

# Dragon-led innovation Private Water Supply Prompt

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Prof Sarah J Jones

22 October 2025



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# Elevated blood lead

## Environmental Public Health Case Management

2016



60%



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2017



95%



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# Private water supply related GI problems

## Chemical or biological sources



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Stool sample  
and / or supply  
testing

?



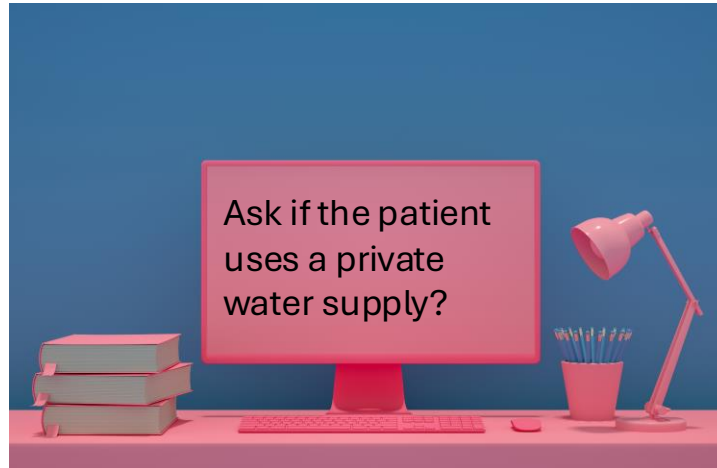
# Why does this matter?

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- Access to clean, safe and sustainable water and sanitation
- How many private water supplies in Wales?
  - Some estimates – 2% of the population
  - 43% of properties in some areas
- Emerging risk associated with the changing climate
  - Unnecessary medical investigations increase the rate of climate change
- Significant inequalities
  - Rural areas
  - ?older people
- Understanding where the supplies are, who uses them and if there are health harms associated with them is critical to determining what, if any, action is needed in the future to provide water to these users

# Proposal...

## GP prompt system



Stool sample and /  
or supply testing





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# Cael Gwared ar Ganser Ceg y Groth – Cyfle Unwaith mewn Oes

Joanne Allan, Rheolwr y Rhaglen Ranbarthol

22/10/2025

# Eliminating Cervical Cancer – A Once-in-a-Lifetime Opportunity

Joanne Allan, Regional Programme Manager

22/10/2025

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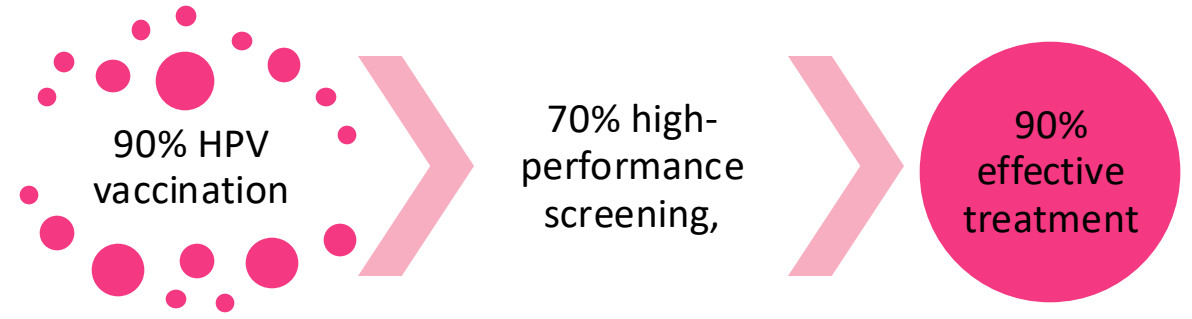
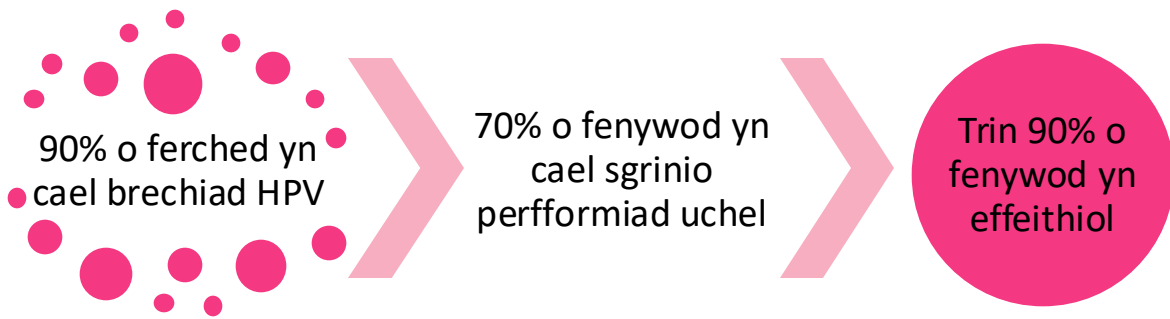
# Mae cael gwared ar ganser ceg y groth yn rhywbeth y gellir ei gyflawni

