

Challenge and opportunity for Indoor Air: Learning from the pandemic

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Indoor Air Matters for Health

Evidence for asthma, respiratory infections, performance, sleep, wellbeing, allergies...

Significant impact on economy

- Poor IAQ can **reduce productivity by up to 9%** - ½ day per week
- UK ONS 2019 **5.3 million days** lost to respiratory infections
- US estimates (2011) **annual gains** from better office IAQ would be over **\$20 billion**



The inside story: Health effects of indoor air quality on children and young people

Research & Evaluation team

RCPCH and Royal College of Physicians

Children in the UK spend more and more of their lives indoors, and the health impact of the air within our homes and schools must be taken seriously. This report is based on a systematic review of the science of indoor pollution, and conversations with children, young people and families. We make recommendations for Government and local authorities, and provide guidance for families.



Highlights from 'The inside story'

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Awaab Ishak: Widespread failings at mould death housing group

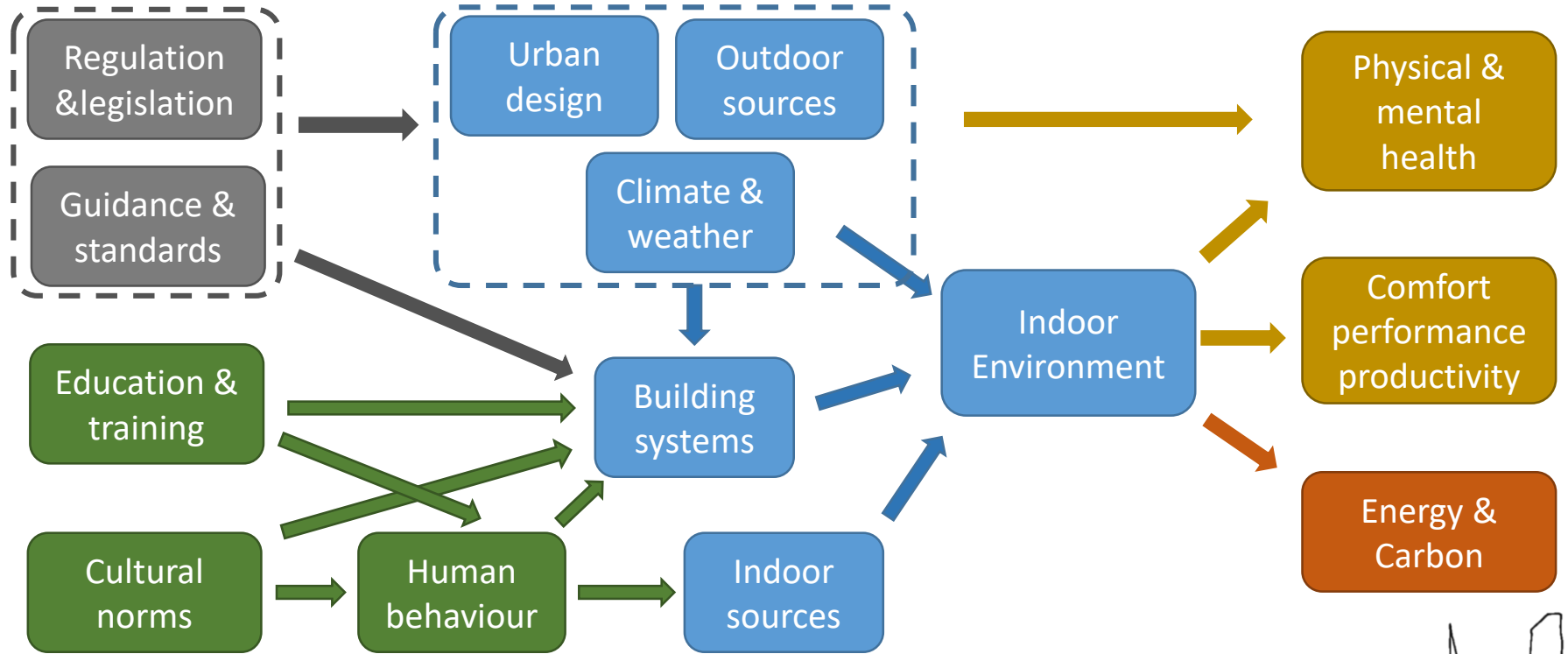
15 December 2022



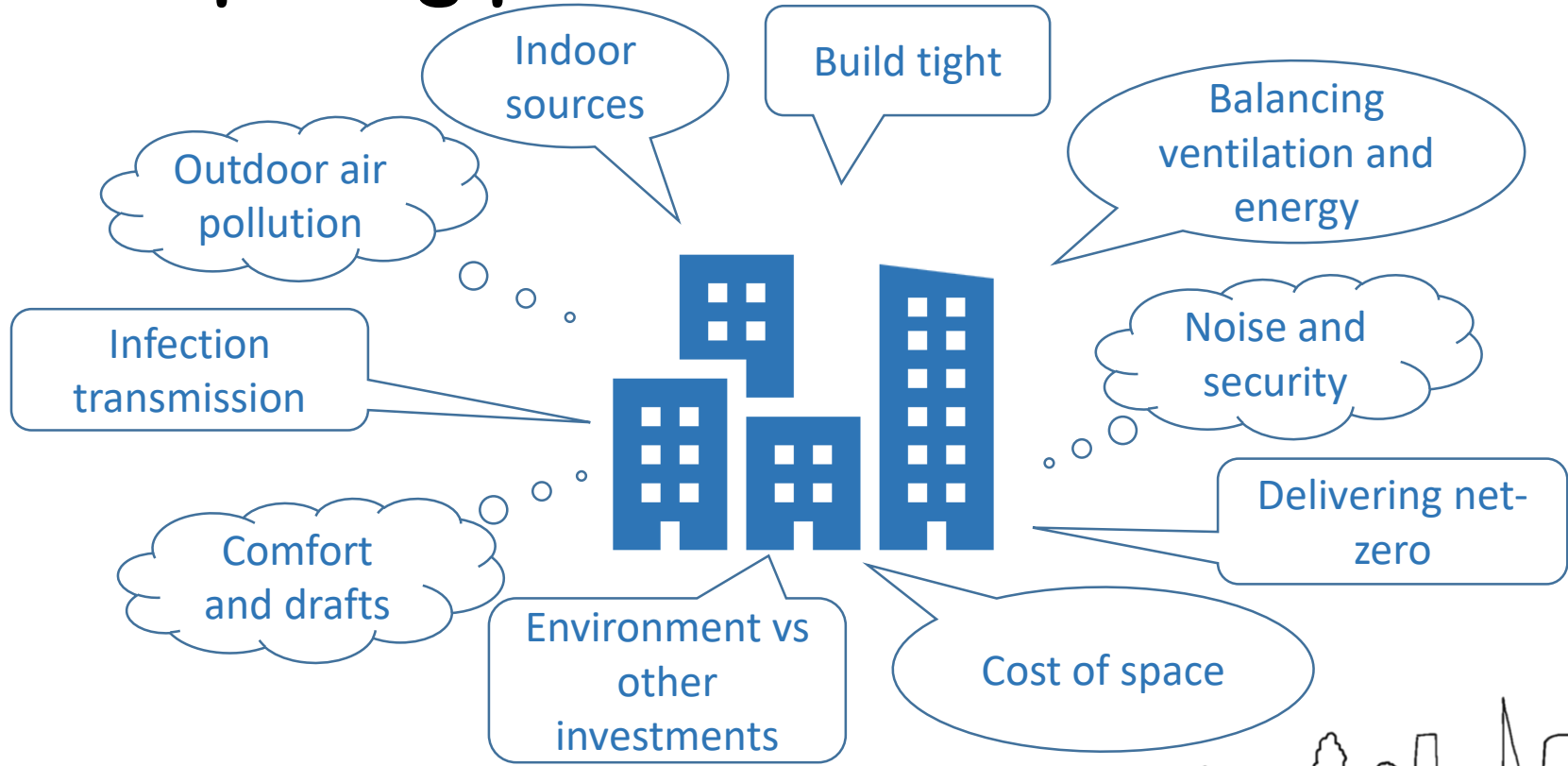
Why do we have a problem?



