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Health

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# Effect of the Smoking Ban on air quality in pubs

# Background



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- Research funded by Welsh Assembly Government
- Comparative study with N. Ireland
- Monitoring in pubs carried out approx 1 month before the ban (in Feb 2007) and again one year later
- Air particulate monitoring and nicotine sampling

# Sidepak Monitor



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# Air Particulate Monitoring



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- Followed a Protocol developed and used by the Republic of Ireland
- Sidepak monitor used, sensitivity set at  $2.5\mu\text{m}$ ( $\text{PM}_{2.5}$ ), 36 pubs, covert monitoring
- Data downloaded onto PC and results available immediately
- Cannot say that all measured particles are nicotine
- A small number of locations monitored for comparative purposes, eg, office, underground car park, no-smoking cafe, roadside

# Results



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## **36 Public Houses** sampled (February 2007 and 2008)

- Highest level recorded before the ban =  $3449\mu\text{g}/\text{m}^3$
- Average before the ban =  $827\mu\text{g}/\text{m}^3$
- Highest level recorded after the ban =  $484\mu\text{g}/\text{m}^3$
- Average after the ban =  $106\mu\text{g}/\text{m}^3$
- Average reduction = 77%
- Biggest reduction = 99% ( $2594$  to  $31\mu\text{g}/\text{m}^3$ )
- 17 pubs showed reductions of 90% or more



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# Results (continued)

- 5 pubs showed increased levels - possibly due to open fires/more people in them/strong cooking smells/smoke drift
- Similar reductions to those seen in Scotland (87%) and Republic of Ireland (80%)

# Additional Sidepak Results – 5 Betting offices and 5 cafes



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**Betting offices** - Levels ( $\mu\text{g}/\text{m}^3$ ) 1 month before  
the ban and then 1 month after

before 115, after 10

before 77, after 11

before 273, after 3

before 219, after 7

before 10, after 111 (very dusty roadworks  
going on outside)

# Results - Cafes



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- 1 month before the ban and then 1 month after:  
before 308, after 8  
before 413, after 14  
before 312, after 9  
before 626, after 260 (open griddle)  
before 250, after 500 (open frying of food)

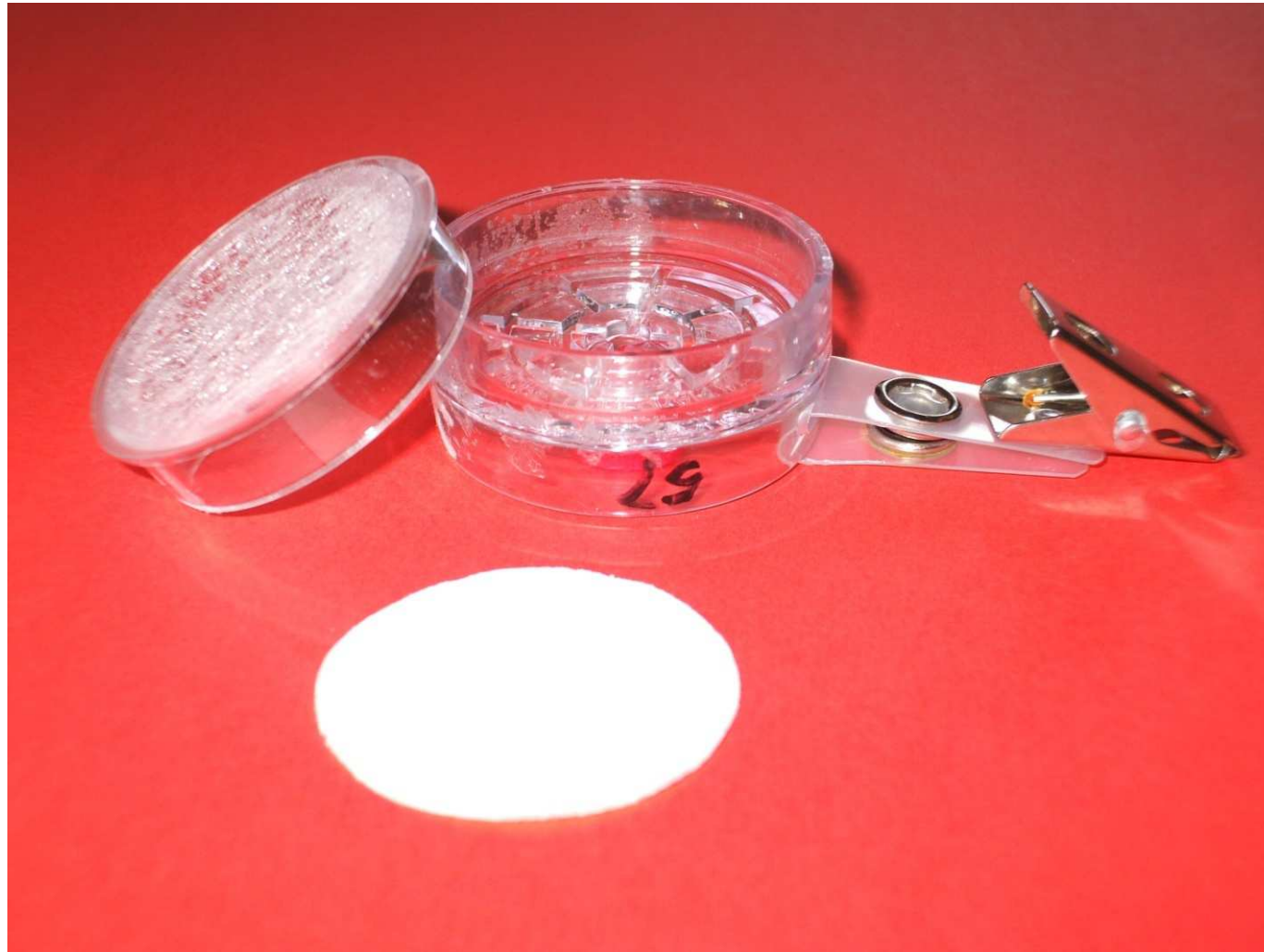


# Nicotine filter unit (open)



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# Nicotine filter unit (closed)



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# Nicotine Sampling



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- 25 pubs sampled
- Each filter left in pub for at least 8 hours
- Sent to USA for analysis

# Nicotine Sampling \_ results



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2007 levels varied from highest  
of **0.39ug** to lowest of **0.01ug**

2008 (after ban) levels varied  
from highest of **0.09ug** to lowest  
of **0.0ug**

22 out of the 25 samples in 2008  
were at 0.01ug or below



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# General observations

- None of the pubs had closed, but some had changed in terms of types and numbers of customers
- The busiest pubs are those serving food
- Anecdotal support for the ban from staff
- Issue of smoke drift from outside to inside of premises

# Conclusions



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- The level of airborne particles in the sampled premises had dropped significantly
- The level of nicotine in the sampled premises has dropped significantly
- Similar to results seen in Scotland and Republic of Ireland