Nod strategaeth fyd-eang Sefydliad Iechyd y Byd<sup>1</sup> yw cael gwared ar ganser ceg y groth drwy dri philer:

# Cervical Cancer Elimination Is Achievable

The World Health Organisation's global strategy<sup>1</sup> aims to eliminate cervical cancer through three pillars:

9



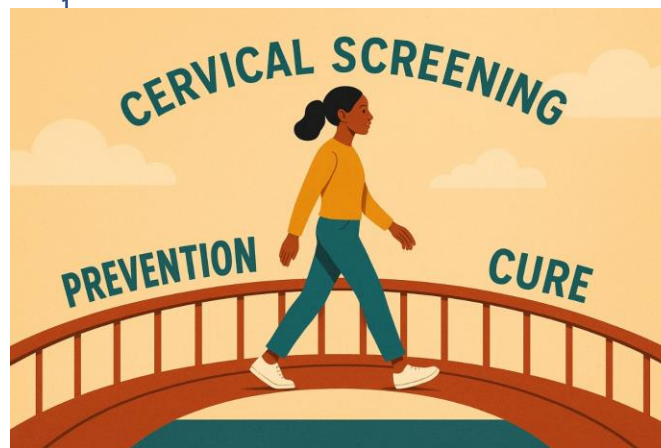
# Ein gweledigaeth

Erbyn 2040, bydd cancer wedi'i ddileu fel problem iechyd y cyhoedd



# Our Vision

By 2040, Cancer will be eradicated as a public health problem



# Sgrinio Serfigol Cymru

## Cyd-fynd â'r Strategaeth Cael Gwared ar Ganser

Mae Sgrinio Serfigol Cymru, dan arweiniad Iechyd Cyhoeddus Cymru, yn cyflwyno'r rhaglen genedlaethol mewn partneriaeth â Gofal Sylfaenol ac Eilaidd.



### Galw ac Ailalw

- Rydym yn gwahodd menywod cymwys a phobl â serfics rhwng 25 a 64 oed bob 5 mlynedd.



### Profi am HPV Risg Uchel

- Rydym yn defnyddio profion HPV, y dull perfformiad uchel y mae Sefydliad Iechyd y Byd yn ei argymhell



### Prawf Sgrinio Serfigol (ceg y groth)

- Mae unigolion yn mynd at eu meddygon neu glinig iechyd rhywiol er mwyn i glinigydd gymryd sampl serfigol am ddim



### HPV wedi'i ganfod - Gofal dilynol

- Caiff unigolion eu hatgyfeirio am brofion a thriniaeth bellach



### Dim HPV wedi'i ganfod

- Caiff unigolion eu galw'n ôl ymhen pum mlynedd

# Cervical Screening Wales

## Aligning with the Cancer Elimination Strategy

Cervical Screening Wales, led by Public Health Wales, delivers the national programme in partnership with Primary and Secondary Care.



