

HAZARDOUS CHEMICAL EXPOSURES IN AUSTRALIA: CURRENT STATUS & DIRECTION

Improving Occupational Health for West Australians

Occupational Health Society of Australia (WA)

CLAYTON UTZ

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OVERVIEW

-
- Effective regulation & reform
 - Keeping pace with the science
 - Complex toxicology & legal interplay
 - What does good regulation look like?
 - Hygienists – difficult / sophisticated role

EFFECTIVE OH&S REGULATION

Motivate
Regulated &
Regulator

Clear,
Predictable

Fair,
Achievable

Prescriptive
-v-
Risk-based

Dynamic /
Flexible
v
Vulnerable to
influence



INFLUENCES ON GOOD REGULATION

Good regulation is dynamic (but predictably so)



OVERRIDING OH&S DUTIES

- ▶ Trend: non-prescriptive overriding duties
 - » Improved National consistency
 - » "reasonably practicable" steps
 - » "appropriate measures" / "healthy atmosphere"
 - » "acceptable level" of risk / "likelihood" & "severity" of illness
- ▶ Overriding Duty: safe working environment
 - » Reasonable steps (size / nature of operations)
 - » Prescriptive regulatory obligations
 - » Legal status of exposure limits / guidelines

TOXICOLOGY & CAUSATION

Common sense approach (not always helpful)

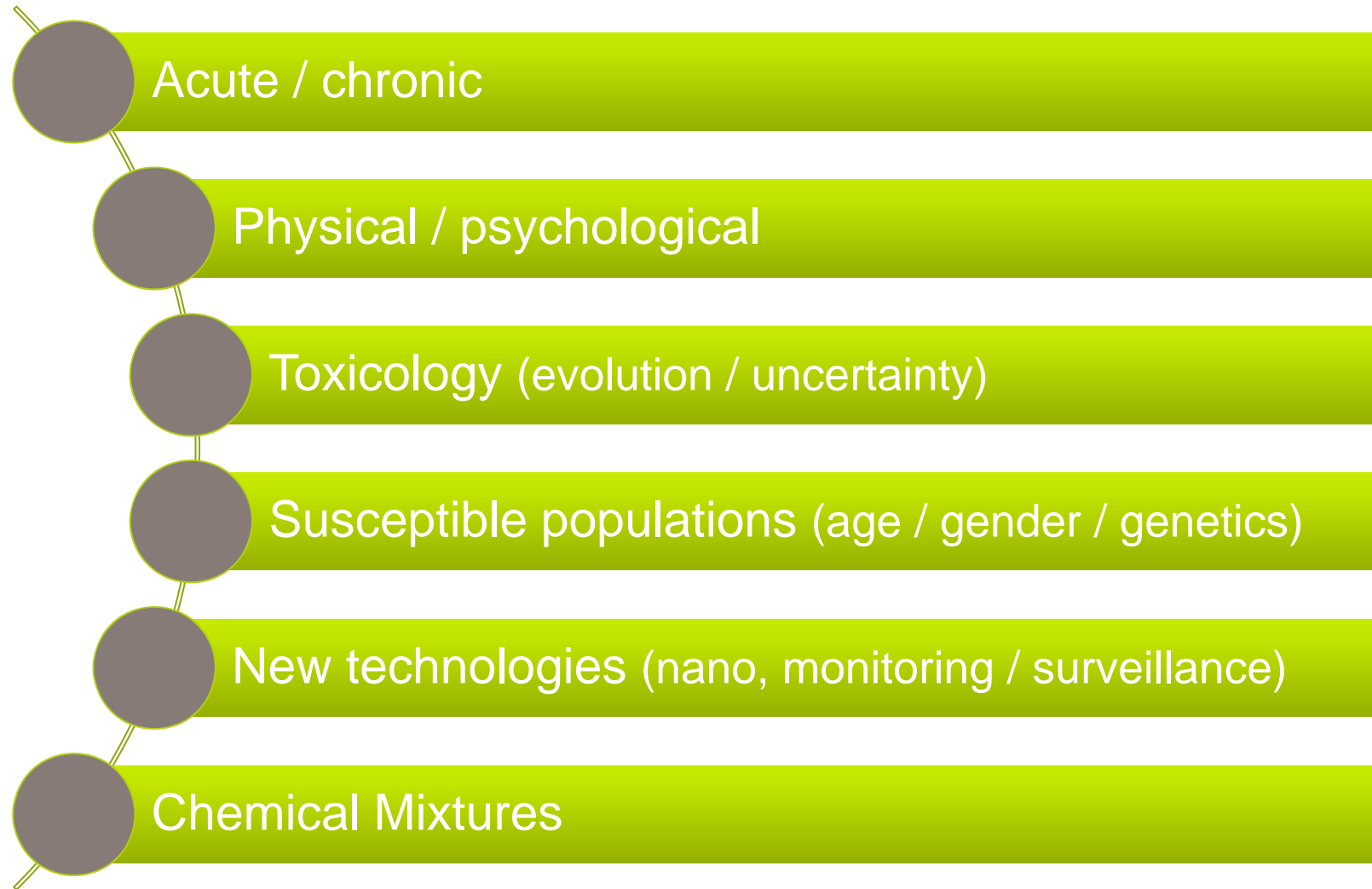
Exposure limits not definitive

“Material contribution” (“safe” level?)

