BAPCOC SUPPORT TEAM

YEARLY PROGRESS REPORT HOST

2022

SPF Santé Publique - FOD Volksgezondheid
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Content

LIST OF TABLES and FIGURES

ABREVIATIONS

AB	Antibiotic
ABNOL	Antibioticagids voor ziekenhuis Netwerk Noord-Oost Limburg (antibiotic guide for hospital networks in north-east Limburg)
AMS	Antimicrobial Stewardship
AVIQ	Agence Wallonne pour une Vie de Qualité (walloon agency for a healthy life)
AZG	Agentschap Zorg en Gezondheid
BAPCOC	Belgian antibiotic policy coordination committee
BeH-SAC	Belgian Hospitals - Surveillance of Antimicrobial Consumption
CAUTI	Catheter-associated Urinary Tract Infections
CLABSI	Central Line-associated Bloodstream Infection
CMA	Check of medication appropriateness
COCOM	Common Community Commission
COVID	Corona Virus Disease
DDA	Daily dose administrated
DDD	Defined daily dose
ECDC	European Center for Disease Prevention and Control
EUCAST	European Committee on Antimicrobial Susceptibility Testing
FPS	Federal Public Service
FTE	Full-Time Equivalent
GDPR	General Data Protection Regulation
HOST	Hospital Outbreaks Support Teams
IPC	Infection Prevention & Control
IRIS	Implementation of the Infection Risk Scan
IV	Intravenous
KWS	Klinisch Werkstation (clinical work station)
MDRO	Multi-Drug Resistant Organisms
OPAT	Outpatient Parenteral Antibiotic Therapy
OST	Outbreak Support Team
OT	Occupational Therapy
PEP	PostExposure Prophylaxis
PO	Per Os
PPS	Point Prevalence Study
RIO	Règlement d'ordre intérieur
RIZIV	RijksInstituut voor Ziekte-en Invaliditeitsverzekering (National Institute for Health and Disability Insurance)
SSI	Surgical Site Infection
THP	Total hip prosthesis
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TDM	Therapeutic Drug Monitoring
TKP	Total Knee Prosthesis
UTI	Urinary Tract Infection
VAP	Ventilator-Associated Pneumonia

BACKGROUND

The FPS Public Health has launched a pilot project, Hospital Outbreak Support Teams (HOST), to strengthen Infection Prevention & Control (IPC) and Antimicrobial Stewardship (AMS) teams in and between hospitals, residential facilities and front-line actors with regard to IPC and AMS. The HOST project work on two complementary axes: a local-regional approach based on mutualization of resources and collaboration between hospitals and a transversal approach in which the expertise of hospitals is made available to both residential and other care facilities or providers and vice versa.

Twenty-four (24) HOST pilot teams are launched (21 in 2021 and 3 in 2022) including 4 in the Brussels region, 12 in Flanders and 8 in Wallonia (on the basis of a submitted and approved project proposal). Regional hospital networks designated a coordinating hospital that signed an agreement with the FPS Public Health. Table 1 gives an overview of the 24 HOST pilot teams with their starting date, the coordinating hospital and region.

Table 1 Overview of the HOST projects

Network name	Starting year (Second half 2021 or beginning 2022)	Coordinating Hospital	Region coordinating Hospital
BRIANT	2021	AZ Jan-Portaels	Flanders
CUROZ	2021	UZ Brussel	Brussels
E17	2021	AZ MARIA MIDDELARES	Flanders
ELIPSE	2022	Hôpital de la Citadelle	Wallonia
GENT	2021	UZ Gent	Flanders
HELIX	2021	Universitair Ziekenhuis Antwerpen	Flanders
HELORA	2021	CHU Tivoli	Wallonia
HUB CHIREC	2021	H.U.B. Erasme	Brussels
HUMANI	2021	CHU de Charleroi	Wallonia
H-UNI	2021	Cliniques de l'Europe	Brussels
IRIS	2021	CHU St Pierre	Brussels
KEMPEN	2021	AZ Turnhout	Flanders
KOM	2021	AZ Zeno	Flanders
MIRA	2021	VITAZ	Flanders
MOVE	2021	CHC Mont-Légia	Wallonia
NOORD OOST LIMBURG	2021	Ziekenhuis Oost-Limburg Genk	Flanders
PHARE	2021	EpiCURA	Wallonia
PLEXUS	2021	Universitaire ziekenhuizen Leuven	Flanders
RHCM	2022	Grand Hôpital de Charleroi (GHDC)	Wallonia
RHN NAMUR	2021	CHU UCL Namur – Site Godinne	Wallonia
TRIAZ	2021	Jan Yperman Ziekenhuis	Flanders
VIVALIA	2022	Clinique Sud Luxembourg - CSL	Wallonia
ZNA GZA	2021	ZNA	Flanders
ZUID WEST LIMBURG	2021	Jessa Ziekenhuis	Flanders