### Call & Recall

- We invite eligible women and people with a cervix aged 25–64 at intervals of every 5 years



### Testing for High-Risk HPV

- We use HPV testing, the high-performance method WHO recommends



### Cervical Screening (Smear) Test

- Individuals attend their doctors or sexual health clinic for a free clinician taken cervical sample



### HPV Found - Follow Up

- Individuals are referred for further tests and treatment



### No HPV Found

- Individuals are rescheduled in five years

# Effaith a Chyfle

## Effaith

- Mae gostyngiad o 10% wedi bod yn y rhai sy'n cael prawf sgrinio serfigol ers 2017
- Mae'r gostyngiadau mwyaf i'w gweld yn y cymunedau mwyaf difreintiedig
- Mae sgrinio'n gweithio – i'r rhai sy'n mynd i'w prawf sgrinio serfigol, mae'r rhan fwyaf o newidiadau i gelloedd yn cael eu canfod yn gynnar a'u trin cyn iddynt droi'n ganser.
- Nid yw dros 60% o ganserau ceg y groth yn cael eu canfod drwy sgrinio
- Mae canserau na chanfuwyd trwy sgrinio yn aml yn ganserau datblygedig, sydd â phrognosis gwaeth.

# Impact & Opportunity

## Impact

- Attendance for cervical screening has seen a 10% decline since 2017
- Larger declines can be seen in the most deprived communities
- Screening works – for those who attend, the majority of cell changes<sup>2</sup> are detected early and treated before they become cancer.
- Over 60% of cervical cancers are not screening detected
- Non screen detected cancers are often advanced stage cancers, with worse prognosis.

# Rhwystrau i fynd i'r apwyntiad

## Ymchwil Sgrinio Serfigol Cymru a CRUK

- Ymwybyddiaeth
- Rhwystrau Emosiynol a Chymdeithasol
- Profiadau negyddol

# Barriers to attendance

## CSW & CRUK Research

- Awareness
- Emotional and Social Barriers
- Negative experiences



# Tegwch

## Rhwystrau mynediad ar gyfer

- Menywod a phobl â serfics sydd o gefndiroedd incwm is
- Lleiafrifoedd ethnig
- Unigolion traws ac anneuaid
- Y rhai sydd ag anabledau neu gyfrifoldebau gofalu

# Equity

## Access barriers for

- Women and people with a cervix from lower-income backgrounds
- Ethnic minorities
- Trans and non-binary individuals
- Those with disabilities or caring responsibilities





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# Y Cyfle

# The Opportunity



# Hunan-samplu

## Arloesol ar gyfer mynediad a thegwch

- Eisoes yn cael ei ddefnyddio mewn gwledydd fel Awstralia, Denmarc, Rwanda....

# Self Sampling

## The game-changer for access & equity

- Already in use in countries like Australia, Denmark, Rwanda....



1  
6

# Hunan-samplu

Sut mae'n gweithio.....



# Self Sampling

How it works.....



# Manteision Hunan-samplu

## Chwalu Rhwystrau!

- Nid oes angen trefnu apwyntiad gyda meddyg teulu
- Dim sbecwlwm, dim dinoethi, dim anesmwythder
- Dim ofn cael eich barnu na'ch camddeall
- Llai o rwystrau diwylliannol ac ieithyddol
- Dim angen aildrefnu gwaith, gofal plant na theithio

# Benefits of Self Sampling

## Removing Barriers !

- No need to book a GP appointment
- No speculum, no exposure, no discomfort
- No fear of being judged or misunderstood
- Reduced cultural and language barriers
- No need to rearrange work, childcare, or travel



# Manteision Hunan-samplu

## Chwyldroi Mynediad

- I'r rhai nad ydynt erioed wedi mynd i apwyntiad o'r blaen
- I'r rhai sy'n teimlo eu bod wedi'u heithrio gan y system
- I'r rhai sydd wedi cael profiadau gofal iechyd negyddol
- I'r rhai sydd angen opsiwn mwy hyblyg

# Benefits of Self Sampling

## Revolutionising Access!

- Those who've never attended before
- Those who feel excluded by the system
- Those who've had negative healthcare experiences
- And those who simply need a more flexible option



