

Rising Colorectal Cancer Mortality in South Asia: Pakistan in Regional Context, 1990-2023

Dr. Ayyaz Ahmad¹, Dr. Abdullah Mushtaq¹

¹Faisalabad Medical University, Faisalabad, Pakistan • Poster ID: 260758

2.51 → 4.03

Pakistan, deaths per 100,000 (1990 → 2023): +61%

5.59

Bangladesh: highest 2023 rate, up 165% from 2.11 in 1990

+185%

Bhutan: steepest relative rise (1.57 → 4.47)

5 of 5

countries faster growth after 2010 than before it

BACKGROUND

Colorectal cancer (CRC) is a leading cause of cancer death worldwide, and its burden is increasingly shifting to low- and middle-income countries. South Asian countries face ageing populations, dietary and lifestyle transition, and limited organised screening, yet regional comparative mortality data remain sparse.

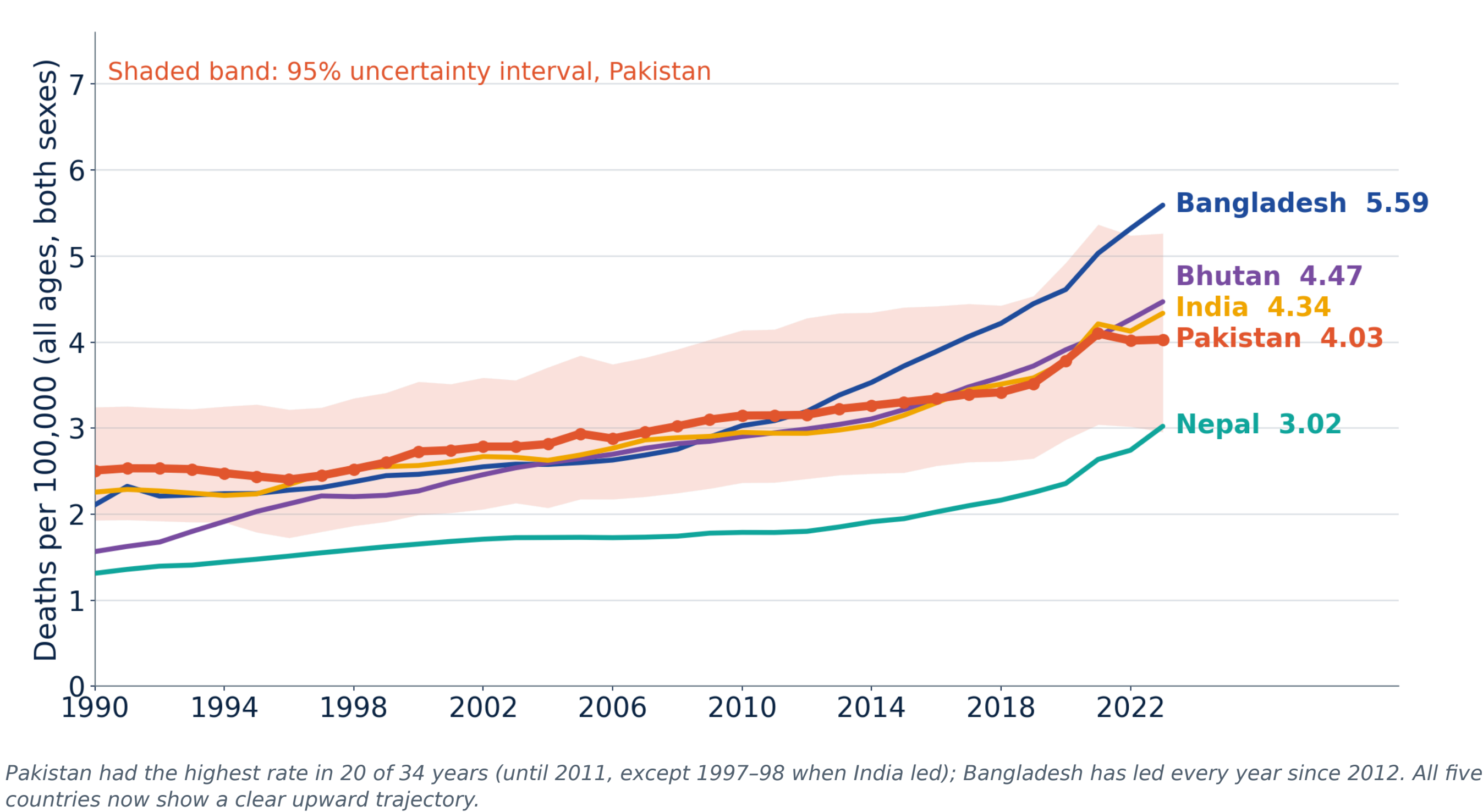
OBJECTIVES

- Describe CRC mortality trends in Pakistan from 1990 to 2023
- Compare Pakistan with Bangladesh, Bhutan, India and Nepal
- Quantify absolute, relative and annual change across periods

