ENVIRONMENT, SOCIAL, GOVERNANCE

QUESTION

Background

You are a consulting actuary living in the country of Alasia, a country with 40 million working age citizens. Alasia is a reasonably wealthy country with a comprehensive social security system, including unemployment payments ("the dole") for people unable to find work. The country is currently in a strong economic situation with GDP growth at 2.7% p.a. and unemployment at 5%.

The current government of Alasia was elected on a "tough on crime" platform. The government also promised to "crack down on dole bludgers[1]".

Six months ago, the government attempted to introduce legislation for mandatory drug testing of dole recipients. Under the proposed legislation there would be drug testing (at random times) of a sub-set of people receiving the dole. If a person was found to have illegal drugs in their system:

- The dole payment would be reduced by 50%.
- Drug treatment counselling would be offered, where available.
- A second drug test would be carried out about 6 months later.
- If the second drug test was positive (i.e. drugs were detected again), the person would never again be eligible to receive dole payments. If the second drug test was negative (no drugs in the system), full dole payments would resume immediately.

The legislation did <u>not</u> pass the parliament, as it was blocked by Alasia's Upper House (the review arm of parliament). This greatly annoyed the Alasian Minister of Social Security, Minister Kiek M. Orff, who has vowed to get the legislation passed.

You are the sole Actuary in a small actuarial consulting firm in Alasia. You recently received the following letter from Minister Orff:

"Dear A. N. Actuary

I was very impressed by your work on the recidivism bonds, and wondered if you can help me to get this drug testing legislation passed? I need to show that there are financial benefits to the taxpayer of drug testing the dole bludgers. The savings are not just from having to pay them less dole, but also this will force them off drugs and back into the workplace to support themselves, so we'll have savings to the health budget, prisons budget and other financial benefits.

If we can prove there are significant savings to the tax players, I'm sure the Upper House will support the legislation. This is, of course, highly confidential at this stage.

Yours sincerely,

Minister Kiek M. Orff"

[1] "Dole bludger" (Alasian slang): An unemployed person who has no intention of seeking a job.

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Your Task

Prepare a report for Minister Orff that answers the question in his email. In addition, you should prepare a confidential briefing note to go with your report that addresses some of the issues that may have arisen from your financial investigations.

Your report should include (not necessarily in this order):

1. The suggested design for the random drug testing system (i.e. what proportion of the unemployed are tested, which cohort is tested, etc.).
2. Estimates of the impact to government finances of the proposal. Include scenario modelling of the impact under different assumptions and with modified design features.
3. If appropriate, calculations and/or recommendations as to how financial savings could be achieved using a different response to drug use by those receiving dole payments.
4. A confidential briefing note to the Minister about your findings and whether they address his desired outcomes.

Further Information

About the dole:

- Unemployed people in Alasia receive $200 a week. This is not means tested or subject to any other tests. There is no waiting period for the dole.
- The average duration (on the dole) of Alasians currently receiving unemployment benefits is shown in Attachment A. As the Attachment shows, most people are on the dole for a short period before they find work again.

About drug use in Alasia:

- It is estimated that about 15% of all Alasians use an illegal drug, at least once, over any 12 month period.
- It is estimated that about 25% of all dole recipients use an illegal drug, at least once, over any 12 month period.
- Most drug use is recreational and infrequent, not frequent.
- Funding for drug treatment programs has been slashed in Alasia over recent years. A drug treatment program costs about $2,000 per person to implement with about a 50% success rate (i.e. the person stops using drugs). There are currently waiting lists for drug treatment programs.
- The cost of a drug test is $60 per test (assumed to be a Laboratory based urine test with a very high level of accuracy).
- Some information about the types of illegal drug and the period over which they can be detected is shown in Attachment B.

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Assumptions

Your detailed analysis of the impact on government finances should focus on the direct costs and benefits of the proposal but you can also make high level estimates of any indirect costs and benefits to the government if you wish to quantify these.

You should feel free to make any assumptions you wish in this question, but you should state these in your report. The assumptions should be reasonable overall.

You can assume there are no legal limitations on how and to whom the drug testing is carried out, i.e. the drug testing could be targeted and not strictly random.

SEE ATTACHMENTS A AND B ON NEXT PAGE

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ATTACHMENT A

"Duration on dole" of Alasian dole recipients as at 31 December 2017

Cohort	Percentage of unemployed people
< 4 weeks	17%
4 to 13 weeks	24%
13 to 26 weeks	13%
26 to 52 weeks	22%
52 to 104 weeks	11%
More than 104 weeks	
Total	100%

ATTACHMENT B

Windows of Detection by Drug Type

Drug (and common name)	Approximate Detection Time
Cannabinoids (marijuana) - infrequent use	Up to 10 days
Cannabinoids (marijuana) - chronic use	30 days or longer
Opiates (heroin, morphine, codeine)	2-4 days
Cocaine	2-3 days
Amphetamines / Methamphetamines (ice, speed, ecstacy)	2-5 days
Benzodiazepines (valium, serapax)	Up to 2 weeks

END OF QUESTION