**Gyda chyfraddau sgrinio yn gostwng a bylchau o ran tegwch yn ehangu, rhaid i Gymru weithredu'n feiddgar i gyflwyno hunan-samplu a dod yn fodel byd-eang ar gyfer arloesi ym maes iechyd y cyhoedd.**

**With declining screening rates and widening equity gaps, Wales must act boldly to introduce self-sampling and become a global model for innovation in public health.**



**Gyda'n gilydd, gallwn gael  
gwaredd ar ganser ceg y  
groth fel problem iechyd y  
cyhoedd**

**Together, we can  
eradicate cervical cancer  
as a public health problem**



**Diolch am wrando  
Unrhyw gwestiynau**

**Thank you for listening  
Any questions**

2  
2



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# Wlser 24: Prosiect i wella diagnosis heintiau sy'n achosi clefydau briwiol.

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**Ulcer 24: A project to improve the diagnosis of infections that cause ulcerative disease.**

Timothy Jones

## Nodau

- Gwella diagnosis heintiau clefydau briwiol trwy ddarparu sgrin foleciwlaidd gynhwysfawr ar samplau swab.
- Hwyluso ehangu profion panel moleciwlaidd brech M ac wlsarau i labordai y tu allan i Ganolfan Firoleg Arbenigol Cymru (WSVC).
- Darparu data ar gyffredinrwydd a digwyddedd brech M a heintiau aciwt a gafwyd yn rhywiol sy'n achosi clefydau briwiol yng Nghymru.

## Aims

- Improve diagnosis of ulcerative disease infections by provision of a comprehensive molecular screen on swab samples.
- Facilitate the expansion of mpox and wider ulcer panel molecular testing to laboratories outside the Wales Specialist Virology Centre WSVC.
- Provide data on the prevalence and incidence of mpox and acute sexually acquired infections that cause ulcerative disease in Wales.

## Cyn samplau a anfonwyd i'w profi i:

- WSVC ar gyfer herpes
- UKHSA (Colindale) ar gyfer sifflis a LGV
- UKHSA (Porton) ar gyfer brech M

### Ar ôl

- Samplau wedi'u hanfon at Ficrobioleg Rhyl, Firoleg Abertawe Iechyd Cyhoeddus Cymru a WSVC, samplau a brofwyd ar gyfer:
- herpes
- sifflis, VZV a LGV
- feirysau brech M ac *orthopox*

## Before samples sent for testing to:

- WSVC for herpes
- UKHSA(Colindale) syphilis & LGV
- UKHSA(Porton) mpox

### After

- Samples sent to Rhyl Microbiology, PHW Swansea Virology and WSVC tested for:
- herpes
- syphilis, VZV & LGV
- mpox & orthopox viruses

## Canlyniadau/Manteision

- Ystod darged ehangach a sensitifrwydd prawf gwell.
- Amseroedd gweithredu llai oherwydd profion lleol.
- Arbedion cost ac amser i Iechyd Cyhoeddus Cymru.
- Gwella gwybodaeth, arbenigedd a gwydnwch y rhwydwaith.
- Cyflwyno methodoleg newydd i wasanaeth rheolaidd.

## Results/Benefits

- Wider target range and improved test sensitivity.
- Reduced turnaround times due to local testing.
- Cost and time savings to PHW.
- Improvement of the network's knowledge, expertise and resilience.
- Introduction of a novel methodology into routine service.



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# Escherichia coli sy'n Cynhyrchu Tocsin Shiga (STEC)

22/10/2025

# Shiga Toxin-Producing Escherichia coli (STEC)

22/10/2025

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**STEC**  
**EHEC**  
**VTEC**  
**EPEC**  
**EIEC**  
**O HECK**

3  
2

## STEC – Pam trafferthu?

Mae STEC yn halogydd hysbys mewn cynhyrchion bwyd

Mae'n achosi dros 250,000 o achosion o salwch bob blwyddyn

Ysgarthol - Geneuol

Y math mwyaf cyffredin yw O157 ond.....