HOST PROGRAM ASPECTS

1. HOST team

1.1. Composition of the HOST teams started in 2021 (n=21)

The hospital networks have established HOST teams composed of people with expertise in infectious diseases, medical microbiology, clinical pharmacy and IPC. By the end of 2022, the HOST pilot employed a total of 81,6 FTE.

The standard HOST team is:

- **Responsible HOST (0.5 FTE)**: a physician specialist trained in hospital hygiene, or who meets the accreditation requirements for medical microbiology or infectious diseases.
- **HOST coordinator (1 FTE)**: staff member with a minimum of a master's degree related to health care or public health or equivalent work experience.
- **Nursing staff (1 FTE)**: relevant work experience and acquired knowledge of hospital hygiene, infectious diseases or public health, of which at least a master's degree or equivalent.
- **Clinical pharmacist (0.5 FTE):** with training in clinical pharmacy or AMS.

HOST teams starting in 2021 could hire 1 more FTE in 2022 if their basic team was complete by the end of 2021. *Table 2* gives an overview of the number of FTEs in 2022 and *Table 3* indicates the total FTEs at the end of 2022 per profile.

Table 2. Overview FTE in 2022 per HOST

Network	FTE 2022 worked in 2022	FTE 2022 Present at the end of 2022
BRIANT	2,67	3,00
CUROZ	2,58	3,00
E17	3,77	3,55
ELIPSE	NA	3,00
GENT	4,67	5,00
HELIX	3,33	3,20
HELORA	2,71	3,70
HUB CHIREC	0,82	1,50
HUMANI	2,86	3,00
H-UNI	3,20	3,80
IRIS	2,80	2,90
KEMPEN	4,04	4,00
KOM	4,23	4,00
MIRA	3,82	3,95
MOVE	4,07	3,80
NOORD OOST LIMBURG	3,97	4,25
PHARE	0,90	0,75
PLEXUS	4,22	4,26
RHCM	NA	3,20
RHN NAMUR	3,70	3,00
TRIAZ	4,70	4,20
VIVALIA	NA	3,00
ZNA GZA	4,13	3,54
ZUID WEST LIMBURG	4,00	4,00

Table 3 FTE per profile at the end of 2022

Profile	FTE 2022 Present at the end of 2022
Responsible MD	11,2
Coordinator	22,14
Nurse IPC	19,8
Nurse	9,1
Pharmacist	12,56
MD IPC	0,83
MD	0,25
MD GER INF	0,27
Data manager	3,05
Administration	2,2
Other	0,2
Total	**81,6**

1.2. Financial aspects of the HOST Teams

Figure 1 represents the total cost per FTE as calculated based on the available input from the 24 HOST teams. Please interpret these data with caution for the following reasons: i) the data is recalculated from the reported % FTE to a 100% FTE; ii) This represents total cost (= employer cost), so it is not equal to a salary.

Figure 1 presents the total costs per 1 FTE as reported by the HOST teams.

