Reviewer’s report

Title: Outpatient Primary and Tertiary Healthcare Utilisation among Public Rental Housing Residents in Singapore

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Reviewer: Amresh Hanchate

Reviewer’s report:

This paper presents rates of utilization of healthcare services grouped by public rental housing status of patients in Singapore. Public rental housing in Singapore is subsidized and provided for those with lower income. The study is based on administrative data for one of the regional healthcare systems, SingHealth Regional Health System, covering the south-central region of Singapore. The System includes polyclinics (providing primary care services), tertiary clinics (providing specialist outpatient care services), emergency departments and hospitals. Combining all the patients in the system in 2011 and 2012, the study reports the number of annual (2012) primary care visits, specialist visits, ED visits and hospitalizations per person grouped by public rental housing status. They report that adjusted for demographics and comorbidities, rate of likelihood of high-use of specialist outpatient care is lower and of emergency department and hospital care is higher among those with public rental housing. For improved clarity of the resulting discussion, more information on the following questions would be helpful.

Issues:

1) How representative is the patient population; there may be non-users of the System

The fact that the data represents users of the largest provider system in a region of Singapore is commendable. However, for the benefit of the readers, it would be helpful to better contextualize the underlying population examined. That is, to what extent is it representative of the overall population of south-central Singapore; in particular, how large is the excluded population? Two issues seem relevant here but are largely unaddressed: a) How large is the subpopulation of residents who do not use the SingHealth Regional Health System? and b) How large is the subpopulation of residents who use another health system? From your tabulation of included patients (Figure 1) you mention that out of 870k system users, 610k are (excluded) users of the SingHealth Regional Health System who resided in a region covered by another system; this suggests that there may be residents of south-central Singapore who may be receiving care in another system.

2) It appears that GPs are not part of the System

Given the wide variation across countries in healthcare systems, it will be helpful to provide the basic details of the system in Singapore. The manuscript mentions that GPs provide primary
care, but it is not clear if GPs (some or all) are part of the SingHealth Regional Health System? What proportion of primary care is provided by GPs? If GPs are not part of the SingHealth System, then what proportion of primary care is captured in the SingHealth System and how does this affect the study discussion of differences in primary care services in SingHealth System by public rental housing status. Are there no co-pays for emergency department and hospital care? Does higher use of ED and hospital care among those with public rental housing indicate barriers to access for GPs and other outpatient care?

3) Need for more background information on access barriers

To help readers make better sense of differences in use of services by patients in public rental housing, please provide more information on: a) are there out-of-pocket costs for different healthcare services, and are these lower for those with public rental housing? b) are there other access barriers to different healthcare services (waiting time; need for referral for specialist services)?

4) Limitations need to be elaborated

One limitation states, "Consequently, other measures of primary healthcare utilization could not be evaluated." What primary care utilization measures have not been captured? Needs to be better explained.

5) Is staying at rental flats same as staying at public rental flats? Table 1 compares those in "rental flats" and those not in rental flats; but the main text using the words "public rental flats"; please be consistent.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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