ANTIMICROBIAL STEWARDSHIP: WHAT IF EVERYTHING IS ON YOUR SCREEN?

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What was done?

Hospital Pharmacists (HPs) designed and developed software tools to support antibiotic stewardship team's work. Particular developments were:

a) A PC application (GrAD_calc), in Microsoft excel, to calculate antimicrobial consumption, instead of ABC_calc tool. GrAD_calc takes advantage of the unique codes for each branded product and transforms aggregated data, provided by the Hospital Information System* (HIS), into antibiotic consumption in DDDs/100 occupied bed-days. Results are presented in charts and figures, in a format that enables ease comparative monitoring over time.

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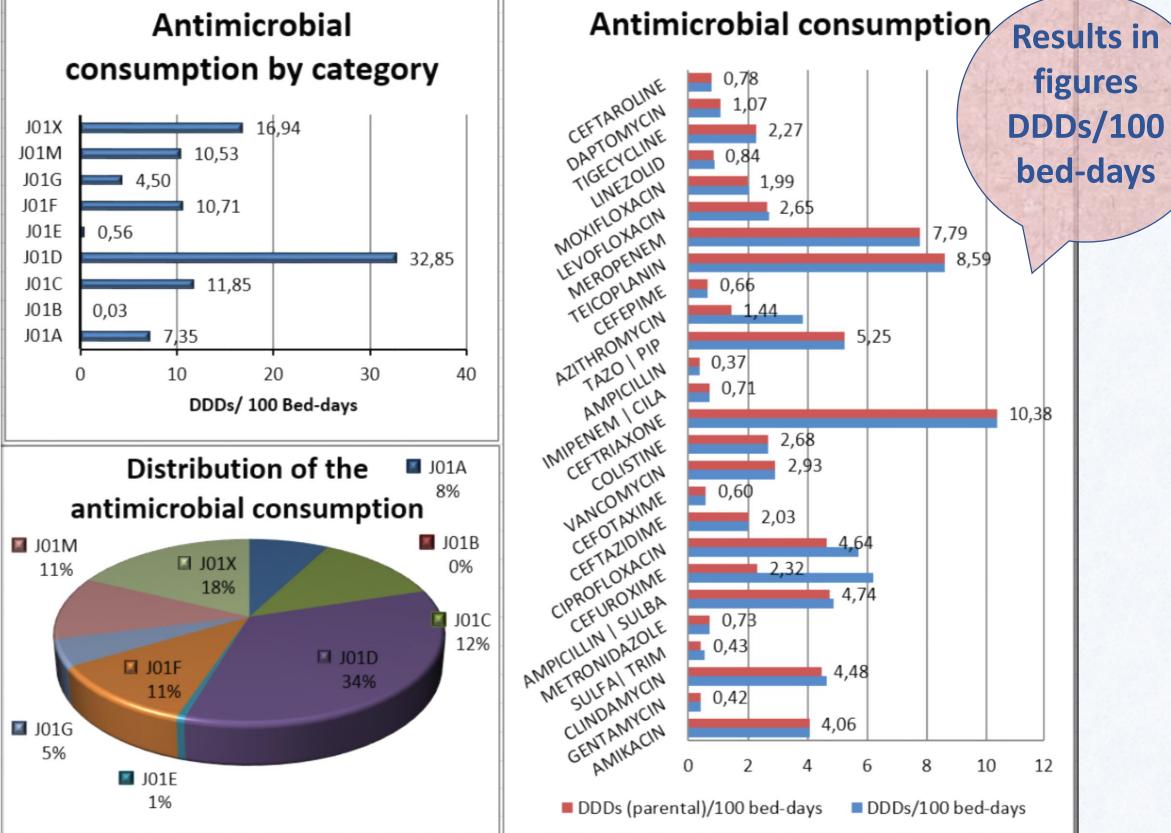
DATA ENTRY No of tablets,			C app	Dication (GrAD_calc)				D	Results in tables DDDs/100 bed-days			DATA ENTRY: No of bed- days		
	Medicine's													
		single							в		D	F	G	Ι
1	or barcode	doses	Descriptio	on	L	DDDs	ATC					DDDs		
2	23160602	12	FUCIDIN F.C	C.TAB 250MG	G/TAB	2,00	J01XC01					(parental)/10		No of bed-
3	23410102	5249	VIBRAMYCI	N DISP.TAB 1	LOOMG/	5249,00	J01AA02	1	Antibiotic	-			ATC	- days
4	23540901	693	DALACIN-C	CAPS 300MG	G/CAP	173,25	J01FF01	2	NITROFURANTOIN PHENOXYMETHYLPENICILLI	N	0,00 0,00		J01XE01 J01CE02	103904
5	28030602	319	BACTRIMEL	TAB (800+16	50)MG/	132,92	J01EE01	4	AMIKACIN		4,06		J01CE02	
6	28030702			INJ.SO.INF (J01EE01	5	ERYTHROMYCIN		0,00		J01FA01	
7	38310202			DR.PD.INJ 1			J01BA01	6	GENTAMYCIN		0,42		J01GB03	
0								7	FUSIDIC ACID		0,00		J01XC01	
8	58920301			DR.PD.INJ (50			J01CR01		DOXYCYCLINE		5,05 4,64		J01AA02 J01FF01	
9	58920401	11887	BEGALIN-P	DR.PD.INJ (10	000+200	3962,33	J01CR01		SULFAMETHOXAZOLE TRI	METHOPRIM			JO1FF01	
10									METRONIDAZOLE		0,73		J01XD01	
11								.2	CHLORAMPHENICOL		0,03		J01BA01	
12									AMPICILLIN SULBACTAM		4,89		J01CR01	
											0.00	0.00		
		А		В		С		D						

