



Equity & Social Justice: Economics of MDR TB and international mitigation strategies

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Outline

Costs of MDR TB globally and patient incurred costs

Catastrophic costs & patient cost systematic review

Social Justice and cost-effectiveness of MDR-TB regimens

International mitigation strategies

Fig. 5.11 Estimated cost per patient treated for drug-susceptible TB in 122 countries, 2020^a

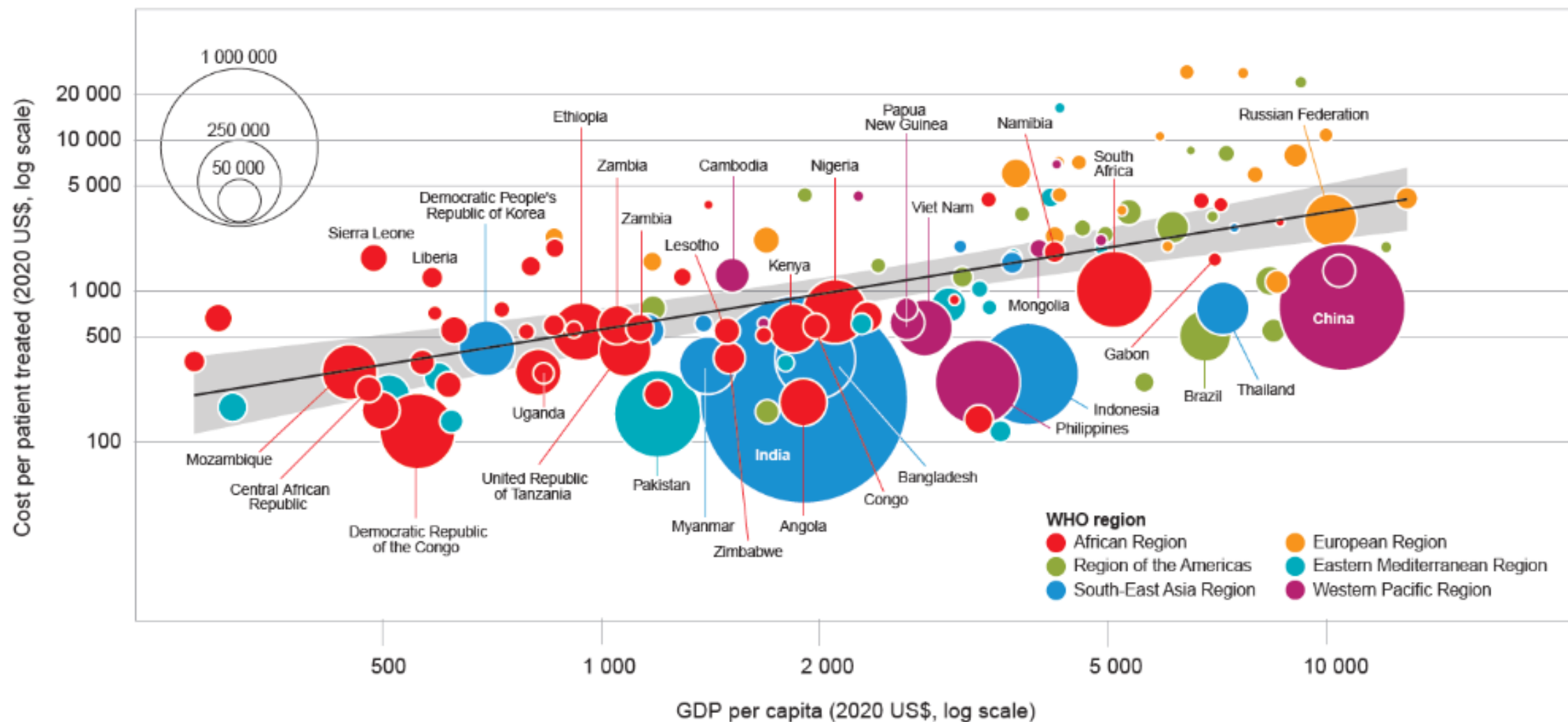
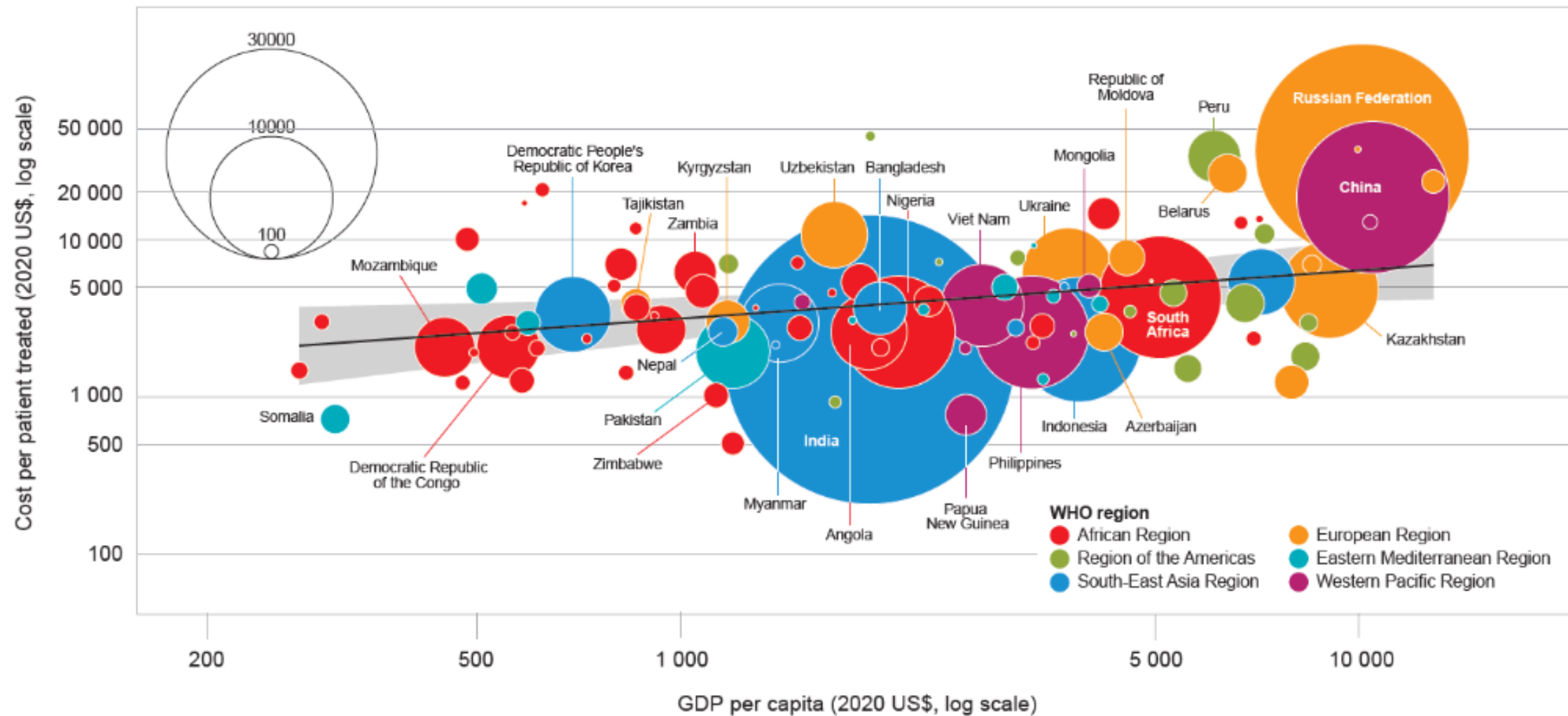


