

Introduction to CEMAS

John Cherrie



INSTITUTE OF OCCUPATIONAL MEDICINE
Edinburgh, EH14 4AP, UK

www.iom-world.org

INSTITUTE OF RISK ASSESSMENT SCIENCES
IRAS, P.O. Box 80.176, NL-3508 TD Utrecht.

www.iras.uu.nl/index

Summary...

- why have we been developing CEMAS?
- theory and measurement
- exposure modelling and data
 - e-risk
 - other models
- how might CEMAS be used

Why have we been developing CEMAS?

- Occupational hygienists need to record their data
- Data in a common format can be shared more easily
- A carefully thought out scheme should help ensure more relevant data is recorded
- Better data can help improve predictive models

Theory...

- theory is the basis for prediction
- a paradigm is the summation of a theoretical position
 - laws, rules, examples etc.
- a paradigm guides research and helps us find solutions to problems

Theory precedes measurement...

- before you can make a measurement you need a theory
- measurements are not independent of theory
- a poorly articulated theory produces “fuzzy measurements”

For occupational hygiene...

- measure exposure level, 8-TWA
 - and associated measurement parameters
- measure or record information about exposure determinants
 - sources
 - handling or processing
 - methods of control
 - size of the workroom/ general ventilation
 - personal protective equipment

Implications for data recording...

- number of contextual variables is limited
- contextual information can and should be categorised
- number of categories should be related to the range of influence of the exposure determinant
- Assigning exposure variable to categories needs to be done systematically

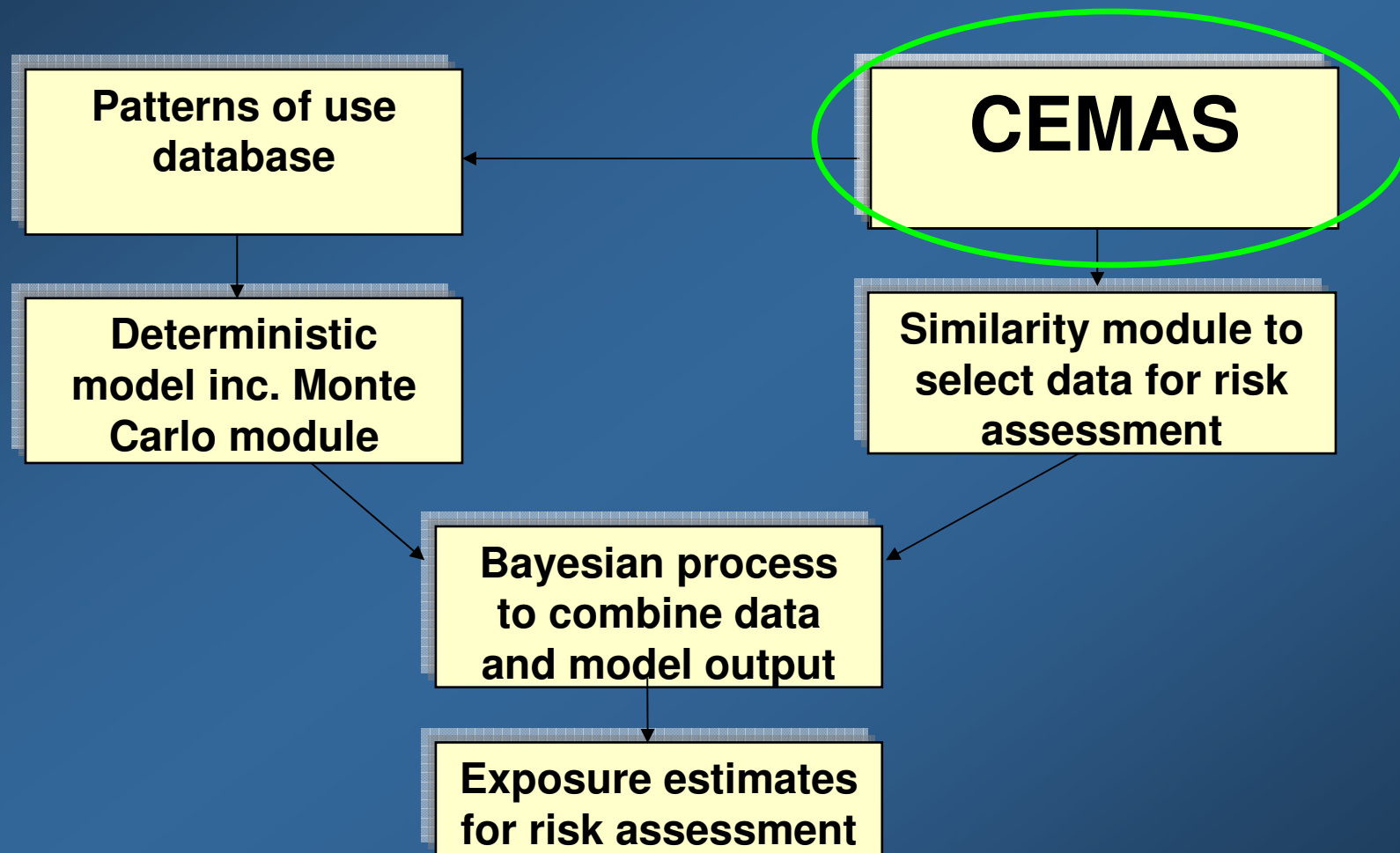
CEMAS contains a simple exposure model

- why?
 - to help encourage use by SMEs and
 - to gather contextual data
- what's the basis for the model?
 - COSHH Essentials, but it's called e-Risk
- is it reliable?
 - possibly!
- are there alternative models?
 - yes

The bigger picture...

- “All models are based on assumptions. Their outputs are at best approximate and may be wrong.”
- ... but so are measurements
- Using measurements or models is inefficient

Measurements and models



Conclusions...

- CEMAS offers a great opportunity for occupational hygienists to have a greater impact on risk assessment
 - It should promote sharing and improved data quality
 - It can gather useful contextual data
 - It can be integrated into a comprehensive predictive tool