b) Necessary indexes of the above calculator and documentation needed as justification for restricted antimicrobials dispensing have been integrated into the HIS; in result, data for national surveillance program for antimicrobial consumption area automatically exported. Useful information for pre and post-prescription review, like demographics, indication(s), co-morbidities, current and previous treatments, microbiology tests' results, susceptibility reports, is available and easily accessible to prescribers, HPs, and infection disease specialists. *Hospital_ES®

How was it done?

HPs created GrAD_calc on their own resources, while changes in HIS were made by ICT service provider*, following technical specifications described by HPs. A number of technical problems have been resolved with the contribution of HPs.

* ORCO Organization & Computing SA



Why was it done?

Implementation antimicrobial of stewardship programs in hospitals is part of the national strategy to promote prudent of antimicrobials. As HPs chair use stewardship teams, they are responsible for assessing prescription and monitoring antimicrobial Designing use. and developing automated informative tools facilitates HPs in their role.

Electronic documentation needed as justification for restricted antimicrobials dispensing

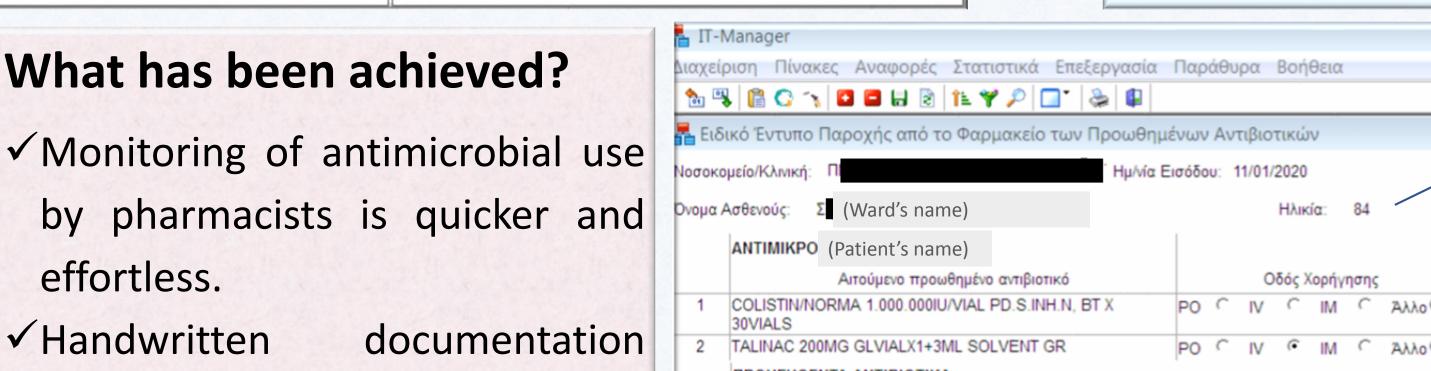
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Demographics