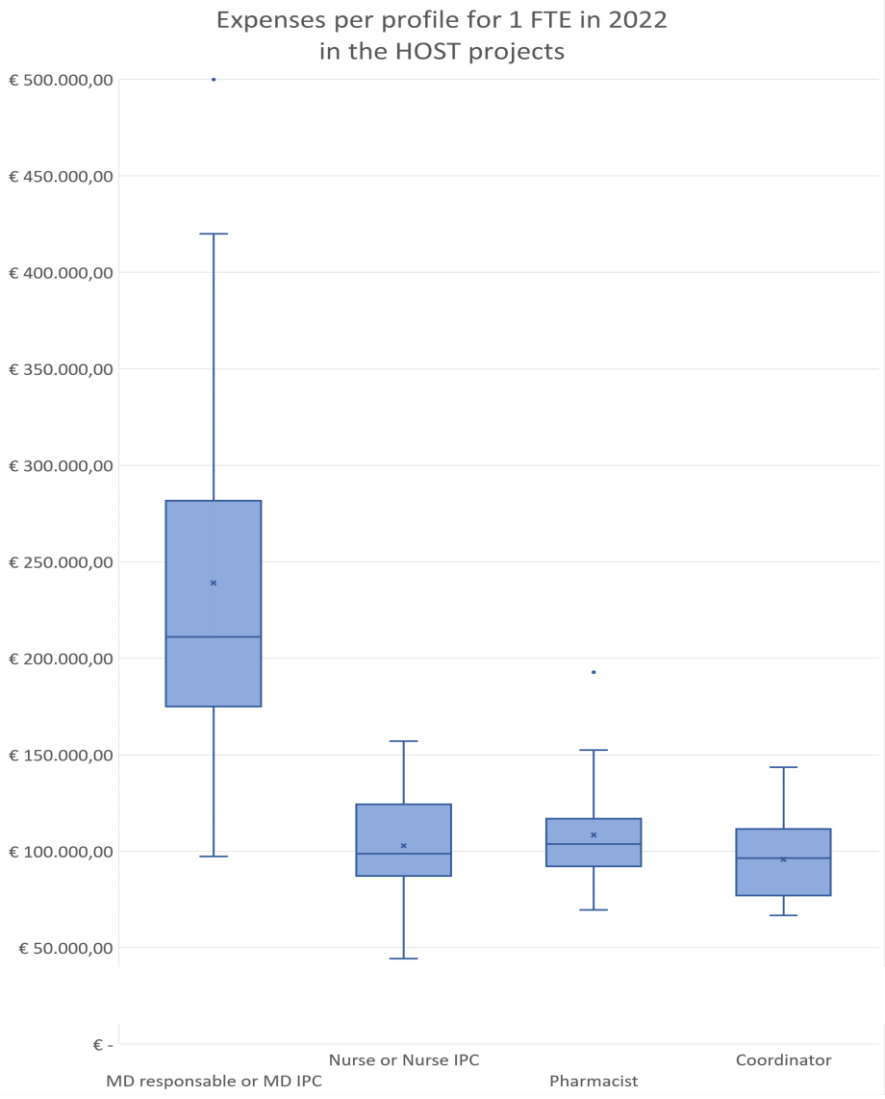

Figure 1 Reported annual cost per FTE per profile

Table 4 Criteria for funding the HOST teams in 2021, 2022 and 2023

	2021	***2022***	***2023***
Provided by HOST	**550.000 €**	**550.000 €**	**620.000 €**
Fixed part	**500.000 (3 FTE)**	**300.000 (3 FTE)**	**420.000 (4 FTE)**
Conditions for fixed part	Fixed basic team : 500.000 euros maximum are destined to staff expenses, on the understanding that the HOST team must be formed at the end of December 2021 (independently and as complement to the existing standard regarding hospital hygiene and antibiotic therapy management) with a minimum of: • 0.5 FTE Pilot project manager, • 1 FTE HOST coordinator, • 1 FTE Nursing staff with • 0,5 FTE Hospital pharmacist The attributed budget will be reduced by 100.000€ per missing FTE.	300.000 euros maximum are destined to staff expenses, on the understanding that the HOST staff is at least composed of: • 0.5 FTE Pilot project manager, • 1 FTE HOST coordinator, • 1 FTE Nursing staff • 0,5 FTE Hospital pharmacist The attributed budget will be reduced by 100.000€ per missing FTE.	400.000 euros maximum are destined to staff expenses, on the understanding that the HOST staff is at least composed of: • 0.5 FTE Pilot project manager, • 1 FTE HOST coordinator, • 1 FTE Nursing staff • 0,5 FTE Hospital pharmacist • 1 FTE depending on the network context and the strategic plan The attributed budget will be reduced by 100.000€ per missing FTE.
Operating budget	50.000		20.000
Variable part	**/**	**250.000 (also includes 1 FTE)**	**200.000 (also includes 1 FTE)**
Sine Qua non conditions		Signed by all hospitals Fill in the report Send the strategic plan	
Operating expenses		30.000 maximum: 10.000 per FTE (rounded up)	
Conditional extra FTE		100.000 for 1 extra FTE : if at least 2,8 FTE in 2021	100.000 for 1 extra FTE : if at least 3,8 FTE in 2022
Complementary themes with signed engagement		120.000 for surveillance work : Verification through the 2022 report	100.000 - Between 40.000 and 50.000 Surveillance continuity 130.000 : - Between 20.000 and 30.000 Network: Chosen multimodal strategy on two subjects of priority - Between 20.000 and 30.000 Transmural: Seminars, tools, trainings, …

Except for the first year, an amount calculated pro rata for the missing FTE in the HOST Team is deducted. The following table presents the total amount financed and deducted for 2022.

