

REVERSE Kick-Off Meeting, 17 September 2021, Geneva, Switzerland

WP 2: Microbiology and Diagnostic Stewardship (MDS)

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WP 2 (microbiology and diagnostic stewardship) - objectives

- 1. To establish state-of-the art microbiology methods to detect CRE, CRPA, and CRAB
 - 2. To improve diagnostic microbiology capacity of participating hospitals
 - 3. To perform point prevalence surveys on CRE in participating hospitals
 - 4. To investigate clonal relatedness of identified CRE
- Task 2.1
 Tasks 2.2, 2.3, 2.4

Project year:		Year 1				Year 2				Year 3				Year 4				Year 5			
WP	Task	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
2	2.1 Microbiol. capacity & diagn. stewardship																				
	2.2 Molecular typing																				
	2.3 CRE prevalence surveys																				
	2.4 Clonal relatedness of CRE.																				

WP 2 (microbiology and diagnostic stewardship) - tasks

Task	Timeframe	Lead partner	Other partners
2.1. Microbiology capacity and diagnostic stewardship	month 1 – 51	UNIFI	UZH, UMCU, SAS-HUVM, NKUA
2.2 Molecular typing for outbreak investigation	(month 7 – 51)	UNIFI	UZH, UMCU, SAS-HUVM, NKUA
2.3 Repeated prevalence surveys of CRE	(month 6 – 51)	UMCU	UNIFI, UZH
2.4 Clonal relatedness of CRE and detection resistance mechanism	(month 21 – 50)	UMCU	UNIFI, UZH

Task 2.1 - Microbiology capacity and diagnostic stewardship

- Checklist for auditing to be applied in the REVERSE hospitals (in collaboration with the national focal points)
- Improve diagnostic microbiology capacity (rate of blood cultures, implementation of fast diagnostic microbiology workflows of positive blood cultures and respiratory tract specimens) where limitations are identified
- Establish an external quality control system for CRE, CRPA, CRAB for laboratories of the participating hospitals

Deliverable No and title	Due date	Status
D2.1 Microbiology capacity auditing checklist	Month 6	In progress

Task 2.2 - Molecular typing for outbreak investigation

- Typing of isolates of MDRO from outbreaks occurred during the clinical trial (WGS analysis)

Deliverable No and title	Due date	Status
D2.4 Resistance genes and plasmids in CRE, CRPSA and CRAB	Month 50	Activity not yet started (planned from month 7)
D2.5 Clonal relatedness of CRE, CRPSA and CRAB	Month 50	Activity not yet started (planned from month 7)

Task 2.3 - Repeated prevalence surveys of CRE

- Repeated prevalence surveys of CRE carriage (before baseline, end of baseline, end of IPC and ASP) in each REVERSE hospital on patients (250 patients per hospital, 4800 patients per survey) from selected wards (intensive care, haematology-oncology, internal medicine and surgery including transplant units)

Deliverable No and title	Due date	Status
D2.2 Prevalence of CRE, in basic measurement	Month 21	Activity not yet started (planned from month 6)
D2.3 Prevalence of CRE in follow up measurements	Month 48	Activity not yet started

Task 2.4 - Clonal relatedness of CRE and detection of resistance mechanism

- Characterization of isolates from the repeated prevalence surveys by WGS for resistance mechanisms and for clonal relatedness.
- Descriptive analysis of the geographic patterns and evolution in time, to determine the efficacy of infection control and AMS intervention

Deliverable No and title	Due date	Status
D2.4 Resistance genes and plasmids in CRE, CRPSA and CRAB	Month 50	Activity not yet started (planned from month 7)
D2.5 Clonal relatedness of CRE, CRPSA and CRAB	Month 50	Activity not yet started (planned from month 7)

REVERSE WP 2 – milestones and interactions with other WPs

Milestone No and title	Due date	Other WPs
MS3 – MS6: hospitals selected in each country	Month 6	WP1, WP3, WP4, WP5, WP6, WP7
MS7, MS9, MS11, MS13: hospitals commencing MDS program in each country	Months 12 - 21	WP1
MS26, MS28, MS29, MS31: hospitals completed the three programs in each country	Months 42 - 51	WP1, WP3, WP4

REVERSE WP 2 – for discussion

- Remodulation of task 2.2 (outbreak analysis)
- Remodulation of task 2.3 (reduction in the number of point-prevalence surveys on CRE)