- 112 Hμ/víα: 27/1/2020

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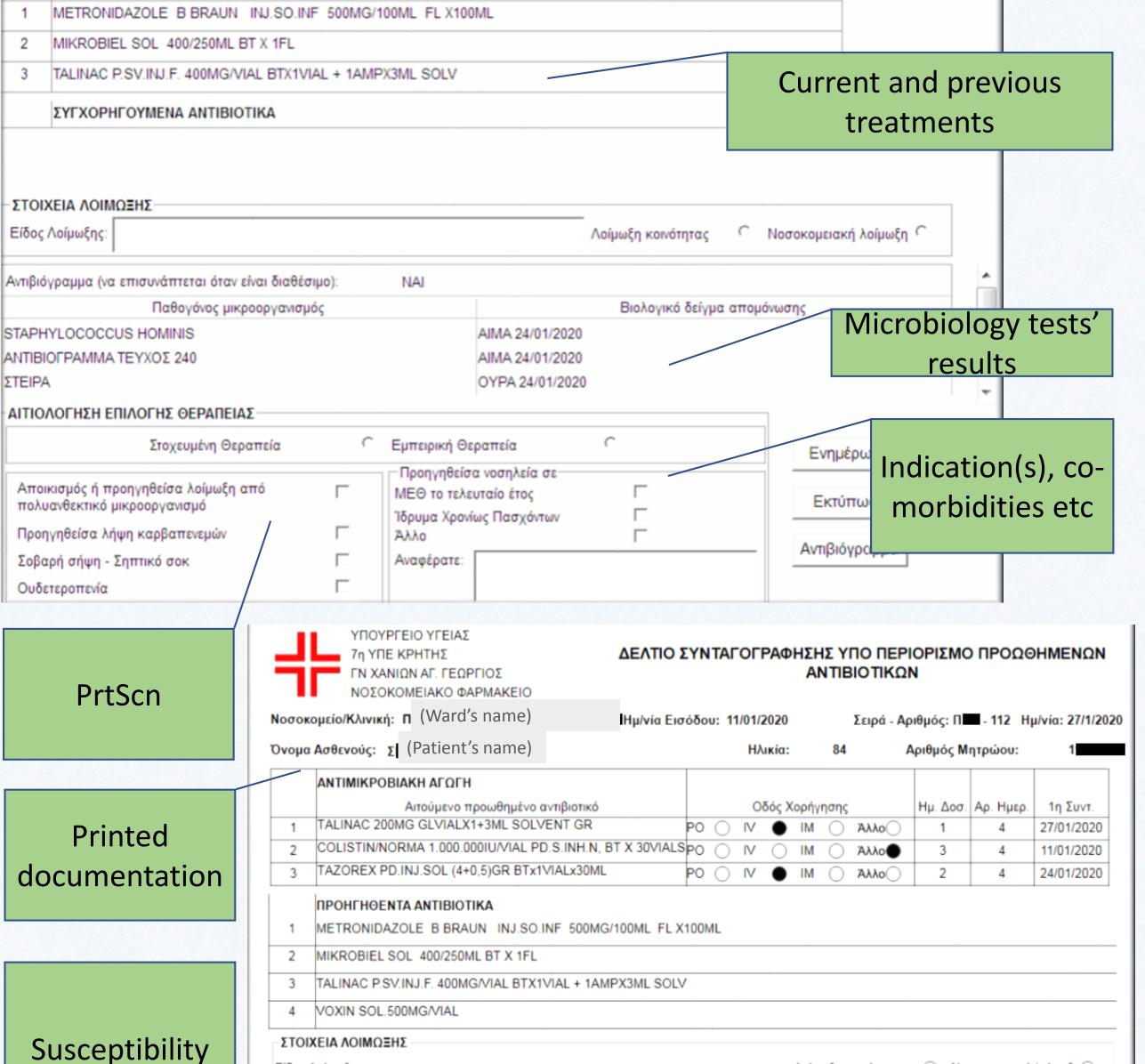


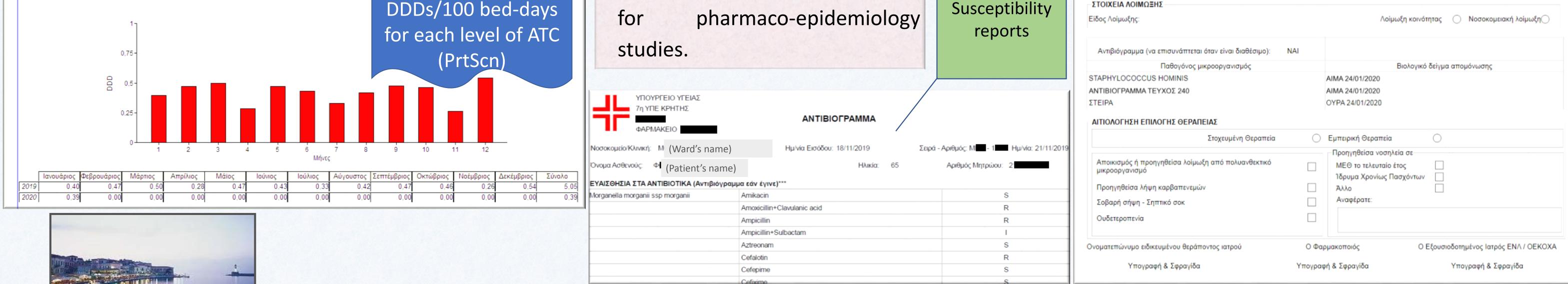
Automatically exported data from HIS for antimicrobial consumption