Table 5 total budget HOST per year

Financed in 2022	**Reclaimed in 2023**	**Financed in 2023**
12.620.000 €	- 897.500 €	14.070.000 €

IPC on Network level (in the network hospitals)

For the projects starting in 2021, the analysis of the activities of 2022 are based on a narrative analysis of progress reports on the following topics: creation of local IPC guidelines, tools and standard operating procedures; education and training; surveillance, monitoring and feedback; IPC and AMS implementation of multimodal strategies. For the projects starting in 2021, a special focus was placed on surveillance, with an earmarked budget in 2022 for the improvement of comprehensive epidemiological surveillance, analysis and feedback of data on antimicrobial use and health care-associated infections (HAIs) in the participating hospital networks.

Different priority topics have been defined for IPC to provide guidance on the activities to be implemented in the networks:

- hand hygiene;
- cleaning/disinfection environment and equipment;
- transmission based precautions;
- choice of venous vascular access; and
- prevention of HAIs: central line-related bloodstream infections (CLABSI), catheter-associated urinary tract infection (CAUTI), ventilator-associated pneumonia (VAP), and surgical site infection (SSI)

The HOST pilot demonstrated a wide variety of activities conducted by the different teams. It is worth highlighting the heterogeneity observed in the number of activities carried out by each team with some teams placing greater emphasis on IPC while others focused more on AMS. Notably, the influence of emergency situations in the local context was evident in the selection and implementation of specific activities. For example, Monkeypox, Diphtheria, and Scabies demanded particular priority and specific response measures.

1. Creation of local IPC guidelines, tools and standard operating procedures (SOPs)

At the start of the HOST pilot there were no local IPC guidelines, tools and SOPs at the network level with the exception of 1 network that had common COVID-19 SOPs and 1 network with a common MDRO transfer document. Table 6 present the number of local guidelines, tools and SOPs at the network level developed (or harmonized) during 2022 with the HOST teams.

Table 6 Number of local guidelines, tools and SOPs at the network level developed (or harmonized) for IPC during 2022 with the HOST teams

Priority	Topics	Finalized in 2022
Hand hygiene	Hand hygiene procedures	2
	Hand hygiene lightbox procedure	1
	KAP Hand hygiene	1
Cleaning/disinfection environment and equipment	ATP procedures	1
	Audit tool endoscopes	1
	Cleaning & disinfection	1
	Sampling endoscopy	1
Transmission based precautions	MDRO Transfer Document/procedures	2
	Isolation policies and tools	3
	MRSA	2
	Transfer document	1
	Transfer document MDRO	1

Choice of venous vascular access		
Prevention CAUTI, CLABSI, VAP SSI	Audit tool CAUTI	1
	CAUTI	1
	UTI and CAUTI	1
Others	Covid	3
	Acute hepatitis	1
	Bed bugs	2
	Blood sampling	1
	Build and renovate	1
	C. Difficile	2
	Candida Auris	2
	Diphtheria	3
	Heatwave plans	1
	Information sheets vaccination	1
	IPC in OT	1
	IRIS	1
	Lice	1
	Monkeypox	2
	Needlesticks	1
	OPAT	1
	Profile referent IPC	1
	Rabies	1
	RIO Neonatal ward	1
	Scabies	4
	Screening policy refugees	1
	Standard Precautions	2
	Template strategic plan	1
	Template yearplan	1
	Tool PPS	1

2. Training and education

At the start of the HOST pilot there were no trainings on network level with the exception of 2 networks that had common COVID SOPs and 2 networks with a common training for referents IPC. Table 7 presents the number of trainings that were given on network level during 2022 with the HOST teams.

