



Clinical WorkPackages

4.1 & 4.2

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- Romania 1
- Malta 2*
- Albania 2
- Bosnia 2
- NL 1
- Finland 3
- Austria 2*
- Hungary 2*
- Italia 3
- Serbia 2



- Schools not too far from the Center
- Children (schools) representative of the Center
- Provide criteria for Rural/traffic/industrial etc used for description, not selection
- Select classrooms with children >8 years
- Provide direction for multi-story building



Tools

- Questionnaires

- Objective measurements



Tools

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 - ▶ Parents

- Objective measurements



Tools

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 - ▶ Parents
 - ▶ Pupils (>9 yr)

- Objective measurements



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 - ▶ School principals
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 - ▶ School workers
 - ▶ School principals
- Objective measurements
 - ▶ Pupils





Question domains

- ISAAC core



Question domains

- ISAAC core
- Symptoms related to the environment



Question domains

- ISAAC core
- Symptoms related to the environment
- Exposures/family



Question domains

- ISAAC core
- Symptoms related to the environment
- Exposures/family
- Values/Perceptions/Awareness/Practices



Why do we need clinical tests?



Why do we need clinical tests?

- Validate questionnaires



Why do we need clinical tests?

- Validate questionnaires
- Effects undetected by questionnaires



Why do we need clinical tests?

- Validate questionnaires
- Effects undetected by questionnaires
- Investigate mechanisms



Clinical tests

- Spirometry
- Peak Flow
- Acoustic rhinometry
- Break-up time/Tear film stability
- Skin tests
- Exhaled NO
- Exhaled CO
- Nasal lavage
- Exhaled breath condensate
- Crevicular fluid
- Performance tests



Spirometry



Spirometry

- Expertise widely available



Spirometry

- Expertise widely available
- Relatively unexpensive





Spirometry

- Expertise widely available
- Relatively unexpensive
- Not much responsive to irritants





Spirometry

- Expertise widely available
- Relatively unexpensive
- Not much responsive to irritants
- Useful for validating the questionnaire



Acoustic rhinometry



Acoustic rhinometry

- Expertise uncommon





Acoustic rhinometry

- Expertise uncommon
- Apparatus expensive



Acoustic rhinometry

- Expertise uncommon
- Apparatus expensive
- Very sensitive to irritants



Peak Flow over a few days

- Easy



Peak Flow over a few days

- Easy
- Relatively Unexpensive



Peak Flow over a few days

- Easy
- Relatively Unexpensive
- Requires cooperation



Peak Flow over a few days

- Easy
- Relatively Unexpensive
- Requires cooperation
- Can be more sensitive for asthma than spirometry





Tear film stability

- Break-up time
 - ▶ Very simple, unexpensive
 - ▶ Relatively insensitive





Tear film stability

- Break-up time
 - ▶ Very simple, unexpensive
 - ▶ Relatively insensitive
- Tearscope
 - ▶ Simple, but more expensive
 - ▶ More sensitive to irritants





Tear film stability

- Break-up time
 - ▶ Very simple, unexpensive
 - ▶ Relatively insensitive
- Tearscope
 - ▶ Simple, but more expensive
 - ▶ More sensitive to irritants
 - ▶ Apparatus currently unavailable





Allergic skin tests

- Widely available
- Not much expensive
- Panel of allergens difficult to standardize
- Not much responsive to irritants
- Knowing the prevalence of allergy can be important
- Can create problems to some ethical committees



Exhaled Nitric Oxide (eNO)

- Relatively simple and available
- Relatively expensive
- Sensitive but increased in asthmatics



Exhaled Carbon Monoxide (eCO)

- Simple, not expensive
- Not much sensitive to irritants
- Increases in inflammation
- Identifies smokers



Nasal lavage, NAL

- Simple, unexpensive
- Requires a centrifuge and ice
- Sensitive to pollutants
- Measurements (albumin, LSM, ILs) are expensive



Exhaled Breath Condensate

- Simple, relatively unexpensive (cold metal pipe)
- Requires a freezer (more cumbersome than NAL)
- Less documented than nasal lavage
- Measurements are expensive





Crevicular fluid

- Simple, relatively inexpensive noninvasive alternative to blood sample
- Undocumented
- Measurements are expensive





Performance tests

- Somewhat cumbersome to perform
- Some are proprietary
- Sensitive to context

WHAT IS DESIRABLE vs. WHAT IS FEASIBLE



sinphonie
Schools Indoor Pollution and Health: Observatory Network in Europe

We are a large group

WHAT IS DESIRABLE vs. WHAT IS FEASIBLE



sinfonie
Schools Indoor Pollution and Health: Observatory Network in Europe

We are a large group

One size doesn't fit all



2/3 levels



2/3 levels

- 1 All groups: Questionnaires and spirometry





2/3 levels

- 1 All groups: Questionnaires and spirometry
- 2 Large set: Break-up time, nasal lavage, eNO





2/3 levels

- 1 All groups: Questionnaires and spirometry
- 2 Large set: Break-up time, nasal lavage, eNO
- 3 Smaller group(s): extended testings



Questions?