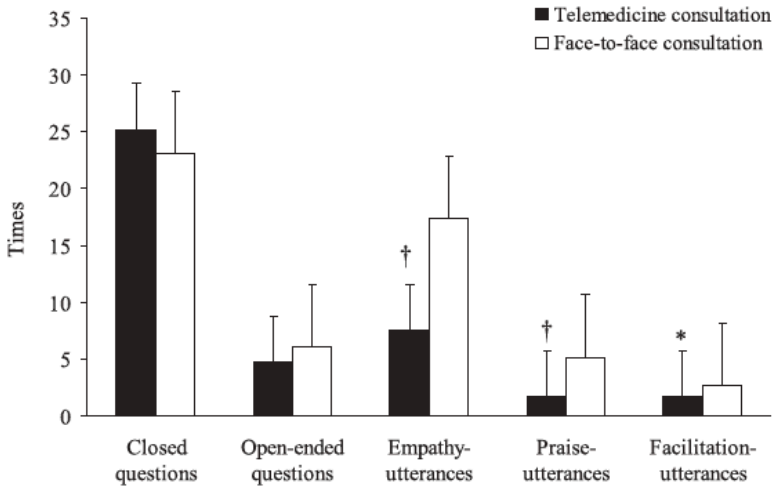


Figure 1. Comparison of the doctors’ verbal behavior patterns between telemedicine and face-to-face consultations. Data are shown as mean±SD. *p<0.05, †p<0.01 vs. the face-to-face group.

Liu et al. Intern Med 2007

Virtual visits lack key elements such as touch and other expressions of “being there”

- Shachak and Alkureishi from U of T wrote a Perspective in J Am Med Inform Assoc. July 2020
- Virtual care: a ‘Zoombie’ apocalypse?
- “Do you hug all of your patients?” It was the end of a busy clinic, and my (MA) third-year medical student’s question caught me off guard. Taken aback, I asked what he meant. “It seems like you hugged each of the families we saw today. . .” It was an odd question, and the observation must have been a fluke I thought, but then he added “. . ..and last week too.”

From Ontario Renal Network, Ontario Palliative Care Network and SpeakUp Ontario

Approach to Goals of Care Conversations

- Begin the conversation by establishing rapport with the individual. Shake hands and introduce yourself and other healthcare providers who are present for the discussion.
- Convey empathy, and encourage response by using eye contact, touch and silence when appropriate, and sitting at the individual's level. Ask permission to begin the conversation.

Stevenson et al, Cochrane Database Syst Rev August 2019

- 43 studies with 6617 participants evaluating impact of eHealth interventions in people with CKD
- Authors' conclusions:
  - eHealth interventions may improve the management of some surrogates like dietary sodium and fluid
  - Current evidence for the use of eHealth interventions in CKD is of low quality, uncertain effects due to methodological limitations and heterogeneity
  - Clear need for robust, high quality research that reports a core (minimum) data set to enable meaningful evaluation of the literature

Summary

- While I don’t concede this rigged debate, I will concede that virtual care does have, and will continue to have a role in MCKC/dialysis care
- New technologies need to bridge the digital divide and in particular to appeal to the CKD demographic
- Nothing can replace F2F visits in terms of the richness of communication
- Don’t let Rigatto steal this Debate!! Vote early and vote often

#MMCKCF2FA #HOUSE2020

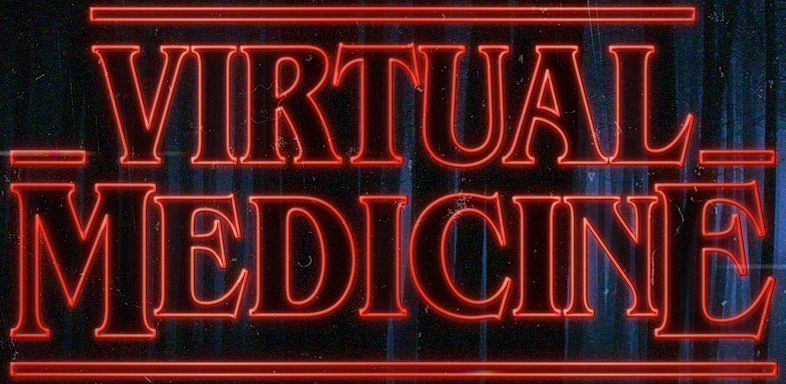
VIRTUAL MEDICINE

To be or not to be the standard of care for CKD/ESRD patients

Audience Q&A

To ask a question or share a comment, click on the participant button and select the “raise hand” feature.

Dr. Zimmerman will then ask you to unmute yourself to verbally comment.



To be or not to be the standard of care for CKD/ESRD patients

Who won?

YOU DECIDE!