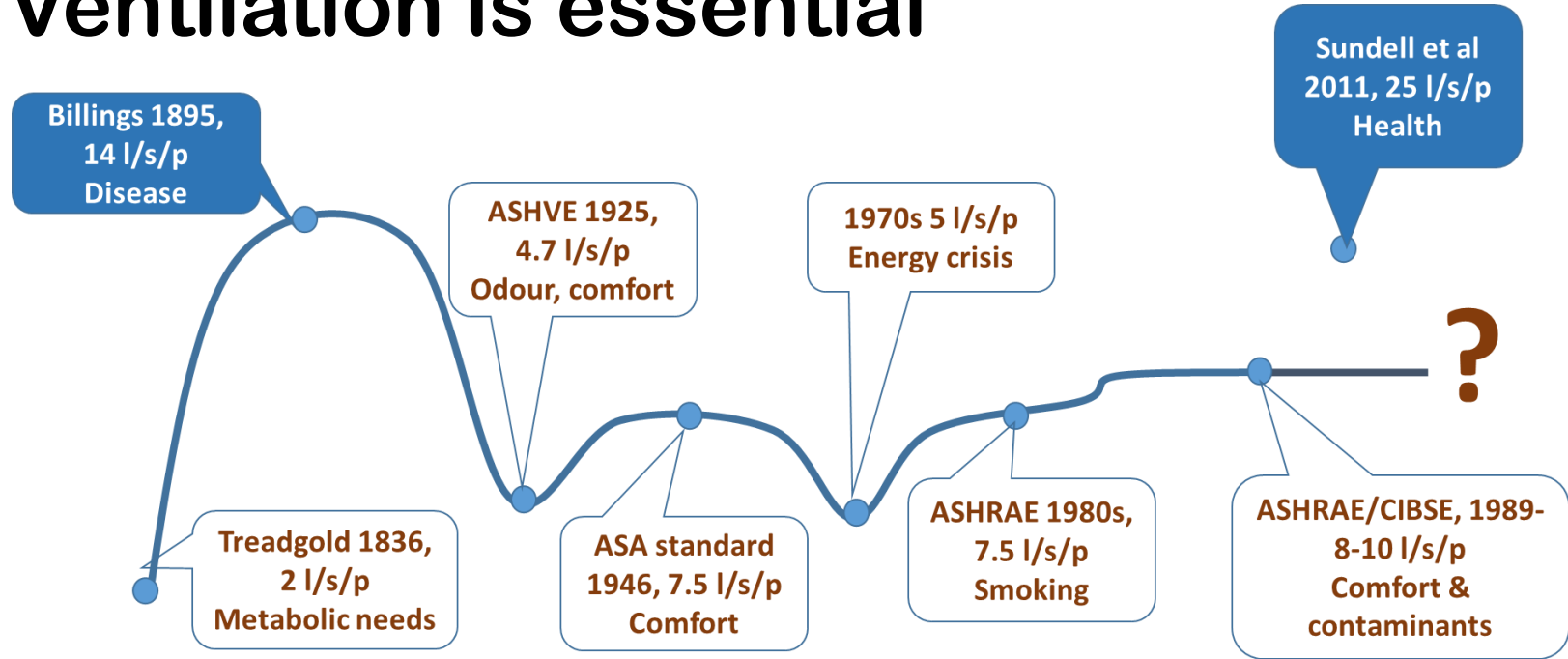
Indoor air is complex



Competing priorities



Ventilation is essential



“Effective ventilation, while minimising energy use and heat loss, is a priority for reducing air pollution, respiratory infections and achieving net zero” England Chief Medical Officers Annual Report 2022



