The Development of Barriadas & Access to Medical Services in Lima Peru

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Background

• Barriadas – squatter developments
• “cones”
• 1950s to now
• Integration
• Middle class
Goals

• Do different socioeconomic classes have differing access to these services and if the barriadas have developed to a point where access to medical services is comparable to those in metropolitan central Lima?
• Areas with lower levels of access can be candidates for new facilities.
• Placement of new facility & impact
Data

- Peru census data
- Roads
- Facilities
Socioeconomics

Map: Socioeconomic Levels in Lima, Peru
- Low
- Middle Low
- Middle
- Middle High

Scale: 0 km, 10 km, 20 km
Medical Facilities
Population Density

Population Density in Lima, Peru
(persoms per square kilometre)
- 42 - 900
- 901 - 1200
- 1201 - 6900
- 6901 - 16500
- 16501 - 30000

0 10 20 km
Methods

- A different kind of road “network”
- Raster based
Methods

• Dasymmetric Modelling for population locating
Distance
Distance with a new Facility
Distance by Class

Average Distance to a Hospital by Socioeconomic Class

- Average distance with proposed hospital
- Average distance with current hospitals
- Population

Socioeconomic Class:
- Low
- Middle-Low
- Middle
- High

Average Distance (km):
- Low: 13
- Middle-Low: 15
- Middle: 10
- High: 5

Population (thousands):
- Low: 3,000
- Middle-Low: 2,000
- Middle: 1,000
- High: 500
Distance by Region

Average Distance to a Hospital by Region

- **Average distance with proposed hospital**
- **Average distance with current hospitals**
- **Population**
- **Number of hospital facilities in red**

Region:
- Callao
- City Centre
- Eastern Cone
- Northern Cone
- Southern Cone

Population (thousands):
- Callao: 5
- City Centre: 48
- Eastern Cone: 8
- Northern Cone: 4
- Southern Cone: 3

Number of hospital facilities:
- Callao: 5
- City Centre: 48
- Eastern Cone: 8
- Northern Cone: 4
- Southern Cone: 3
Conclusions

• Different socioeconomic classes have differing access to these services and if the barriadas have developed to a point where access to medical services is comparable to those in metropolitan central Lima.

• New facility has regional impact and impacts those with greater aspatial barriers to medical facilities.
Impacts

• Who is impacted?
• Why does it matter?
• Informed planning
Limitations

- Raster as road network
- Ad hoc style of medicine
- Dasyymmetric modelling
- Placement of new facility
Acknowledgements

• The data used in this analysis was provided by the Latin America Research Centre at the University of Calgary
Thank you

Questions or Comments?
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