Table 7 Number of trainings on IPC given at network level in 2022

Priority	Topics	Quantity finalized in 2022
Hand hygiene	Hand hygiene	2
Cleaning/disinfection environment and equipment		
Transmission based precautions	E-learning isolation precautions	1
	E-learning MDRO	1
	Isolation policies	1
Choice of venous vascular access		

Prevention CAUTI, CLABSI, VAP SSI	CAUTI	1
	E-learning UTI	1
	Sepsis surveillance	1
	SSI Surveillance	1
Others	Referent IPC	6
	E-learning Scabies	1
	E-learning standard precautions	2
	IPC for non-medicals	1
	IPC in KWS program	1
	IRIS Scan	2
	Symposium IPC and AMS	1
	Vaccination influenza	1

3. Surveillance and feedback

There were no surveillance activities on network level at the start of the pilot. Table 8 presents the surveillance and feedback activities that were launched on network level in 2022.

Table 8 Number of surveillance and feedback regarding IPC given at a network level in 2022

Topics	Started in 2022
CAUTI	3
CLABSI	1
Clostridium	2
Creating common database	1
Dashboard MDRO surveillance	1
ECDC PPS	1
IPC dashboard	1
IRIS Scans	1
IRIS Scans in the geriatric wards	2
MDRO	2
Network report MDRO	2
Nosocomial sepsis	1
Real Time outbreak alerts	1
Sepsis	1
Sharing data MDRO	2
SSI THP	1
SSI THP, TKP, C-sections	1
Survey SSI surveillance	1
Tool for surveillance SSI	1
Urosepsis	1
Work towards common software for surveillance	3

4. Monitoring and feedback

There were no monitoring activities on network level at the start of the pilot. Table 9 presents the monitoring and feedback activities that were launched on network level in 2022.

Table 9 Number of monitoring and feedback activities regarding IPC on network level in 2022

Topics	Started in 2022
Audit OT	1
Care bundles CLABSI	2
Care bundle CAUTI	3
Door movements in OT	1

Hemocultures	1
Hand hygiene	4
IRIS scans	5
Isolations	1
VAP Bundle	1

5. Multimodal strategies

There were no multimodal strategies on network level at the start of the project. Table 10 presents the multimodal strategies that were launched on network level in 2022.

Table 10 Number of multimodal strategies regarding IPC on network level in 2022

Topics	Started in 2022
CAUTI	3
Environmental cleaning	1
Hand hygiene	2
Improve Standard precautions	1
Isolation policy	2
Scabies	2
UTI and CAUTI	1
Vaccination influenza	1
VAP	1

AMS on Network level (in the network hospitals)

The activities of 2022 for the projects starting in 2021, are analyzed based on the narrative progress reports on the following topics: creation of local AMS guidelines, tools and SOPs; education and training; surveillance, monitoring and feedback; AMS implementation using multimodal strategies. For the projects starting in 2021, a special focus was placed on surveillance, with an earmarked budget in 2022 for the improvement of comprehensive epidemiological surveillance, analysis and feedback of data on antimicrobial use and health care associated infections in the participating hospital networks.

Different priority topics have been defined for AMS to provide guidance on the activities to be implemented in the networks:

- appropriate prescription: indication, drug, dose, duration and route;
- surgical prophylaxis;
- prescriptions for intensive care units, geriatrics, and oncology units;
- syndromes (diagnosis, microbiology, epidemiology, and principles of appropriate treatment): sepsis, meningitis, low respiratory tracts infections, and urinary tract infections;
- pathogens: *S. aureus*, Enterobacterales, *Candida aureus*, *C. difficile*, Vancomycin-Resistant *enterococci*
- patient engagement; and
- outpatient parenteral antimicrobial theray (OPAT).

1. Creation of local AMS guidelines, tools and SOPs

At the start of the HOST project there were no local AMS guidelines, tools and SOPs on network level with the exception of 1 network that had a common Antibiogram and 1 network with a common CMA.

Table 11 present the number of local guidelines, tools and SOPs on network level developed (or harmonized) during 2022 with the HOST teams.

Table 11 Number of local AMS guidelines, tools and procedures on network level in 2021 and 2022

Priority	Topics	Finalized in 2022
Appropriate prescription: Indication and Drug – Dose - Duration – Route	Antibiotic guidelines	5
	Dosing AB children	1
	Extended CMA with new EUCAST rules	1
	New EUCAST rules guidance	5
	Posology table AB	1
	Switch IV-PO	2
	TDM	1
	Therapeutic formulary	3
	Use of Levmentin	1
	Use of Zerbaxa	1
Surgical prophylaxis	Surgical prophylaxis	2
Syndromes	UTI	1
Priority pathogens		
Patient engagement	Fiches d'information patients prise AB	1
OPAT	OPAT	6
Others	AB consumption follow up	2
	C. Difficile	2
	Diphtheria	2
	Drinking water contamination Hodeige	1
	Hemocultures sampling	1
	IRIS Scan	2
	List AWaRE AB	1
	Malaria	1
	Monkeypox	1
	Needlesticks	1
	PEP	1
	Rabies	1
	Template new AB	1
	Template new vaccines	1
	Tool for AB consumption monitoring	1