Fig. 5.12 Estimated cost per patient treated for MDR/RR-TB in 104 countries, 2020^a

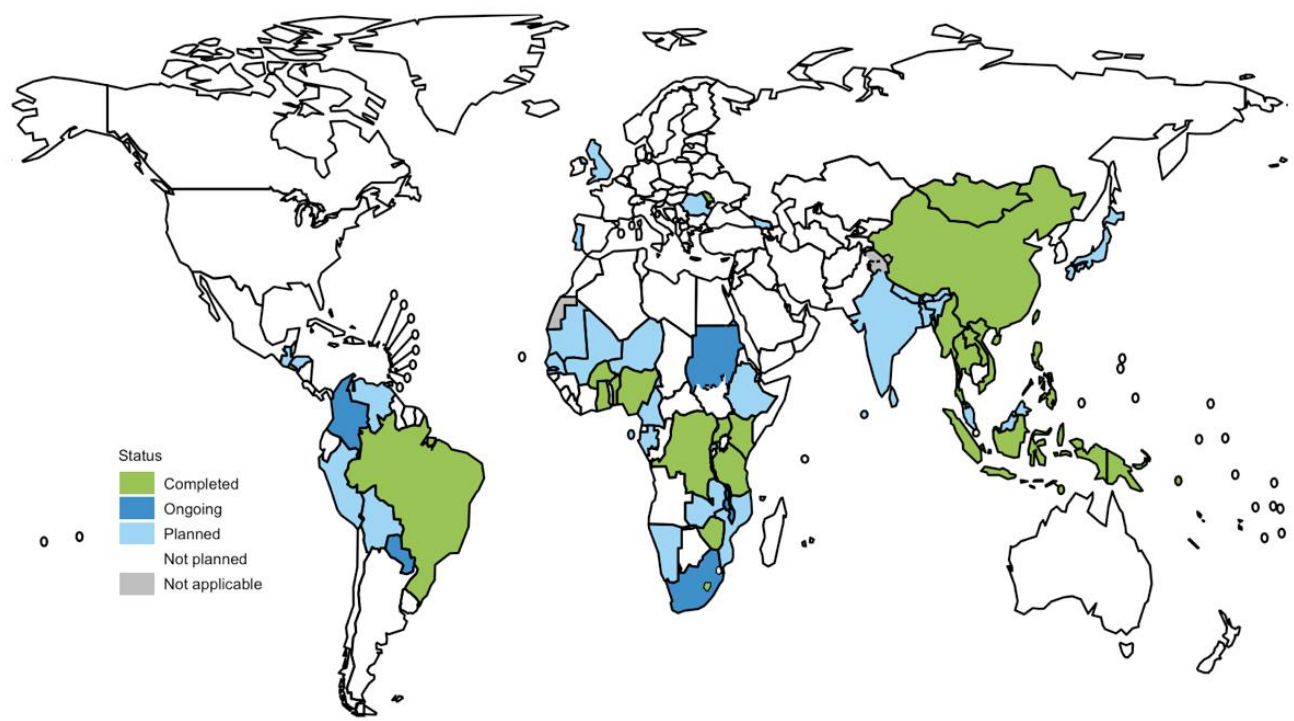


Cost of MDR-TB in the US

2020 U.S. Dollars		Average	Average
Cost/Case	Non-MDR TB*	MDR TB**	XDR TB**
Direct Treatment Costs	\$ 20,211	\$ 182,186	\$ 567,708
Societal w/o deaths	\$ 24,661	\$ 347,324	\$ 729,039
Societal w/ deaths	\$ 67,337	\$ 419,530	\$ 801,245



Fig. 6.2.1 National surveys of costs faced by TB patients and their households since 2015: progress and plans (as of September 2021)



Source: WHO Global TB Programme

Factors with important influence on cost:

- Model of TB care; (hospitalization, outpatient care)