ΝΥΡαφή 🔁 ΥΠΟΥΡΓΕΙΟ 7η ΥΠΕ ΚΡΗΤ ΓΝ ΧΑΝΙΩΝ Α	ΥΓΕΙΑΣ Κατανάλωση ειδών κατα Μονάδα (ATC / DDD) ΓΗΣ	Results ir bed-da and Wa	ys by A	AT (
	AKO ΦΑΡΜΑΚΕΙΟ Περίοδος από: 01/01/2019 έως 31/12/2019	OIK	KONOMIKO ET	ΟΣ 20
Κωδ. ΑΤΟ	Περιγραφή ΑΤC	Αξία	Κόστος	DDD
J01AA02	ΔΟΞΥΚΥΚΛΙΝΗ	805,26	807.07	5
J01AA12	TIFEKYKAINH	111.919,45	127.379,97	2
J01BA01	ΧΛΩΡΑΜΦΑΙΝΙΚΟΛΗ	292,44	290,31	0
J01CA01	АМПІКІЛЛІН	3.785,40	3.785,19	0
J01CA04	AMOEYKIAAINH	131,34	132,72	0
J01CA11	MEKIAAINAMH	-146,02	-127,02	-0
J01CE01	BENZYAOTENIKIAAINH	1.962,98	1.962,98	0
J01CE08	BENZAGINOBENZYAOTENIKIAAINH	39,52	46,77	0
J01CF02	KAOEAKIAAINH	3.229,85	3.223,96	0
J01CR01	ΑΜΠΙΚΙΛΛΙΝΗ ΚΑΙ ΕΝΖΥΜΙΚΟΣ ΑΝΑΣΤΟΛΕΑΣ	38.679,13	38.982,57	4
J01CR02	ΑΜΟΞΥΚΙΛΛΙΝΗ ΚΑΙ ΕΝΖΥΜΙΚΟΣ ΑΝΑΣΤΟΛΕΑΣ	3.742,76	3.756,32	2
J01CR04	ΣΟΥΛΤΑΜΙΚΙΛΛΙΝΗ	347,59	340,03	0
J01CR05	ΠΙΠΕΡΑΚΙΛΙΝΗ ΚΑΙ ΕΝΖΥΜΙΚΟΣ ΑΝΑΣΤΟΛΕΑΣ	66.765,99	67.486,04	5
J01DC01	KEΦOΞITINH	94.554,36	94.763,77	4
J01DC02	KEФOYPOEIMH	5.643,28	5.831,33	6
J01DC04	KEΦAKΛOPH	18,17	18,19	0
.I01DC10 -Manager - [Εξα ιαχείριση Πίνο	ΚΕΦΠΡΩΖΙΛΗ γωγές DDD (Γραφικά)] ικες Αναφορές Στατιστικά Επεξεργασία Παράθυρα Βοήθεια ίπεδο: Ο Τηρίοδος από: 01/01/2019 έως 26/01/2020 Γ Τμήμα	 2.078.19 2.078.19 Αριθμός DDD ανά 1 	2 086 69	

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restricted included in antimicrobials' prescriptions has been replaced by an electronic decision support system, as tool antimicrobial improve to prescribing stewardship. and Useful information from medical patient's record IS directly available to HPs and physicians, facilitates and hospital's policy for assessing antimicrobial prescriptions. ✓ Data, like indication, medicine, dosage scheme, microbiology results susceptibility and recorded reports, are electronically update and patients' pharmaceutical records, permitting further use





What next?

consumption in

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ΓΝ ΧΑΝΙΩΝ ΑΓ. ΓΕΩΡΓΙΟΣ

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Next challenge is wide use of tools developed, to optimize pharmaceutical services provided and dispense restricted antibiotics only when accordingly justified. GrAD_calc is applicable in hospital setting and HIS's tool is incorporated and can be used by all regional hospitals.



URL: **shorturl.at/jwHJ2**