2. Training and education

At the start of the HOST pilot there were no trainings on network level with the exception of 1 network that had common medical seminars and 1 network with a common basic CMA. Table 12 present the number trainings that were given on network level during 2022 with the HOST teams.

Table 12 Number of trainings on AMS on network level in 2021 and 2022

Priority	Topics	Finalized in 2022
Appropriate prescription: Indication and Drug – Dose - Duration – Route	ABNOL Guide	1
	Extended CMA with new EUCAST rules	1
	Meropenem	1
	New EUCAST rules guidance	8

	Seminar duration AB	1
	Switch IP-PO	1
Surgical prophylaxis		
Intensive care units prescriptions, geriatrics, oncology		
Syndromes		
Priority pathogens		
Patient engagement		
OPAT	OPAT	2
Others	Feedback data AB consumption	1
	HealthStat	1
	IRIS Scan	1
	PEP	1
	Referent IPC	2
	Symposium IPC and AMS	1
	Workshop AB consumption data	1

3. Surveillance and feedback

There were no surveillance activities on network level at the start of the project. Table 14 presents the surveillance and feedback activities that were launched on network level in 2022.

Table 13 Number of surveillance and feedback on AMS given on network level in 2022

Topics	Started in 2022
AB consumption	1
Comparison control methods AB use	1
Comparison therapeutic formulary	1
Creating common database	1
Dashboard AMS	1
DDD and DDA per 1000 pt days	1
DDD Meropenem	1
During outbreaks	1
ECDC PPS	1
Global PPS	4
IRIS Scan	2
MDRO resistance data	1
Network report MDRO	1
Query's AB consumption from RIZIV Data in Beh-SAC	1
Switch IV-PO	1
UTI	1
Work towards common dashboard	1
Work towards common database	1
Work towards common software for surveillance	3
Work towards configuration software for surveillance	1

4. Monitoring and feedback

AT the start of the HOST project, 1 netwok monitored CMA, and 1 network performed stock monitoring of rare drugs. Table 15 presents the monitoring and feedback activities that were launched on network level in 2022.

Table 14 Number of monitoring of AMS and feedback given on network level in 2021 and 2022

Topics	Started in 2022
Basic CMA	
Stock monitoring rare drugs	
AB consumption	2
ABNOL Guide use via app	1
C. Difficile treatment	1
Dashboard AMS	1
DDD follow up	1
Extended CMA with new EUCAST rules	1
IRIS Scan	1
IRIS scan in geriatric wards	2
Meropenem use	2
New EUCAST rules	1
PPS	1
Surgical prophylaxis	2
Tool for AB consumption monitoring	1
Uniform design for monitoring and feedback AB consumption	1

5. Multimodal strategies

There were no multimodal strategies on network level at the start of the project. Table 16 presents the multimodal strategies that were launched on network level in 2022.

Table 15 The number of multimodal strategies regarding AMS on network level in 2022

Topics	Started in 2022
ABNOL Guide implementation	1
Administration AB	1
Meropenem use	1
New EUCAST rules	4
OPAT	2
PEP	1
Surgical prophylaxis	1
UTI	1

Transmural activities AMS and IPC

In 2022, BAPCOC has oriented the HOST teams to prioritize hospital activities over the transmural activities. However, HOST teams evidently played a bridging role between regional authorities, BAPCOC and the first line health care (facilities.

Analyses of activity reports reveals that most of the transmural activities are oriented towards elderly homes (WZC), with some exceptions on activities addressed to general practitioners.

In terms of the activities, most common topics for tools, training and education are: prevention, diagnosis and treatment of UTI, MDRO in elderly homes, EUCAST guidelines, Scabies management, vaccination, standard precautions and hand hygiene. A few HOST teams organized training for IPC referents. There were almost no monitoring, surveillance and feedback activities, with the exception of hand hygiene and an IRIS scan.

Most of the above activities were initiated by the HOST team, demand of the collectivities, or by request of the regional authorities.

