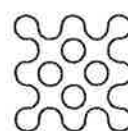


ESGLI

The Barbican Centre
City of London
16-17 September 2015

THIRD ANNUAL SCIENTIFIC CONFERENCE



ESGLI

ESCMID Study Group
for Legionella Infections

1/P3: Legionellosis, Finland, 2014

Kusnetsov, Jaana; Jaakola, Sari; Lyytikäinen, Outi; Helve, Otto; Mentula, Silja; Räsänen, Pia.

National Institute for Health and Welfare, Epidemiologic Surveillance and Response Unit, Helsinki, Bacteriology Unit, Helsinki and Water and Health Unit, Kuopio, Finland

Home water systems as source of legionellosis were systematically studied in Finland.

Laboratories notify all *Legionella* findings to National Infectious Disease Registry and remind physicians about the need for notification of legionellosis cases. Notifications were evaluated by excluding those without pneumonia, confirming diagnostics and exploring exposure history. Water samples were analysed using culture method (ISO 11731) and sequence based typing.

In 2014, 22 notifications were identified, including 10 with pneumonia: 9 were confirmed by urine antigen test, 2 by culture (*L.p.* serogroups 1 and 6), 1 by serology and 1 by PCR. Seven cases had no travel history abroad. Homes of 7 cases with positive urine antigen test were studied, also one hospital and one working place. One-family house with geothermal heating of case with *L.p.* sg 1 yielded indistinguishable strain (ST1) in shower (530000 cfu/l) and whirlpool bath (45 cfu/l). Two other cases lived at homes with 1500 cfu/l (terrace house) and 45000 cfu/l of *L.p.* sg 1 in shower water (block of flats). At these three homes, the coolest temperatures of hot water were 50-52°C. Water temperature was increased, taps were flushed and new shower apparatuses installed. Four other homes and working place contained no legionellae. Only non-serogroup 1 *L.pneumophila* strains were detected in hospital samples, and these strains did not match with the clinical isolate (ST1).

At least in 30% of legionellosis cases, sources of infection were home water systems with too cool hot water. The regulations for hot water temperatures should be followed to prevent legionellosis.