Mae'r symptomau'n amrywio o ddim symptomau/dolur rhydd ysgafn i salwch difrifol o'r enw Syndrom Wremig Hemolytig (HUS) sy'n peryglu bywyd mewn 10% o heintiau O157!

HUS – Gall arwain at yr angen am gymorth dwys costus

Dos heintus isel (<100 o organebau) – yn hawdd ei drosglwyddo

## STEC – Why bother?

STEC is a known contaminant of food products

Causes over 250,000 illnesses annually

Faecal - Oral

Most common type is O157 but.....

Symptoms range from none/mild diarrhoea to HUS serious life-threatening illness in 10% of O157 infections!

HUS – Can Require Costly Intensive Support

Low infectious dose (<100 organisms) – easily transmissible





# O HECK!

3  
5



8 Diwrnod yn Ddiweddarach.....  
Canlyniadau PCR a meithriniadau ar  
gael

8 Days Later..... PCR and culture results  
available

3  
6

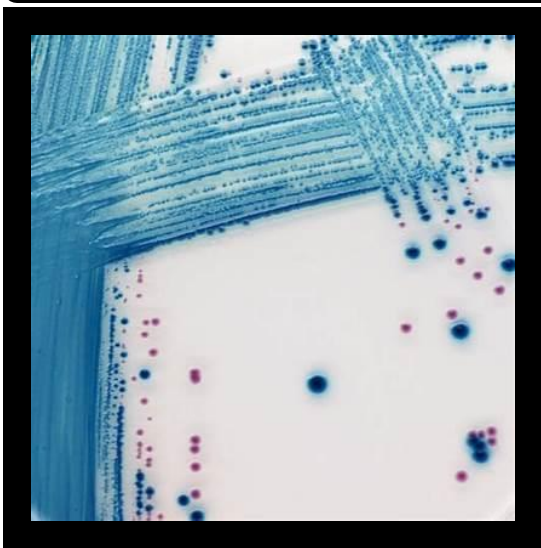
£176.63



## Bioconnections AMPLEX & Chrom Agar Culture

### Diwrnod 1 / Day 1:

- |                    |   |       |
|--------------------|---|-------|
| Verotoxin 1        | - | stx 1 |
| Verotoxin 2        | - | stx 2 |
| Intimin            | - | eae   |
| Haemolysin         | 3 |       |
| EIEC/Shigella      | 7 |       |
| EAggEC             |   |       |
| Verotoxin 2f stx2f |   |       |



### Diwrnod 2 / Day 2:

E. coli 026, 045, 0103, 0111, 0121 and 0145

# Manteision ar unwaith

TAT wedi'i ostwng

Penderfyniadau ar sail gwybodaeth wedi'u targedu

Epidemioleg gyflym

Rheoli Heintiau yn Gyflym

Monitro achosion yn gyflym

**Ac yn well fyth.....**

Gellir defnyddio'r offeryn ar gyfer profion cyflym eraill heb unrhyw fuddsoddiad cyfalaf pellach

**Yr eisin ar y gacen...**

Costau Profi Is

# Instant benefits

Decreased TAT

Targeted informed decisions

Rapid epidemiology

Rapid Infection control

Rapid outbreak monitoring

**Even better.....**

<sup>8</sup>Instrument can be utilised for other rapid tests with no further capital investment

**The icing on the cake...**

Reduced Test costs

Repatriating samples and implementing  
Amplex chromagar culture and non 0157  
latex agglutination will save  
healthboards in Wales in year 1 £7,166.  
Year 2 onwards £55,880.

Bydd profi samplau mewn labordai yng Nghymru, defnyddio cyfrwng meithrin Amplex CHROMagar a phrofion cyflyniad latecs am straeniau nad ydynt yn 0157 yn arbed £7,166 i fyrddau iechyd yng Nghymru yn ystod y flwyddyn gyntaf. O flwyddyn 2 ymlaen bydd yn arbed £55,880.



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