Many of the HOST projects did some kind of needs assessment to define the gaps and to probe the expectations. The findings included the following main topics:

- staff shortage to work on IPC and AMS
- need for guidance & tools for IPC and AMS
- clear policy on AMS and AMS is missing
- lots of interest to work on improvement

Functional ties between hospitals in the network and elderly home is used as the most common criteria to identify the first line facilities to collaborate with. Overlap and gaps in coverage of first line health care facilities with the HOST teams was noticed. Redundancy and overlap of actors was equally challenging.

All the HOST projects are reachable by phone and via the website.

SWOT ANALYSIS

1. Strengths

a. Reported by the HOST Teams

General aspects

- Financial means available
- Responding to field needs
- Sufficient degree of freedom and flexibility
- Bottom up approach

Team related aspects

- Multidisciplinary
- Good complementarity in HOST teams (IPC, AMS, Data management, ID, …)
- Academic and scientific expertise in all relevant subjects in the network
- Mixed experience levels

- Motivated teams

Collaboration / communication related aspects

- Facilitated contacts between multidisciplinary teams
- Strengthen inter-institutional collaboration
- Exchange information and 'Inspiring each other': One of the hospitals in the group is in the process of being accredited and another is already accredited by Accreditation Canada International
- Benchmarking in a non-competitive way; Open and non-competitive benchmarking between hospitals is relatively uncommon, yet very constructive & desirable
- AMS and IPC are communicating
- Support from management
- Collaboration in the network among IPC; among pharmacists
- Experience with positive "hospital-community of care", "hospital-hospital" collaboration in IPC, wide range of hospital structures (specialized and general, public and private, academic and non-academic centers); We get the opportunity to implement process improvements in different hospitals, learning from each other.

Transmural activities

- Contact with first line
- Contact with regional authorities
- Exchange and collaboration among different HOST projects

b. Additional comments from BAPCOC and regional authorities

A total of 24 teams allow a swift communication channel between Bapcoc and >100 hospitals.

The existence of HOST allows and stimulate frequent interaction with Federal entities, BAPOC and hospitals. The bridging role is perceived as a major added value of the project.

The HOST project covers AMS and IPC which brings us towards a better integrated collaboration of IPC and AMS actors in the health care setting.

The stepwise approach and a trial error mindset allows the teams to grow and progress in the complex and diverse landscape realities of IPC and AMS in our health care delivery system.

2. Weaknesses

a. Reported by the HOST Teams

General aspects

- No long term vision and commitment/engagement (Short term vision on yearly basis)
- The role of HOST is unclear with too vague objectives and no official mandate
- Lots of other competing priorities in the hospitals
- Needs for the transmural activities are unclear

Network related aspects

- HOST is the first network activity: difficult to find the right modus operandi for coordination, consensus making without spending too much time, working together
- Heterogeneity among the hospitals in a network is significant: culture, infrastructure, ICT, ways of working, IPC and AMS activities
- Geographical distances are too far; size of the network is too big
- Stakeholders are many, they have different levels of involvement, difficult to find consensus
- Unclear role of the HOST teams versus local teams
- Integration in the existing hospital teams: The fixed teams (IPC) are overburdened. HOST is seen as an extra burden because learning to work together and adapting ways of working is an investment. The lack of long term commitment is jeopardizing the investments

Human resources aspect

- Difficulties to recruit the requested profiles
- Lots of new team members: It is necessary to invest in learning to work together, in gaining experience in IPC and AMS, in learning to know the hospital

Structural aspects

- Weak ICT infrastructure: no common tools for data collection and data sharing; no common tools for communication. Different ICT systems mainly for microbiology, epidemiology and patient records in hospitals of same network.

b. Additional comments from BAPCOC and regional authorities

The integration of the HOST teams in the existing IPC and AMS structures comes with challenges, however, these are improving over time with the involvement of key actors in the hospitals, discussions in regional and national platforms and efforts to improve the interoperability of IPC, AMS and AMR databases within the network.

Start up during COVID has led to a start up with hick-ups.

