Reviewer’s report

Title: Do virtual renal clinics improve access to kidney care? A preliminary impact evaluation of a virtual clinic in east London

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Reviewer: Manisha Jhamb

Reviewer's report:

This manuscript describes the development of a virtual ckd clinic and its impact on timely access to nephrology in community. The program builds on strengths of health IT and common shared electronic health record data. Overall, this is a well-written paper that assesses a wide population over 4 CCGs to determine the benefits of a virtual CKD clinic. The study's strength included the implementation of the virtual clinic and it is a good start in investigating the feasibility and applicability of a virtual clinic.

Some suggestions for improving the manuscript:

1. Can the authors provide some more clarification on how the virtual consults align with the GP workflow? Are the patients identified by the GP and the referral solicited by the GP? Or the nephrologist uses the "package of IT tools" to identify these patients who may not be coded as CKD by the PCP and then provides virtual consult?

2. The Qualitative approach needs more details - how were the participants recruited, what were their relevant characteristics, which CCG did they belong to, how were the interviews conducted - individual or group, what was the qualitative analysis approach?

3. 21,560 adults out of 1.2 million were found to have biochemical ckd - the prevalence seems low. How does this compare with the national prevalence? What was the definition of ckd used? Is this only based on outpatient labs?

4. Table 1 - BP - was this 1 time or average of several readings?

5. How does the average annual referral rate compare to years prior to the program implementation?

6. The increase in referrals is very impressive - what were the most common reasons? What was the distribution across the ckd stages?

7. The surveys were only from 1 CCG - I wonder if the responses would have been different from other CCGs, especially from the one that was hard to engage
8. The authors mention that the 4th CCG was slow to engage - what were some of the challenges and how were they overcome? What lessons learnt from this might be useful for others who may want to implement such a system.

9. On a similar note, can the authors expand on how this was a learning health system - what lessons were learnt, and how did those inform practice?

10. Fig 4 - patients satisfied is misleading as patients were not directly surveyed. Authors should reframe this to reflect that these are GPs perceptions of patient satisfaction

11. The manuscript can be strengthened by addition of data on clinical outcomes - do the authors have any data on follow up of BP, statins, etc. after the virtual consult?

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