Primary Prevention of NCDs

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Chronic Diseases Training Course

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Outline

- Learning Objectives
- Review concepts – risk, causality
- What works in Primary Prevention?
- What does not work?

Learning Objectives

- Review risk and causality

- Review prevention principles

- Identify established effective and cost-effective primary prevention strategies

- Identify commonly used primary prevention interventions with NO evidence of effectiveness

Causality

- Origins in Infectious Diseases

- Problematic in Chronic Diseases

- Correlates of Association

  - dose-response

  - temporality

  - strength of association

  - biological plausibility

  - consistency

Risk?

"a probability of an adverse outcome, or a factor that raises this probability"

World Health report 2002

Risk concepts

- Risk prevalence and incidence
- Absolute and Relative risk
- Population attributable risk
- Risk surveillance, assessment, management, communication
- Risk perception - voluntary/involuntary risk

Prevention

- Continuum not dichotomy
- Primary: avoiding the occurrence of disease/pre-event
- Secondary: early detection & reversal/ re-event
- Tertiary: prevent/delay complications

Primary Prevention

- most effective health care interventions known e.g. immunisation
- CVD mortality decline in developed countries > 50% due to primary prevention
- Primary & Secondary Prevention balance
- Difficulties implementing Primary Prevention

Primary Prevention

- Prevention paradox
- Population wide and/or
- High-risk approaches

What works in Primary Prevention?

- Hypetension
- Hyperlipidaemia
- Cervical cancer
- Colorectal cancer
- Breast cancer
- Obesity

What works in Primary Prevention?

- Lifestyle measures work for high BP
  - weight reduction
  - reduction alcohol intake
  - physical activity
  - sodium moderation

  24-54% reduction from trial results

What does not work?

- Lung cancer screening
- Ovarian cancer screening
- Pancreatic cancer screening

- Prostate cancer screening uncertain
- Diabetes in general population not cost-effective

Cancer

- Estimates 40-50% cancers preventable

  - 25% smoking and diet and infection

  - 15% through screening

  - 10% through diagnosis and treatment

Type 2 Diabetes

- Physical activity and moderate weight loss in middle-aged men with IGT reduced diabetes by 50 – 58%

Physical activity

- Moderate PA (3 hours brisk walking per week) reduces Type 2 diabetes,obesity,CVD, some cancers

Stroke

- Blood pressure reduction
- Treatment of hyperlipidaemia
- Antithrombotic therapy in AF
- Antiplatelet therapy in MI

COPD

- Smoking prevention and cessation most effective and cost effective way to prevent COPD

Primary Prevention and Risk Reduction?

- Risks are continuous

- Most events in populations occur in people with low risk

- Risk reduction/risk management

- Future risk assessment consists of risk factors and markers e.g CVD

Suggested Reading

van Venrooij et al Journal of Internal Medicine 2002; 251(4): 301-