METHODS

- Source:** IHME GBD Compare, GBD 2023
- Measure:** CRC deaths per 100,000, all ages, both sexes
- Period:** 1990-2023, five South Asian countries
- Analysis:** % change and average annual % change (log-linear regression) for 1990-2023, 1990-2009, 2010-2023 and 2019-2023

FIGURE 1 — MORTALITY TREND, 1990-2023



KEY FINDINGS

- Pakistan began the highest in 1990 (2.51) but **ended fourth** in 2023 (4.03) as neighbours overtook it.
- Pakistan's rise of **+61%** (1.5% per year) was the smallest of the five countries.
- Bangladesh** carries the highest burden (5.59) and the largest absolute increase (+3.48).
- Every country accelerated after 2010.** Nepal rose fastest recently (7.7% per year, 2019-23).
- Pakistan's 2023 rate is still about **1.6 times** its 1990 level and is rising (3.4% per year, 2019-23).

RANK SHIFT BY DEATH RATE



TABLE 1 — RATE AND CHANGE

Country	1990 rate (95% UI)	2023 rate (95% UI)	Change 1990-2023	Avg annual change	Avg annual 2019-23
Bangladesh	2.11 (1.55-2.79)	5.59 (3.89-7.49)	+165%	2.77%	6.20%
Bhutan	1.57 (0.98-2.25)	4.47 (3.22-5.88)	+185%	2.79%	4.63%
India	2.26 (1.71-2.83)	4.34 (3.46-5.28)	+92%	1.84%	4.82%
Nepal	1.31 (0.96-1.83)	3.02 (2.24-3.94)	+130%	1.89%	7.67%
Pakistan	2.51 (1.93-3.25)	4.03 (2.96-5.26)	+61%	1.52%	3.37%

Rates are deaths per 100,000. Pakistan (highlighted) had the smallest relative rise. UI = uncertainty interval.

