

# Population of living place and emergency transport time of children in Japan

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[Aims] To clarify the relationship between population of living place and emergency transport time (from phone call to arrival at medical facilities) of Japanese children.

[Material and Methods] Emergency transport patients' database, 2012 was provided by Fire and Disaster Management Agency, the Ministry of Internal Affairs and Communications. The relationship between population of cities, towns and villages and transport time of neonates, toddlers and children was analyzed.

[Results] Most of the big pediatric departments are located in urban places, and few pediatricians work in under-populated areas in Japan. In rural places, children who need an emergency care must travel longer to visit medical facilities compared with those in urban ones.

[Conclusions] To visit medical facilities, Japanese children in underpopulated areas must travel longer than those in urban places.

## [Background and aims]

In Japan, most of the hospitals where many pediatricians work are located in urban places, and few pediatricians work in under-populated areas.

In order to clarify the access time to medical facilities of children in urban and rural places in Japan, I analyzed the relationship between population of living place and emergency transport time (from phone call to arrival at medical facilities) of Japanese children.

## [Material and Methods]

Emergency transport patients' database, 2012 was provided by Fire and Disaster Management Agency, the Ministry of Internal Affairs and Communications. The population controlled by each of the firefighting headquarters was drawn from Fire Current Situation data presented by Fire Chiefs' Association of Japan in 2012.

On the database of transported patients, the following data of the firefighting headquarters which controlled about 90% of Japanese population were described; name of firefighting headquarters to which transport teams belonged, age of transported patients, time of request call and arrival at medical facilities.

## [Results]

### 1) Transported pediatric patients

Transported cases of 11,772 neonates, 220,949 toddlers, and 178,784 children in Japan were analyzed in this study.

Population	Neonates	Toddlers	Children
~50,000	426	10,874	10,457
50,000~100,000	1,237	24,709	22,189
100,000~300,000	4,357	71,977	61,775
300,000~700,000	2,736	51,543	41,212
700,000~	3,007	61,750	43,027
ND	9	96	124
<b>Total</b>	<b>11,772</b>	<b>220,949</b>	<b>178,784</b>

## 2) Transport time

The mean transport time was 38.3 minutes in neonates, 33.4 minutes in toddlers, and 35.6 minutes in children, respectively.

The ratios of transport time **more than 60 minutes** were 11.0% in neonates, 3.8% in toddlers, and 5.7% in children, respectively.

While the ratios in cities with **more than 700,000** of population were 5.7%, 2.8%, and 5.3%, respectively, those in towns and villages with **less than 50,000** were 27.0%, 9.5%, and 9.8%.

### >60min

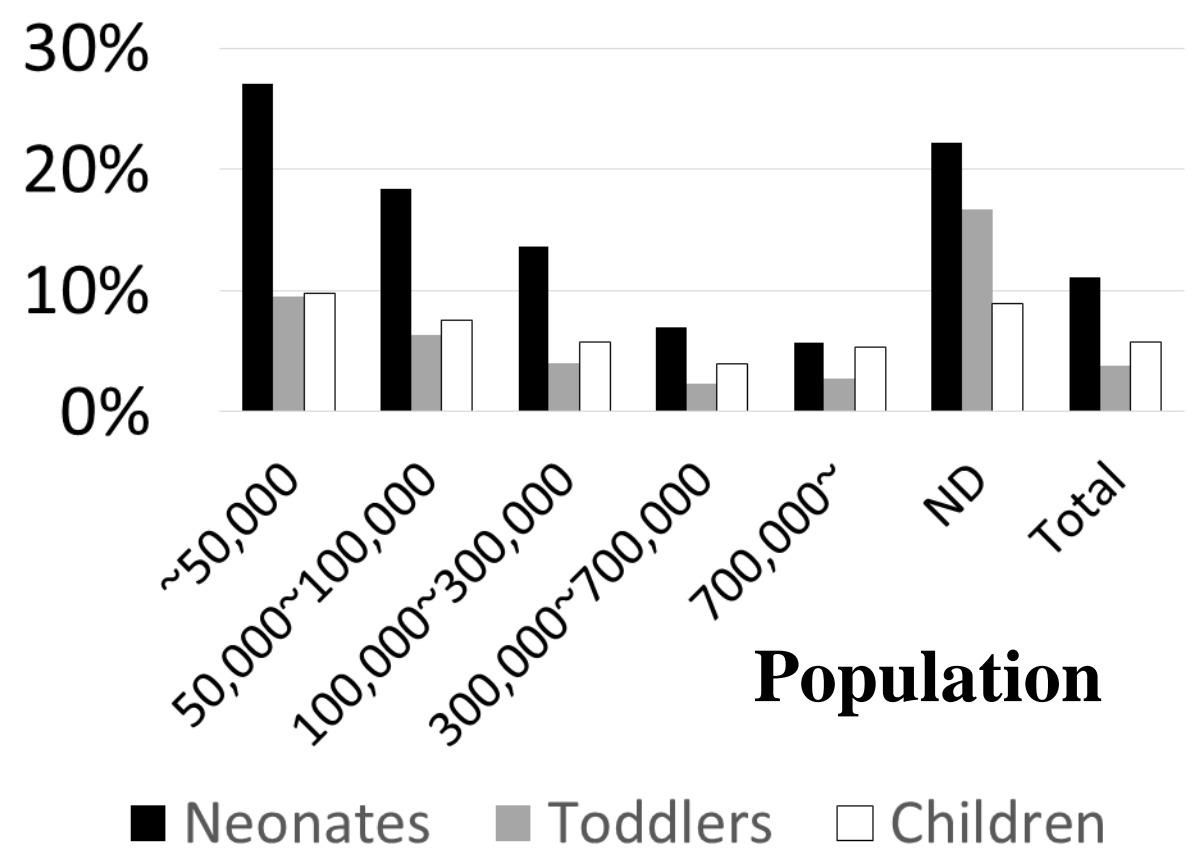


Figure The population of cities, towns, and villages and the ratio of transport time > 60 min.

## [Conclusions]

Japanese children in underpopulated areas must travel longer than those in urban places to visit medical facilities.



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