Abstract Presentations

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Chronic respiratory disease (CRD) surveys in low- and middle-income countries (LMICs): A systematic scoping review of methodologies and outcomes

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IPCRG 2020: Hot Topic Clinical Practice Webinar, 4 July 2020

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Introduction

- CRDs - the leading causes of morbidity worldwide.
- Little robust data on true prevalence of asthma and COPD in LMICs
- Low rates of diagnosis
  - awareness
  - access to health care
  - diagnostic capabilities
  - questionnaire-based tools
  - spirometry

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Background

- RESPIRE Group
- Four Country ChrOnic Respiratory Disease (4CCORD) study to estimate CRD burden in adults in LMICs
- Bangladesh, India, Malaysia and Pakistan
- Scoping review

- **Aim:** To identify strategies (definitions; questionnaires; study tools) used to conduct surveys for CRDs in LMICs.

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Methods

- Search strategy
  - Chronic respiratory diseases
  - Prevalence
  - LMICs
- Arksey and O'Malley's[1] six-step framework.
- Databases:
  OVID Medline, EMBASE, ISI WoS, Global Health and WHO Global Index Medicus databases.
- Limits: 1995 to 2018

Criterion	Inclusion criteria	Exclusion criteria
Population	▪ General population ▪ Adults (typically ≥18 years)	▪ People with known CRDs
Disease definitions	▪ Asthma, COPD or other CRD ▪ 'chronic' respiratory symptoms > three months or recurred in 'attacks'	▪ Acute respiratory conditions
Study design	▪ Population or community surveys	▪ RCTs ▪ Case control studies ▪ Systematic reviews

1. Arksey H, O'Malley L. Int Jof Soc Res Methodology. 2005 Feb 1;8(1):19-32

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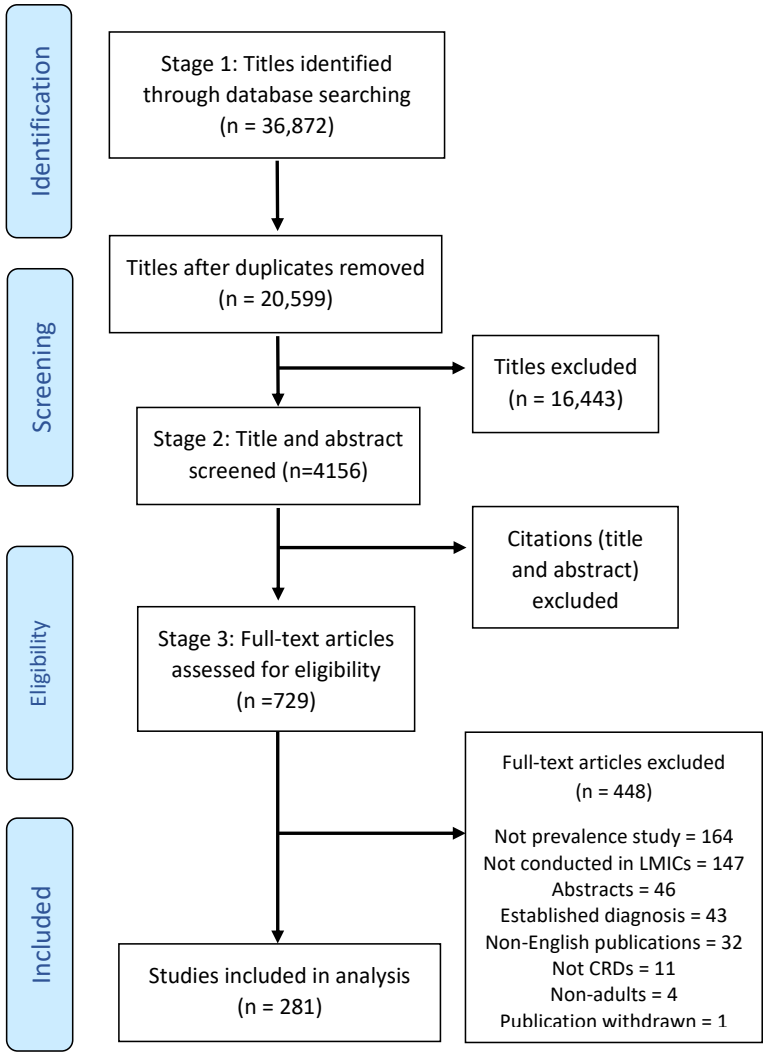
Results

- 281 articles
- Study design:
  cross-sectional surveys (n=260)
  cohort studies (n=11)
  secondary data analysis (n=10)