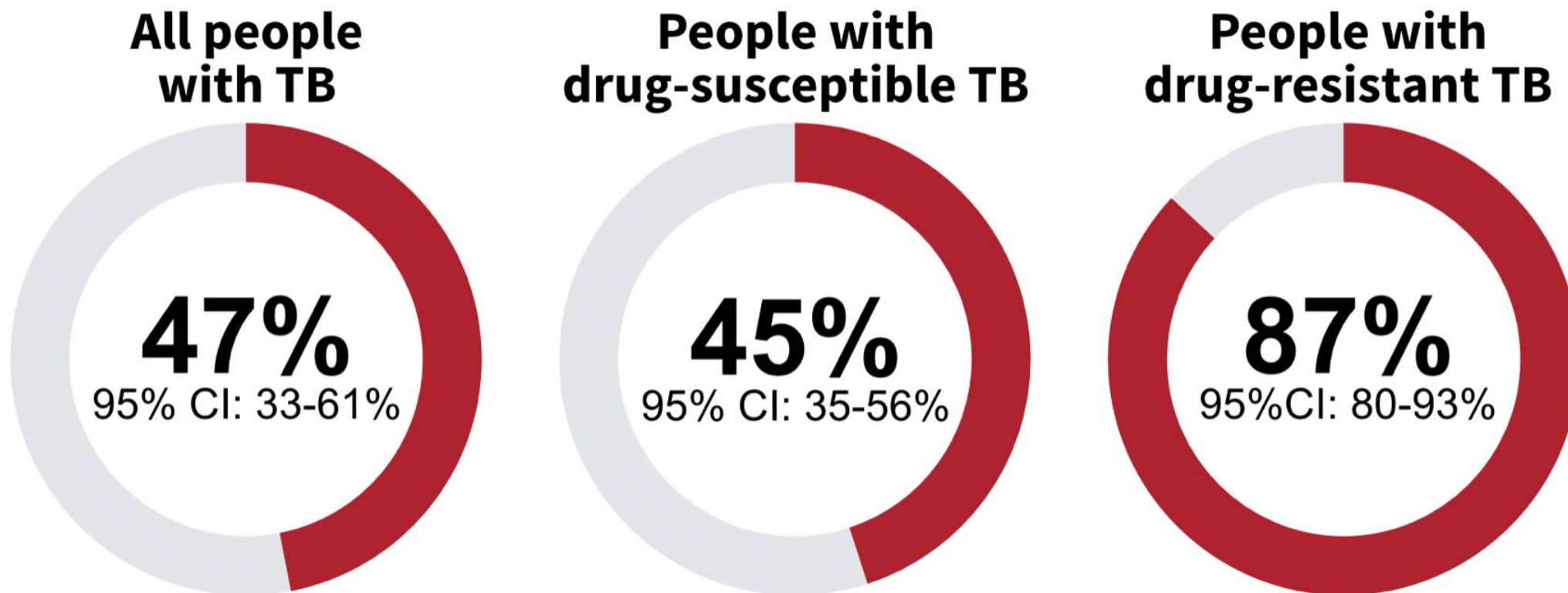
- Frequency with which attendance at health facilities is requested



- Level to which services are decentralized to bring the services close to the community/ ease of access to the health facilities



Fig. 6.2.3 Average percentage of people with TB and their households facing catastrophic costs in 24 national surveys completed since 2015



Catastrophic costs: >20% of household income

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The Union

WORLD CONFERENCE ON LUNG HEALTH 2022
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COSTS INCURRED BY INDIVIDUALS UNDERGOING TB CARE IN LOW-, MIDDLE-, AND HIGH-INCOME SETTINGS: A SYSTEMATIC REVIEW

