Retrospective analysis of stool culture results during the time period 1997-2013. Effect of the FOPH tariff on the recovery of *Aeromonas spp*. Qui cherche trouve!

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Introduction
During the last 17 years our annual number of stool cultures has remained fairly stable. As everywhere in Switzerland we had noticed a shift in the isolated species. We were particularly interested in the numbers of *Aeromonas spp* because, due to different changes in the FOPH tariff, their cultivation was not always systematically included in our basic stool culture offer.

Materials and methods
Our culture results representing roughly 44’000 samples were reviewed. During the period 1997-2005 our panel of culture media included systematically a CIN agar plate containing 4 mg/l of cefsulodin (1), allowing the recovery of *Yersinia* spp. and *Aeromonas* spp. After the introduction of the new tariff in 2006 we decided to search for these germs only upon request of our customers. Finally, from mid-2011 ongoing the CIN medium was reintroduced in our basic routine after noticing that only few clinicians asked for this type of culture. The introduction of the Maldi-ToF identification method facilitated this decision.

Results
The annual positivity rates of the stool cultures ranged from 6 to 10% . During the period 1997-2001 *Salmonella* spp. accounted for about 30% of all positive isolates, decreasing then to reach a minimum of 8% in 2011. Conversely, *Campylobacter* spp. rose from 52.6 percent in 1997-2001 to a peak of 85.8% in 2010. The other pathogens remained stable along the entire period with small figures ranging from 0.4 to 4 percent each (Fig1). Between 1997 and 2001 *Aeromonas spp*. accounted for 8.7 % of the isolates, then an increase of cases occurred with a peak of 18.2 % in 2005. With the change in our culture policy we observed a virtual disappearance of these isolates. Since the reintroduction of their routine search, *Aeromonas* spp. represent again 14 % of our pathogens (Fig 2).

Discussion and Conclusions
The important rise of the percentage of *Campylobacter* spp. among all positive cultures during the time period 2007-2011 is mostly due to the decrease of *Salmonella* spp. infections and the non-recovery of *Aeromonas* spp. In our setting *Aeromonas* infections have become almost equally prevalent to those by *Salmonella*. A simple change in the reimbursement policy can dramatically affect the recovery of recognised pathogens as we have noticed that our customers do not know when to ask specifically for *Yersina/Aeromonas* cultures. Thus we recommend adding systematically a selective medium for these pathogens which do not grow on chromogenic stool media but are easily identified by Maldi ToF.


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Fig.1: percentage of positive isolates

![Fig.1: percentage of positive isolates](image1)

Fig.2: annual variation of positivity percentages

![Fig.2: annual variation of positivity percentages](image2)