

Video observed treatment of tuberculosis: Study of implementation



García Ramos R, Tuñez Bastida V, Lojo Vicente D.
Pharmacy Service, Public Health Service, Computing Service
Xerencia Xestión Integrada de Santiago de Compostela. (A Coruña). SPAIN



BACKGROUND

Adherence to treatment of tuberculosis (TB) is essential for disease control. Directly Observed Treatment (DOT) is considered as the universal "standard of care" and has proven to be an effective method to ensure therapeutic compliance. Resource constraints and technology improvements are generating increased efforts in local TB control programs to develop efficient strategies to ensure patient adherence to appropriate treatments. One example is video observed therapy (VOT) in which the observation is performed through a live video connection.

PURPOSE

To develop a TB VOT implementation plan in a health zone.



MATERIAL AND METHODS

We analyze the current situation of DOT in our health zone.

We review other experiences with VOT.

We design the new program by estimating the relevant requirements: patient enrolment criteria, staffing, technology and costs incurred (time of observation, medication, equipment and communication systems) from the perspective of the national health system.

2009 - South Australia, Wade et al.
Advantages:
• Increased direct observation
• Increased continuity of care
• Increased continuity of therapy
• Increased client privacy
• Selection control

Home Videophones Improve Direct Observation in Tuberculosis Treatment: A Mixed Methods Evaluation
Home Videophones Improve Direct Observation in Tuberculosis Treatment: A Mixed Methods Evaluation
Wade A, Wade S, Scahill S, et al. BMC Public Health. 2010;10:1000.

Pilot conclusion of the
• VDOT is a useful and cost-effective method of delivering DOT to generally selected clients.
• VDOT is not for everybody!

RESULTS

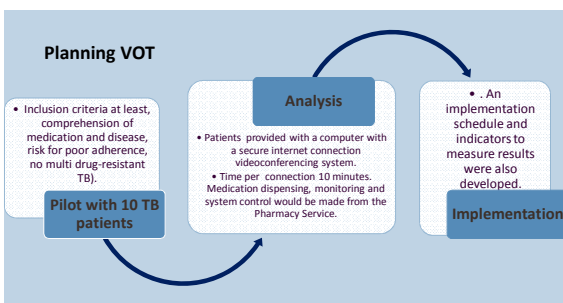
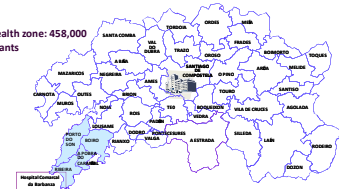
In the last two years 35 DOT concerning 206 TB cases (17%) were performed. Distribution and determinants factors for DOT are represented in table 1.

Table 1

Year	TB cases	DOT	% DOT	% DOT with satisfactory result	% social / psychiatric problem	% health problem DOT	% other criteria DOT
2011	93	17	18,3%	94,1%	47,1%	11,8%	41,1%
2012	119	18	15,1%	82,4%*	50,0%	11,1%	38,9%

* 1 patient continues now treatment

Santiago de Compostela health zone: 458,000 inhabitants



PROGRAM COST	1st year	2 year	3 year
initial investment	Pilot with 10 TB patients	extension to 80% * TB patient	Approximately 80% of TB patients area
equipment number	10	40	
Laptop acquisition	3.000 €	9.000 €	
Communication cards	100 €	300 €	
Support:			
number patients	10	80	80
Additional cost management system:	270 €	2.160 €	2.160 €
Cost watched human resources. (10 minutes video, 0.358 euro / min))	1.862 €	14.893 €	14.893 €
	5.232 €	26.353€	17.053 €
Cost of medication:			
Tt. standart 2RHZ +4 RH (PVP)	196,6 €	196,6 €	196,6 €
Tt. standart 2RHZ +4 intermitten RH (PVL-desc. + VAT)	49,9 €	49,9 €	49,9 €
dif. /pacient	-146,7 €	-146,7 €	-146,7 €
program total difference	(1.467)	(11.736)	(11.736)
Net incremental cost	3.765	14.617	5.317

** patients: 100 treated 6 months -> 40 simultaneous

CONCLUSIONS

VOT design requires little initial investment and would enable more effective and efficient TB control.