Gaps in standards and implementation

Guidance but no IAQ standards



NICE National Institute for Health and Care Excellence

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British National Formulary (BNF) ▾

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Indoor air quality at home

NICE guideline [NG149] Published: 08 January 2020

Lack of awareness and enforcement

- Air is invisible
- Energy is more tangible
- Many buildings under ventilated
 - Poor design and maintenance
 - User knowledge and agency

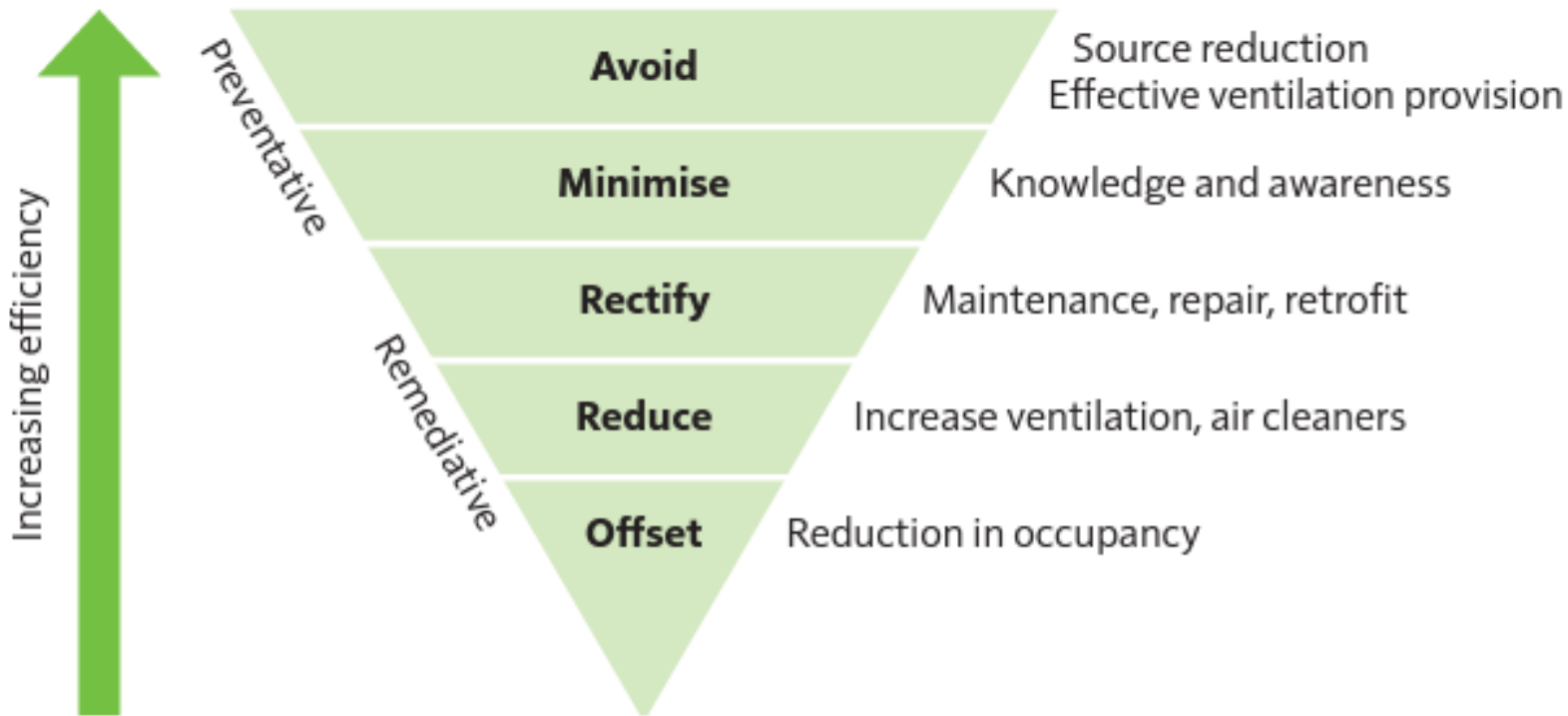
66% GB homes have inadequate ventilation – YouGov survey, FUVN



How do we change things?