3. Opportunities

a. Reported by the HOST Teams

- Extra investment in IPC and AMS
- Integration in the regional platforms IPC
- Collaborations, exchange of information and experiences among different HOST teams
- Intervisions BAPCOC
- Active OST teams
- Elderly homes asking for support
- Interactions and open dialogues between FPS Health/BAPCOC/AZG/AVIQ/COCOM/Sciensano
- economic advantage in larger purchases

b. Additional comments from BAPCOC and regional authorities

A key concept of the HOST projects is cross-fertilization of experiences and lessons learned among the different HOST projects. In this regard, the FPS Health has organized an intervision day in October 2022 with the active participation of all HOST Teams, the federated authorities (Agentschap Zorg en Gezondheid, Cocom and AVIQ), and Sciensano. On the occasion of this event several ongoing projects from the HOST teams were presented, successes, failures and lessons learned were shared among the teams.

Another important opportunity is the possibility of mutualization of resources. We can take on a larger range of tasks with the same number of people by avoiding overlap and de-duplication of work. Sharing local guidelines and tools instead of developing them per hospital of a network gives space to go one step further and spend time on actual implementation.

The HOST pilot allows the national program to orient activities in certain directions. An example is the Implementation of multimodal strategies in all networks in 2023.

The example of the project in Flanders 'prevention, care and management' of urinary tract infections in elderly homes indicates that there are important opportunities in collaboration between first line health care and hospitals.

4. Threats

a. Reported by the HOST Teams

- Uncertainty about the continuity of the project beyond 2024
- Changes in vision over time from the BAPCOC side
- Worrying financial contexts of the hospitals
- Instable networks
- Resistance to change
- Shortage of qualified professionals on the labor market
- The FTE financing for MD is insufficient (100.000 per FTE per year)
- Absence of a legal framework for HOST Teams and activities
- Unclarity in regional versus federal competences
- Unclear repartition of First line facilities linkages with hospitals of the network
- GDPR: not facilitating the exchange of patient data among hospitals in the network and transmural

b. Additional comments from BAPCOC and regional authorities

People with double, triple or more functions going beyond a 100% in a hospital or network is a threat to the full potentials of the project and should be avoided.

The legal framework for networks in terms of IPC and AMS are still all based on recognition / accreditation numbers of hospitals, not yet on network operations, for example financing of an AMS or an IPC committee is still based on exclusively on hospital level.

There is an important variation in transmural HOST activities which makes it challenging for the regional authorities to keep an overview and help facilitate the work. Occasionally HOST teams ambitions are difficult to integrate in a national or regional plan with a vast array of competing priorities in public health.

The fact that HOST is a pilot project with no guarantee of extension beyond 2024, hampers the integration in long term regulation and other initiatives at regional level.

Figure 2 presents the summary of Strengths, Weaknesses, Opportunities and Threats of the HOST projects.

Strengths	**Weaknesses**
Bridging function: Allows and stimulate frequent interaction with Federated entities, Bapcoc, Hospitals and residential care facilities **Swift communication channel** between Bapcoc and >100 hospitals via 24 Host teams **The teams**: Important mix of available expertise; multidisciplinary, mixed experience levels, academic input Evolution towards **collaboration IPC and AMS** **The stepwise approach** and **learning from each other** allows the teams to grow and progress in the complex landscape and diverse realities of IPC and AMS in our health care delivery system. **Open and non-competitive benchmarking** between hospitals is relatively uncommon, yet very constructive & desirable	Start up during COVID has led to a **start up with hick-ups** **Short term vision** on yearly basis **Unclear role of the HOST teams versus local teams** **Time investment needed before gaining from it** (trying to find modus operandi on network level) **Lack of perception of added value of network-level work i**n the medium to long term by local teams (Lack of integration in existing local teams IPC and AMS) **Different ICT systems** mainly for microbiology, epidemiology and patient records in hospitals of same network With regards to transmural activities: huge variation of activities and no formal coordination
Opportunities	**Threats**
Extra means for IPC and AMS: Money + Human resources **Mutualization of resources**: can take on a larger range of tasks with the same number of people by avoiding overlap and de-duplication of work Sufficient degrees of freedom, flexible **adapted to the local needs** BAPCOC can **steer the hospital teams** in terms of content, monitoring and outcome follow up Federated entities are still drafting AMR policies, HOST could be legally integrated into the plans.	**The lack of legal aspects hospital networks,** no strong clear central message expectation for networks **Heterogeneity** of the different hospitals in a network 1 Person with **double or triple functions** in 1 network/hospital **Labor market** shortage certain profiles: IPC, Clinical pharmacy; The ETP financing for MD is insufficient (100.000 per FTE per year) Unstable guidance from BAPCOC Uncertainty beyond 2024

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