Figure 1: Study selection process



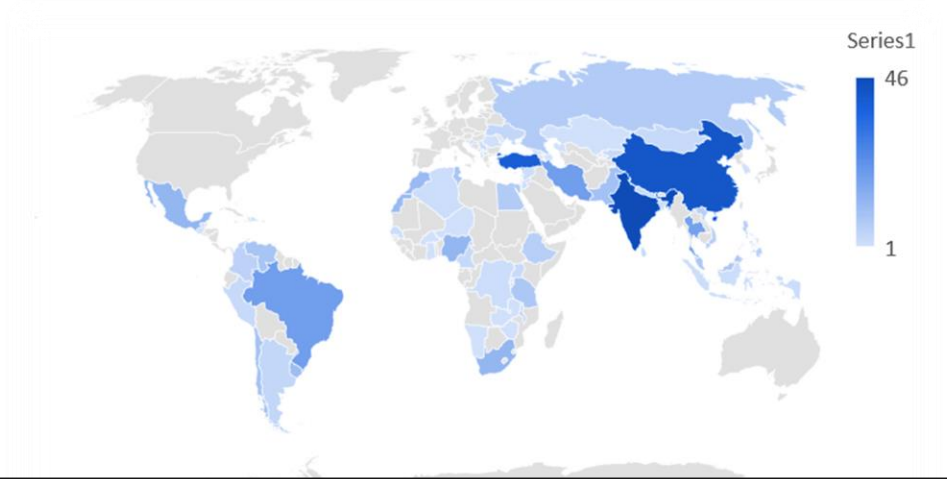
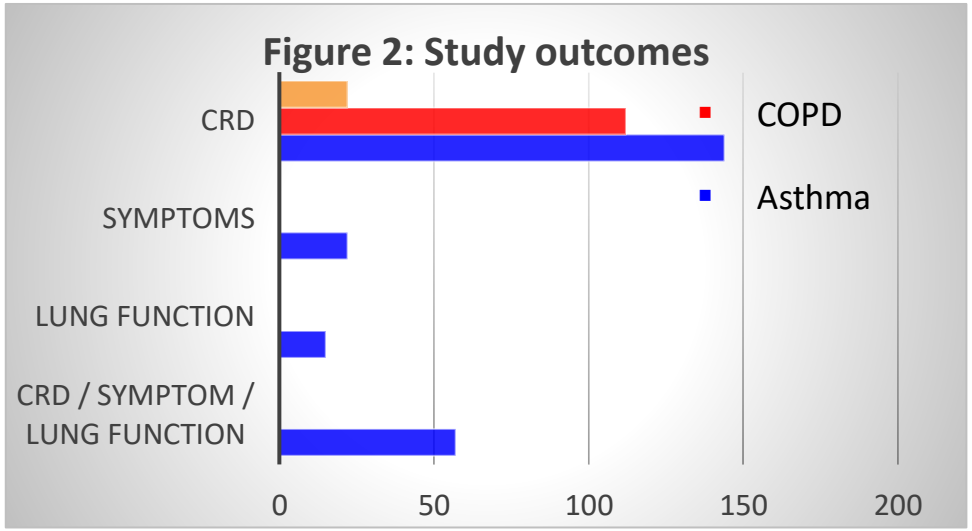
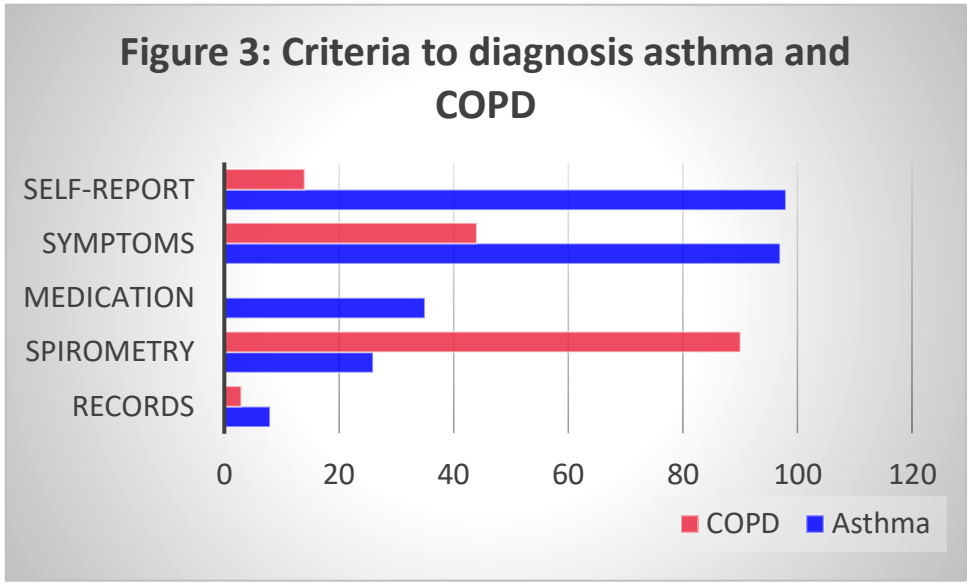


Diagramme 1: Distribution of CRD Prevalence Studies in LMICs

- 70 countries
- 132 from Asia; China, India and Turkey
- Respondents: 50 to 512,891
- Ten publications reported sample sizes of 100,000 or more.

- Survey settings
  - house-to-house or community surveys (n=178)
  - worksites (n=48)
  - health care facilities (n=20)
  - telephone (n=7)
  - postal surveys (n=3)





Questionnaires

- ECRHS (n = 58)
- ATS (n = 43)
- IUATLD (n = 23)
- MRC (n = 14)

Spirometry criteria for COPD

- Fixed FEV1/FVC (n=59)
- Fixed FEV1/FC and LLN (n=28)
- LLN (n=3)

- Burden/impact of CRD (n=33)
- Phenotype (n=6)

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Conclusion:

- There is substantial heterogeneity across the definitions, methodologies, instruments and types of outcomes in CRD prevalence studies

- The impact of CRD on individuals/society was rarely reported, highlighting a major gap in understanding the burden of CRD.

Acknowledgment:

- NIHR Global Health Research Unit (RESPIRE), Usher Institute of Population Health, Sciences and Informatics
- Dr. Marshall Dozier, Academic Support Librarian, UoE
- Dr. Ranita Shamsuddin, Librarian, UM
- Shalini Selvaratnam

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Thank you!

Any questions?

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