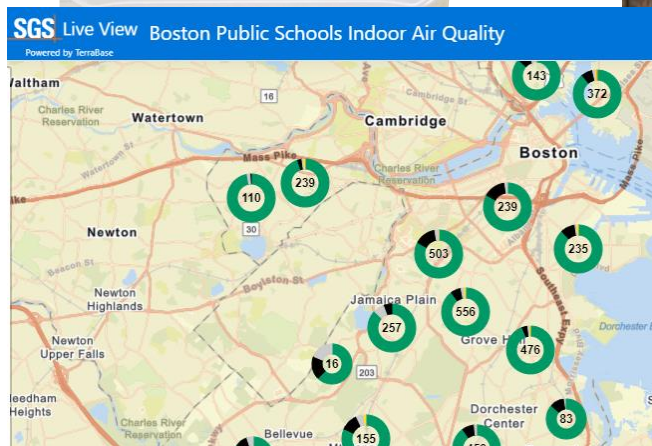


Many opportunities to mitigate risks



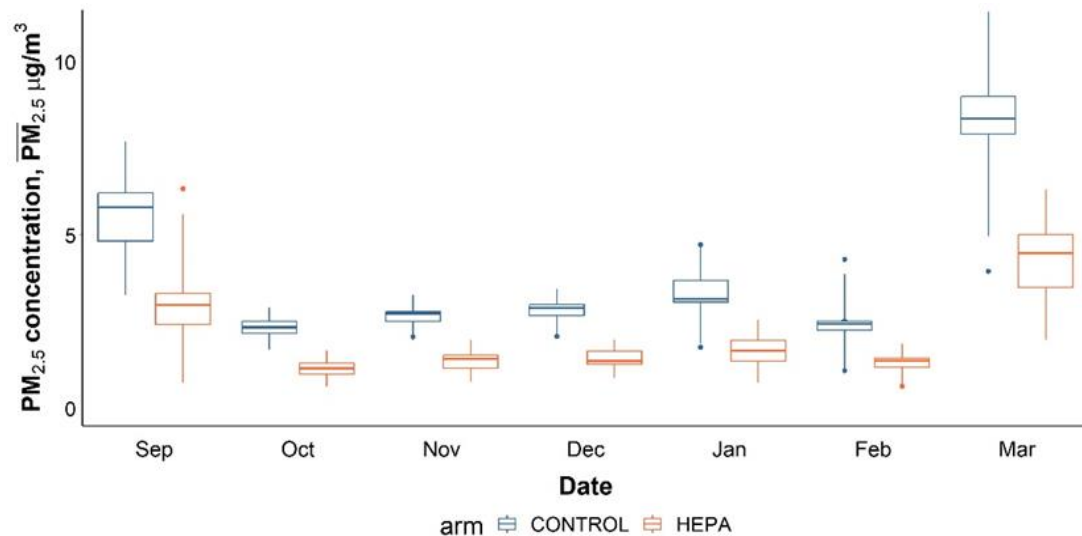
Simple actions and awareness

- Ventilation and IAQ as part of risk assessment
- Maintenance of systems
- Effective user guidance
- Public health messages
- Visualising the air