FIG 2 — 1990 VS 2023

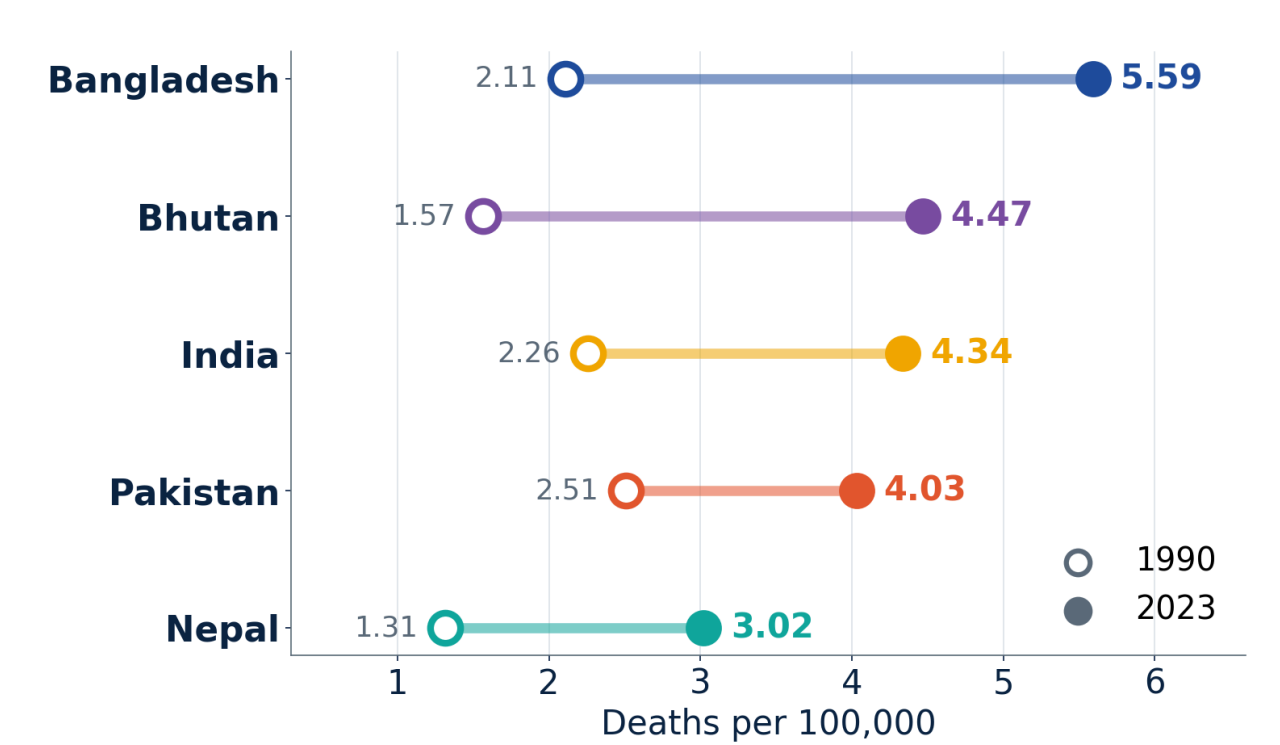
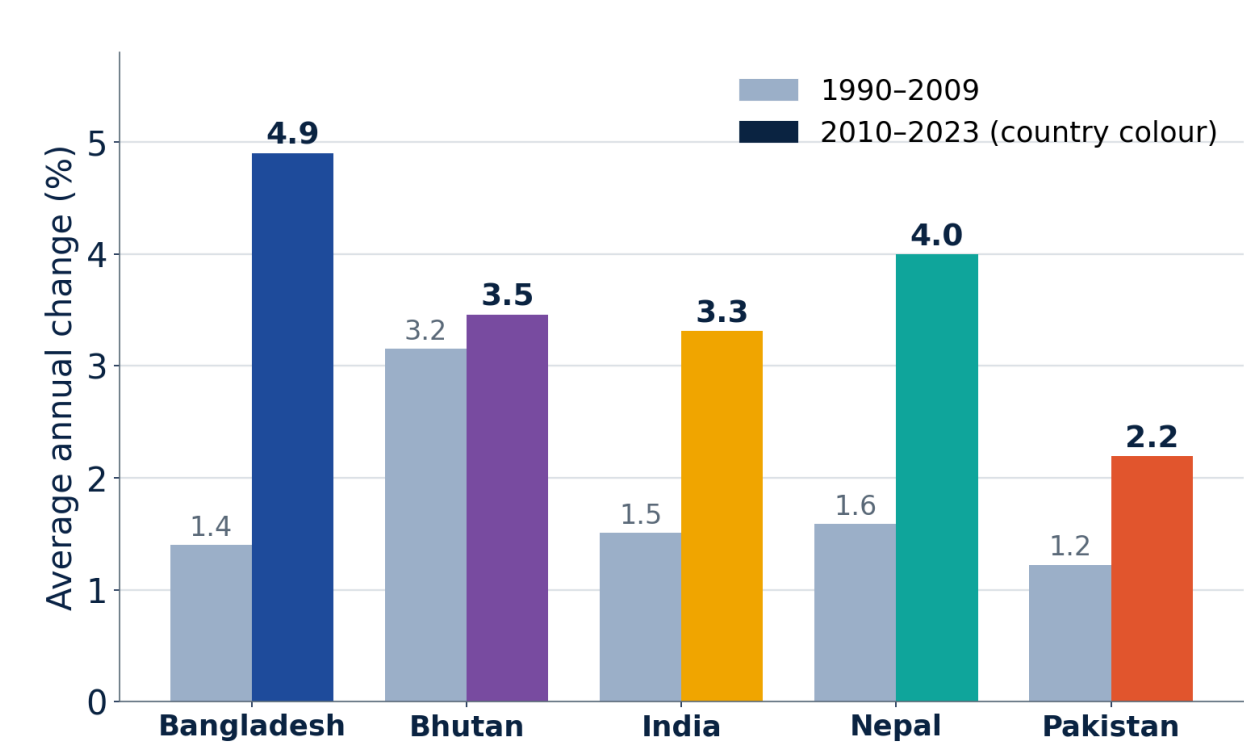


FIG 3 — ACCELERATION



Average annual % change, before vs after 2010.

CONCLUSIONS

- CRC mortality is rising across South Asia, and the pace has increased since 2010.
- Pakistan's relative rise is the lowest, but it has no room for complacency because its rate continues to climb.
- Priorities: a national CRC screening strategy, earlier symptom recognition and diagnosis, access to colonoscopy and treatment, and a national cancer registry.

LIMITATIONS

- GBD values are modelled estimates, and uncertainty is wide where primary data are scarce
- All-age, both-sex rates hide age and sex differences
- Descriptive analysis; causes of the trends are not tested
- Trend slopes are fitted to modelled annual estimates, not raw registry counts