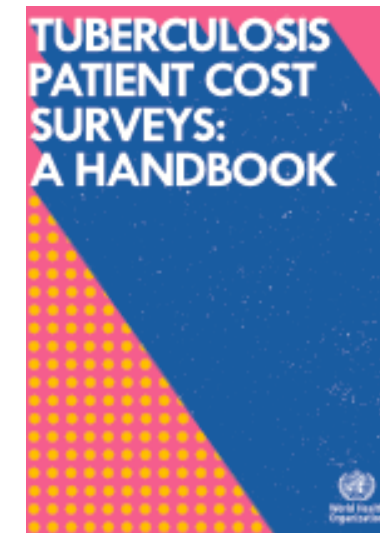
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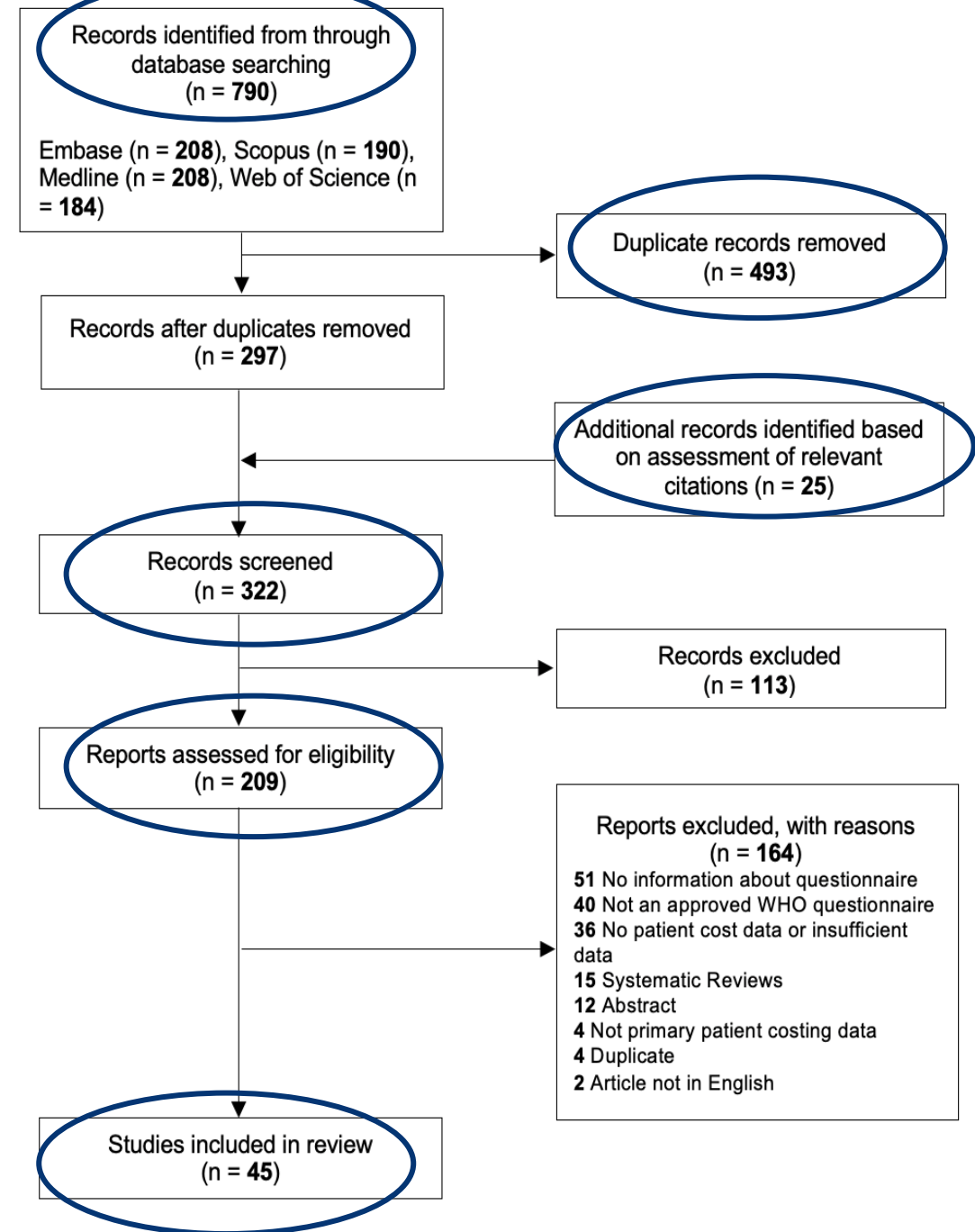


PRISMA DIAGRAM

Identification

Screening

Included



Pre-diagnostic costs – Costs incurred from symptom onset to diagnosis

Post-diagnostic costs – Costs incurred following diagnosis

Direct medical costs – Costs associated with seeking TB care (i.e., consultation, medication, diagnostic imaging, hospitalization etc.)

Direct non-medical costs – Additional costs associated with seeking TB care (i.e., accommodations, transportation, food etc.)

Indirect costs – Costs associated with loss of income or time lost/productivity lost while seeking care