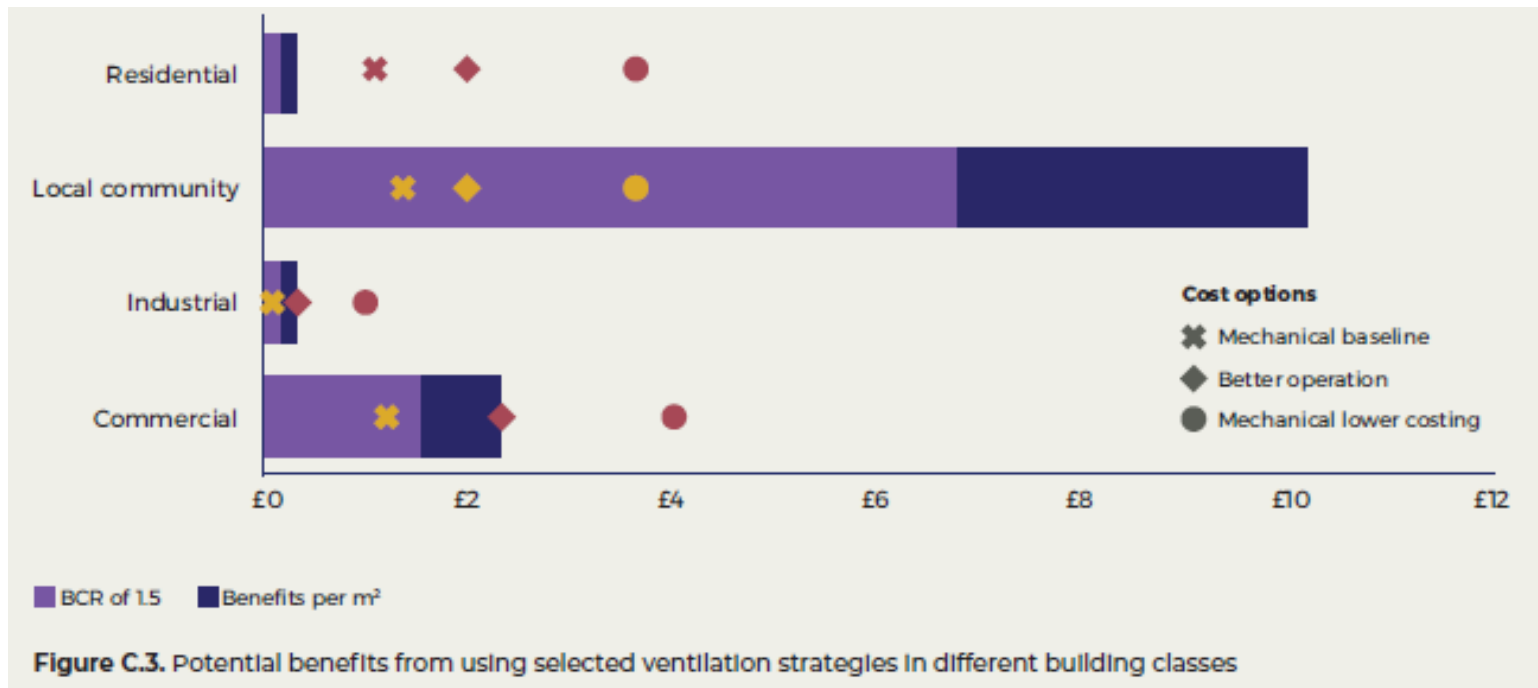
Air cleaners can be effective

- Filters remove particles and pathogens
- Evidence for reduced illness risks
- Relatively low cost
- Success needs good planning and engagement



Class-ACT study, 30 UK primary schools

Cost effectiveness of better indoor air



Yellow – Cost Benefit Ratio > 1.5



Enabling a long-term step change

Data

Evidence risks
and impacts

Collaboration

Cross-discipline
& cross nation

Connected

Link climate,
IAQ, safety

Innovation

Responsible
technology

Standards

Enforcement &
for retrofit

Education

Enabling
behaviour



Thank you for your attention

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