Article details: 2019-0040	
Title	Prevalence of chronic kidney disease and cardiovascular comorbidities in adults in 26 remote First Nations communities in Northwest Ontario with electronic medical records
Authors	Len Kelly, Cai-lei Matsumoto, Yoko Schreiber, Janet Gordon, Hannah Willms, Christopher Olivier, Sharen Madden, Josh Hopko, Sheldon W. Tobe
Reviewer 1	Vinay Deved
Institution	Department of Medicine, University of Alberta, Edmonton, Alta.
General comments (author response in bold)	1. There is an error in table 2 regarding the mean ldl value. **Thanks 22.1 is now 2.1** 2. The discussion references table 3 but i believe there are only two tables. **We have corrected the table and figure listing.** 3. For diabetes, I would include the proportion of adults tested for a1c and the proportion of those tested wirh a1c over and then mean a1c. I would include this in results section in table format. 4. For dyslipidemia, I would include the proportion of adults tested for ldl and the proportion of those tested wirh ldl over target and then mean ldl. I would include this in results section in table format. 5. The estimates of diabetes and dyslipidemia are likely underestimates. This will help clarify the degree of underestimation. **With respect, our focus is on the prevalence of CKD and which comorbidities these patients have.** **We therefore have not discussed testing and prevalence of diabetes and dyslipidemia in the total adult population; this would essentially become a prevalence paper on those conditions, which is not our focus, but well worth doing.** 6. There is a comment in the discussion regarding 29 percent of ckd population not having ldl checked. I think this should be in results section as described. **This comment has been moved to the Methods section as suggested. Thanks.** 7. For medications, I would include proportion of adults on diabetes medication, lipid lowering medication, hypertension medication. This can be further reported as proportion on statins and proportion on angiotensin inhibitors. **Respectfully, we are using the CKD population as our population of interest, rather than the total adult population** 8. If someone was on a non-statin lipid lowering agent and did not have ldl measured, would they be included in dyslipidemia group? **Yes, we have added the information that non-statin treatment is included in the Methods section.** 9. It might be more clear to include all classes of diabetes, lipid lowering and hypertension medications in methods section. **For brevity sake we suggest revising Methods as:** **Anatomic Therapeutic Classification (ATC) codes were used to select**

	medication data: **"A10: all glucose-lowering agents, including insulin, analogues and oral hypoglycemics; C02-9 all hypertension medication classes; C10 and dyslipidemia treatment including, statins and non-statin medications)." (17)** 10. Of those with renal testing over thirty percent had ckd. I would highlight this in discussion. This likely reflects under investigation in rural communities. **Yes, thank you, we will emphasize this in the Interpretation section:** **"Only 32% of the adult population received renal screening during the study period. The CKD estimated prevalence is therefore likely an underestimation. Most CKD identified in screening studies is stage 1-2. With limited (15%) ACR testing, our study likely underestimates both early and total CKD prevalence. Testing with eGFR was more common (28%) with a lower yield of abnormal results. These results may indicate an underutilization of CKD screening in this high-risk population."**
Reviewer 2	Fady Hannah-Shmouni
Institution	Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, Md.
General comments (author response in bold)	1. limited testing in majority of participants (ACR, GFR, lipids, other parameters for DM and HTN such as OGTT and 24-hr ambulatory BP measurement) **We agree that these are limitations. We note several other prevalence studies also used EMR medications alone to identify hypertension. We do not have general access to 24-hour blood pressure monitoring in our setting (most communities have an md visit one week per month). Also, bp measurements are not systematically recorded in the EMR (it is recorded in the clinical notes only), so that data was not available to a retrospective EMR analysis- but it is a limitation, but our methods have been used in other prevalence studies using EMR. We have now identified this in the Limitation Section.** 2. Underestimation of CKD given above limitations **We now emphasize this at the beginning of the Discussion.** 3. No ASCVD Risk Estimator calculation **Without more individualized information, like systolic bp or smoking status, this was not possible; but would invaluable information, especially in this high- risk population.** 4. No description of HTN stage, number of meds etc **The focus was on CKD and the presence of co-morbidities. Without specific bp information this was unfortunately not possible as we had to take what the EMR provided.** 5. Table 2: add DM drugs (metformin etc); HTN drugs (other than ACEi/ARB) and HTN stage; ASCVD risk estimates and BMI if possible **We wanted to focus on the most clinically relevant meds, so we just list ACE/ARB and statins and those are the only specific meds mentioned by the Canadian Cardiovascular Society guidelines 2016. BMI data is not available in our EMR.**

	6. Add standard deviations of other parameters in Table 1 **Will do (SD) for A1c and LDL values** 7. Add a Norther Ontario's map describing the 26 remote First Nations communities (may be important for the international reader) **Excellent suggestion, one has been included.**