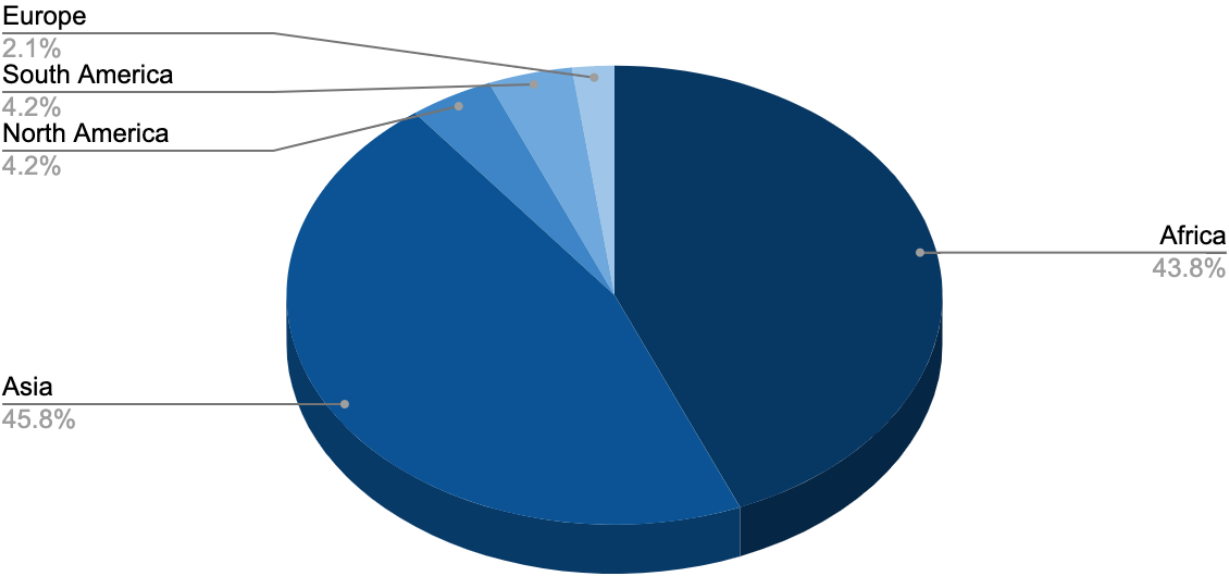
Catastrophic costs - Total cost of care exceeding 20% of household income



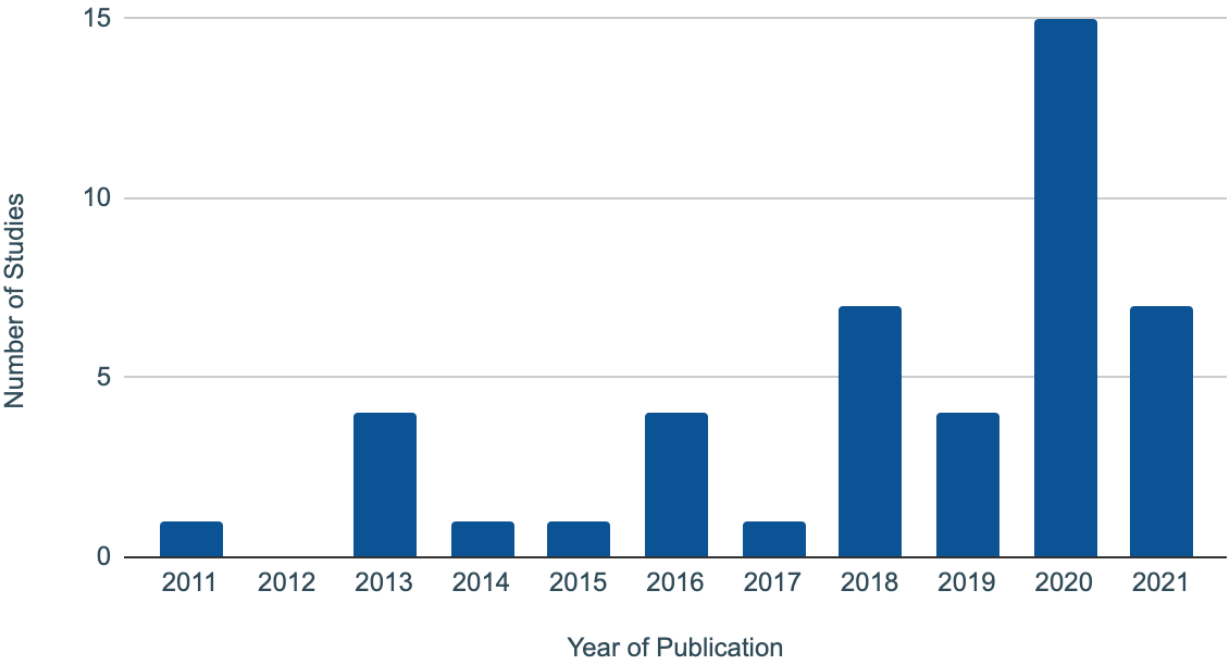
Figure 1 - Cover of the WHO Tuberculosis Patient Cost Surveys: A Handbook. Obtained from the WHO