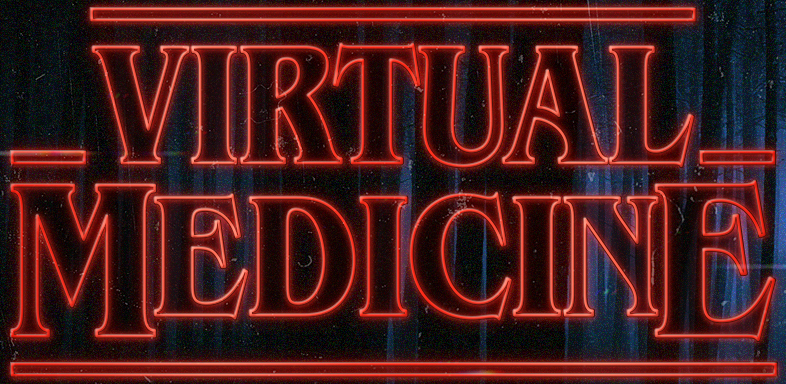
What's next …

Evaluation and Certificate

- You will receive an email directly from the CSN Admin office following this presentation to complete an electronic evaluation.
  Your feedback helps shape future educational initiatives! Completion of the evaluation is appreciated.

- You will then be emailed your Certificate of Participation. CSN members will receive 1.25 hours Section 1 Group Learning credits.

- Questions? Please email Fil at admin@csnscn.ca



To be or not to be the standard of care for CKD/ESRD patients

Thank you!

Our Debaters:
Claudio and Andrew!

Juliya Hemmett!

liV Agency!

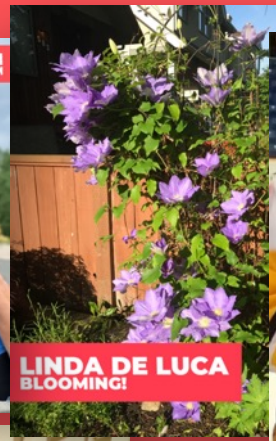
CSN Membership and Sponsors!

Canadian Society of Nephrology/
Société canadienne de néphrologie
CSN/SCN

2020

PAUL KOMENDA

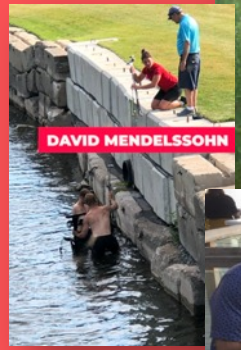
CLARA BOHM
LOVE AFTER 25 YEARS.....AND 220 KM


LINDA DE LUCA
BLOOMING!

PAUL SOHI
700TH GAME


JENNIFER MacRAE
GRADUATION!


JENNIFER MacRAE
BURMUDA & BENNI!


DAVID MENDELSSOHN


TED TOFFELMIRE

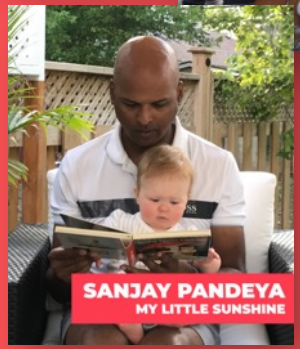

ANDREW HOUSE
30 BEAUTIFUL YEARS


FAISAL REHMAN
GETTING IN SHAPE


GEORGE WORTHEN
TWINS SCARLETT & BLAIR


HEATHER HARRIS


DEB ZIMMERMAN
HAPPY


SANJAY PANDEYA
MY LITTLE SUNSHINE

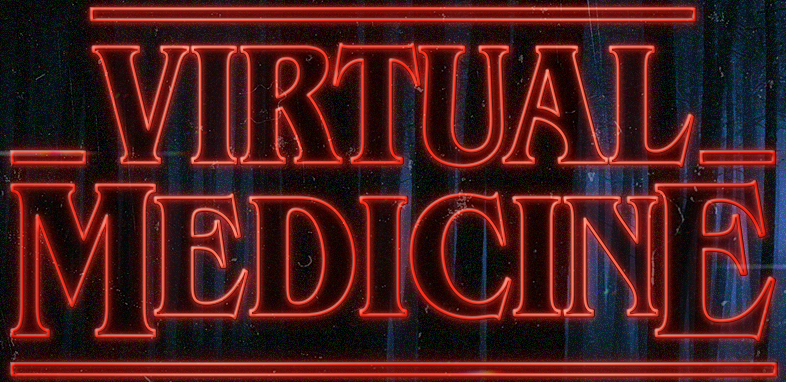

JULIYA HEMMETT
NEW HOME

ANDREW STEELE


KARLA ORELLANA


CHRISTINE WHITE


SAMUEL SILVER
FAMILY



To be or not to be the standard of care for CKD/ESRD patients

Thank you!