



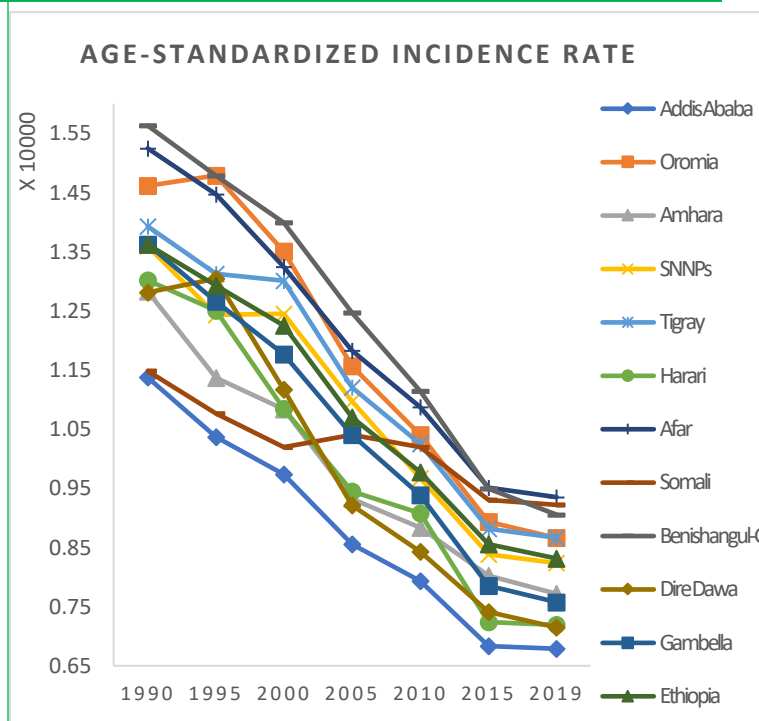
## The burden of lower respiratory infections and associated risk factors

- Lower respiratory infections (LRIs) include diseases of the lower airways, such as bronchitis, pneumonia, and bronchiolitis mainly affecting children.
- LRIs have a significant impact on the morbidity and mortality rates in Ethiopia.
- This evidence brief presents the burden and trends of LRIs in national and regional states of Ethiopia between 1990 and 2019 using the metrics in the Global Burden of Diseases Study (GBD 2019).

### Key Findings

#### Morbidity

- There were 6.6 million episodes of lower respiratory infection in 2019.
- The age-standardized incidence rate was 8,313.7 per 100,000 populations.
- About 22% of all episodes occurred in children under the age of 5.
- The lowest rate of age-standardized incidence per 100,000 people was estimated in the urban areas
- The least decline in age standardized incidence rate was showed in Somali (19%).



#### Mortality

- LRIs were the third leading cause of death in Ethiopia contributing to 8.2% of all deaths in 2019.
- 46,300 deaths occurred due to LRIs, and 42% of those deaths were among under 5 children.
- LRIs contributed 10.3% of all deaths of children under the age of five.
- The age-standardized mortality rate is higher among males than females.
- Pastoralist areas, such as, Benishangul-Gumuz and Afar show higher mortality rates than the urban areas of Ethiopia.

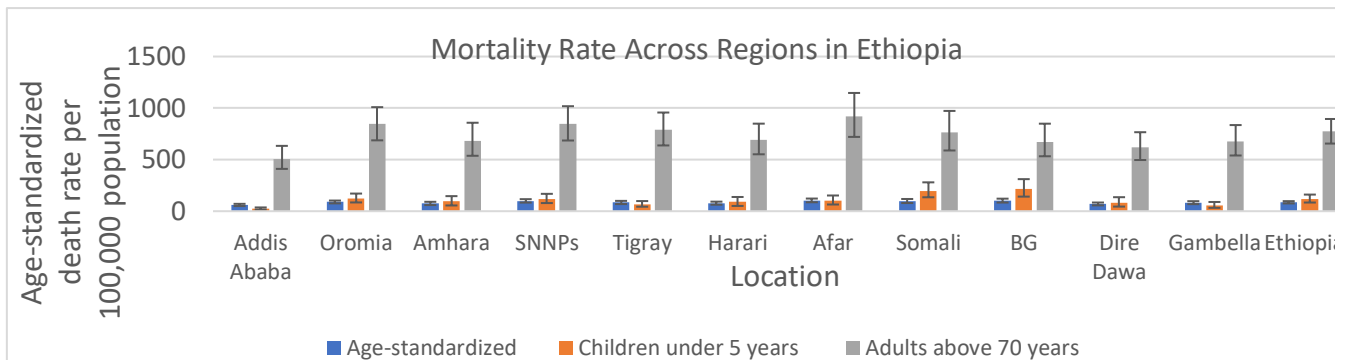




Table 1: Percentage change of reduction in LRIs mortality rates between 1990 and 2019

Location	Age standardized	Under-5	People ≥70
Addis Ababa	64	95	45
Oromia	63	87	28
Amhara	62	87	33
SNNPs	59	88	28
Tigray	65	92	33
Harari	68	93	9
Afar	58	86	10
Somali	34	57	5
BG	64	84	32
Dire Dawa	68	93	29
Gambella	64	96	9
Ethiopia	61	86	30

- Nationally, reduction in LRIs mortality rate is less than half for people ≥70 years between 1990 and 2019. (Table 1)
- The Somali region showed the least reduction in mortality rate (34%) due to LRIs. (Table 1)

### Risk factors

- In children under five years, more than three-fourths of the risk factors for the mortalities due to LRIs were attributed to wasting [54%], stunting [12%], and underweight [10%].
- In all age groups, about half of the risk factors for the mortalities due to LRIs were attributed to household air pollution from solid fuel [48%] followed by lack of access to hand washing facility [23%] and childhood wasting [23%].

### Premature mortality

- In 2019, premature mortality due to LRIs was 2.4 million, yielding age-standardized rate of 2,404 per 100,000 people.
- Compared to 1990, the age-standardized YLL rate has declined by 76%.
- 70% of all premature mortality occurred in children under 5 years accounts for a total YLL of 1.7 million.
- The YLL rate in children under 5 years was 72,055.4 per 100,000 children in 2019, which showed 86% decline compared to 1990.
- The rate of premature mortality declined by 41% in 2019 in adults older than 70 years compared to rate in 1990.

### Conclusion

- Despite the substantial mortality reduction from LRIs, children remain disproportionately affected by LRIs.
- The burden is higher in pastoralist areas compared to urban areas of the country.
- As adults older than 70 years are highly impacted with the burden of LRI, implying the need for targeted interventions to prevent and control LRIs in elder population.
- Efforts should be made to tackle the major risk factors for LRIs by improving child nutrition, improving access to immunization and curative health services for LRIs, and reducing indoor air pollution through universal electrification.

### Acknowledgment

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