“Strands in the cable”

Reasonable inferences (eg. Bradford Hill)

HEALTH CHALLENGES



LEGAL CHALLENGES

- Pace of reform (*ad hoc*)
- Hindsight & "watershed" moments (latent disease)
- "Contribution" to severity / risk (no safe level?)
- Complex disease (cancer, CV & respiratory)
- Adverse inferences (mechanistic / epidemiology)
- Ideology masquerading as a legitimate goal

IDEOLOGY V LEGITIMATE GOALS



<http://TheFunnyPlace.net>

IDEOLOGY V LEGITIMATE GOALS



Conservation
v
Safety
v
Animal rights

- ▶ Emotive issues
- ▶ High stakes risks
- ▶ Uncertain science
- ▶ Public ignorance

A screenshot of a news article from The Sydney Morning Herald. The article is titled "How on earth did sharks become the new dolphin?" and is written by Garry Linnell. The date is October 7, 2016. The article is categorized as "COMMENT". The screenshot also shows the newspaper's navigation menu, including "News", "Sport", "Business", "World", "Politics", "Comment", "Property", "Entertainment", "Lifestyle", "Travel", and "Cars". There is also an American Express advertisement and a "Find out more" button.

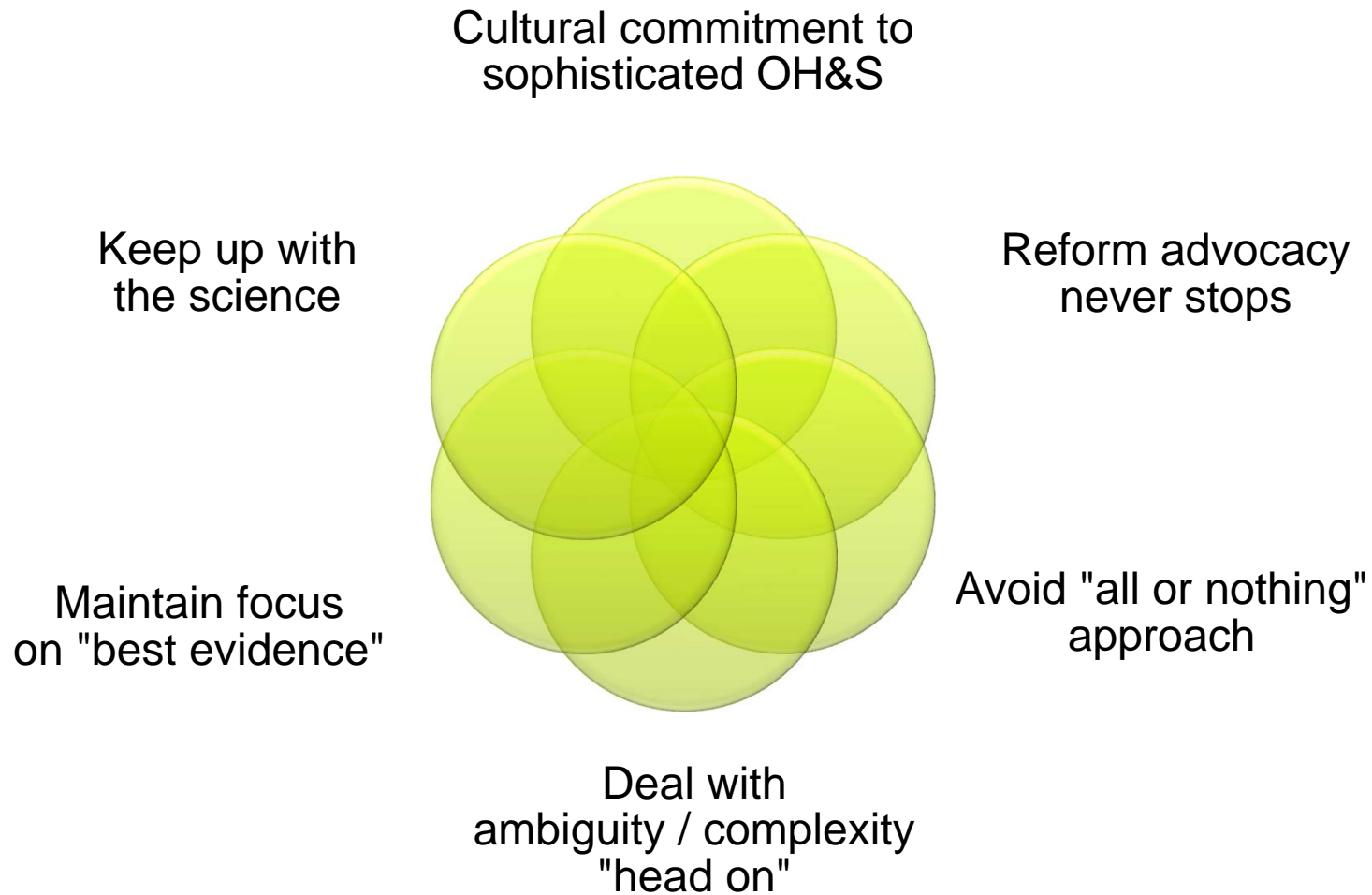
THE SCIENCE DOESN'T STAND STILL!

- ▶ Precautionary principle: A difficult balancing act
- ▶
 - Obligation to stay ahead of the curve (or just keep up?)
 - » Science of health effects / surveillance (diesel, mixtures, nano etc)
 - » Regulatory movements elsewhere (silica)
 - » Dealing with the unknown (nanoparticles, chemical mixtures)
- ▶ Is the approach to exposure standards too narrow / slow?

EXPOSURE STANDARDS: NEW APPROACHES?

- ▶ Safe Work Australia Review
 - » Health based -v- pragmatic
 - » Mandatory -v- advisory (or both?)
- ▶ NIOSH
 - » Data hierarchy
 - » Hazard / exposure banding (endocrine disruptors / dose response?)
 - » Efficiencies / deals with uncertainty
- ▶ Industrial Chemicals Bill 2017 (NICNAS / AICIS)
- ▶ Regulation: Punitive -v- continuous improvement

KEY TAKEAWAYS



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