STUDY CHARACTERISTICS

Breakdown of Study Settings by Continent



Year of Study Publication



PATIENT COST RESULTS

		<i>Pre-Diagnostic Cost</i>		<i>Post-Diagnostic Cost</i>		<i>Total Cost</i>		<i>Range</i>
Median								
DS-TB	N=9	\$52.12	N=8	\$88.15	N=20	\$469.49		
DR-TB/MDR-TB	N=3	\$59.43	N=4	\$1,134.61	N=8	\$5,123.26		
Mixed Population	N=0	-	N=0	-	N=2	\$134		\$7.00 -
HIV+	N=0	-	N=0	-	N=1	-		\$13,042.62
Mean								
DS-TB	N=6	\$466.77	N=7	\$667.27	N=21	\$1,234.18		
DR-TB/MDR-TB	N=0	-	N=0	-	N=5	\$9,737.09		
Mixed Population	N=0	-	N=0	-	N=2	\$154		\$2.82 -
HIV+	N=2	\$173.96	N=2	\$602.43	N=4	\$97.61		\$19,153.80

- Costs were consistently higher amongst individuals with **MDR-TB compared** to DS-TB
- Costs are higher among patients found using **passive case finding methods** compared with more active case finding approaches.
- The **post-diagnostic period** is also a time where patients continue to incur significant costs despite diagnosis and connection to care.

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Incorporating social justice and stigma in cost-effectiveness analysis: drug-resistant tuberculosis treatment

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Social Justice

- Understood as fairness in the distribution of policy impacts on multiple dimensions of personal well-being.
- TB often contributes to clusters of disadvantage, which are further exacerbated with MDR-TB
- Public health decision makers who are concerned about disadvantaged populations might wish to consider social justice in their deliberations, yet formal methods for doing so are few and not widely applied.



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Disadvantage and the experience of treatment for multidrug-resistant tuberculosis (MDR-TB)



Holly A. Taylor^{a,b,*}, David W. Dowdy^c, Alexandra R. Searle^{d,e}, Andrea L. Stennett^{f,g}, Vadim Dukhanin^a, Alice A. Zwerling^h, Maria W. Merritt^{d,i}

- Respondents identified several factors that, may lighten treatment burdens and facilitate treatment completion.
- These factors were social support (n = 121), access to essential goods and services (n = 74), personal motivation (n = 52), and patient knowledge about the relationship between treatment completion and potential cure (n = 44).

“So he's saying he is lucky that he has the support from his family. Some of his fellow patients died because of they can't get to the clinic, they must take a taxi to the clinic, they don't have much support and the hospital there's no visitation and they don't have friends to support to take all the tablets. So he is lucky one that gets the support from the family.”

- Lack of access to essential goods and services was often mentioned as a barrier to treatment completion, more often by health care providers and community members (n = 55) than by patients (n = 19).
- Insecure access to food was the most common problem mentioned in this category, and food was often mentioned as an essential good to which people living in poverty lack access (n = 23).

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Mitigation Opportunities

- Opportunities for intervention:
 - social support, access to essential goods and services, personal motivation, and patient knowledge – in ways intended to avert and alleviate disadvantage.
- Create culture of risk assessment
 - Collection and sharing of data
- Promote risk awareness and education to aid prevention and loss mitigation
- Design catastrophic risk compensation strategies
 - Insurance and financial protection programs, conditional cash transfers
 - Social protection schemes to replace lost income

- Insurance reimbursement



- Non- insurance reimbursement or subsidy for out of pocket expenses (direct medical and/or non-medical costs)
 - Cambodian Health Equity Fund and Subsidy scheme
 - Provides transportation and food costs and grants a user fee waiver at government facilities
 - Despite existence of program, utilization remains low in many populations

Focus on active case finding
and finding individuals
earlier in disease
progression to reduce OOP
(Reduce diagnostic delays)

Invest in case finding and
prevention programs

Largest financial burden for
patients often comes from
indirect costs
(mainly lost income)



YES!

WE CAN **END TB**

We need to increase by four times the funding available for TB care and prevention.

#YesWeCanEndTB

#WorldTBDay #EndTB

Stop **TB** Partnership

hosted by
UNOPS

Thank You!

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