RISE-Vac

Optional
<Insert picture>

Name:
Nicola Cocco

Country: Italy

Affiliation: ASST Santi Paolo e Carlo, Milan

Function: Infectious Diseases Specialist

Main expertise (1-2 lines):

After humanitarian work with the WHO and various NGOs, he is working in the prisons of Milan as an infectious disease specialist and expert in public and detention health as well as migration medicine. He participates in several international projects for the implementation of the concept of “prison health as public health”, the latest of which is related to vaccinations in prison (RISE-Vac).

Viral hepatitis in Europe's Beating Cancer Plan

Prevention and control of viral hepatitis as cancer prevention opportunities

Antwerp – March 27-28 2025

Cancer-preventing vaccination programs in prison: promoting health equity in Europe

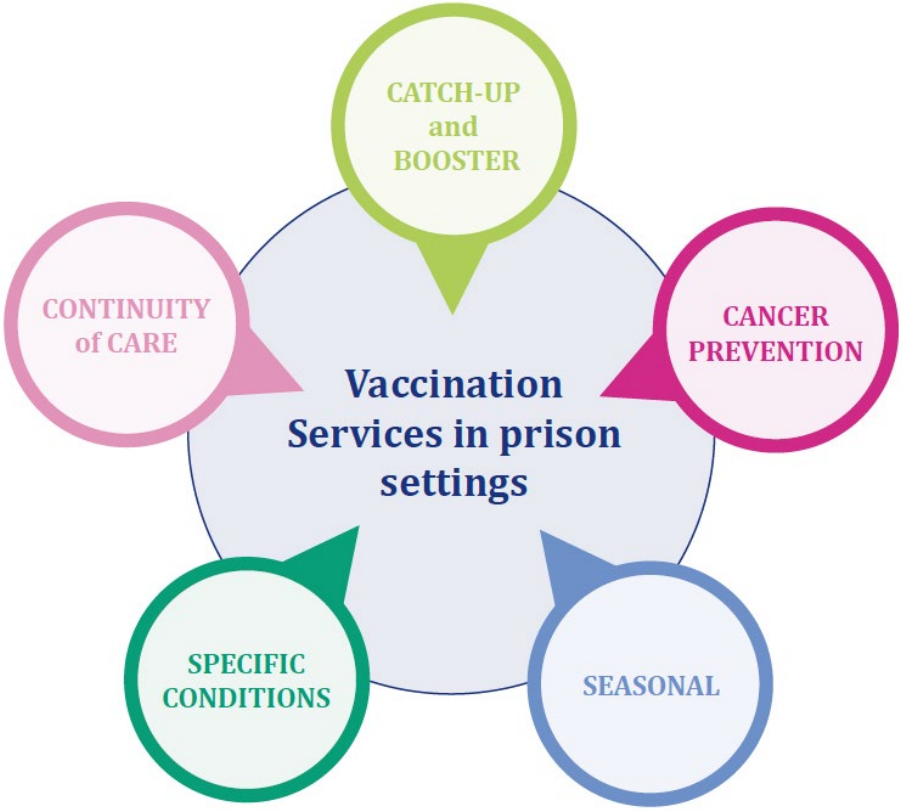
Dr Nicola Cocco, San Paolo Hospital, Milan, Italy

This project grant number '101018353 — RISE-Vac — HP-PJ-2020' was funded by the European Union's Health Programme (2014-2020). The content of this document represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the European Health and Digital Executive Agency (HaDEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

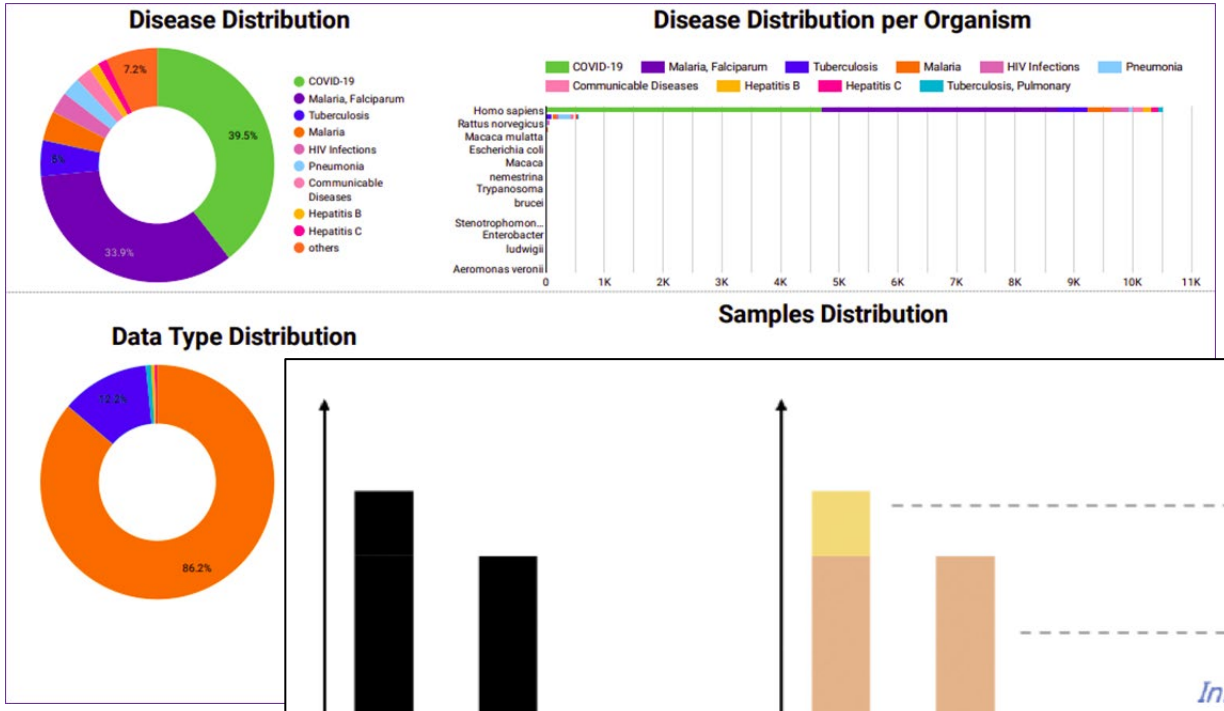
Life course vaccination and expanded offer: RISE-Vac mission

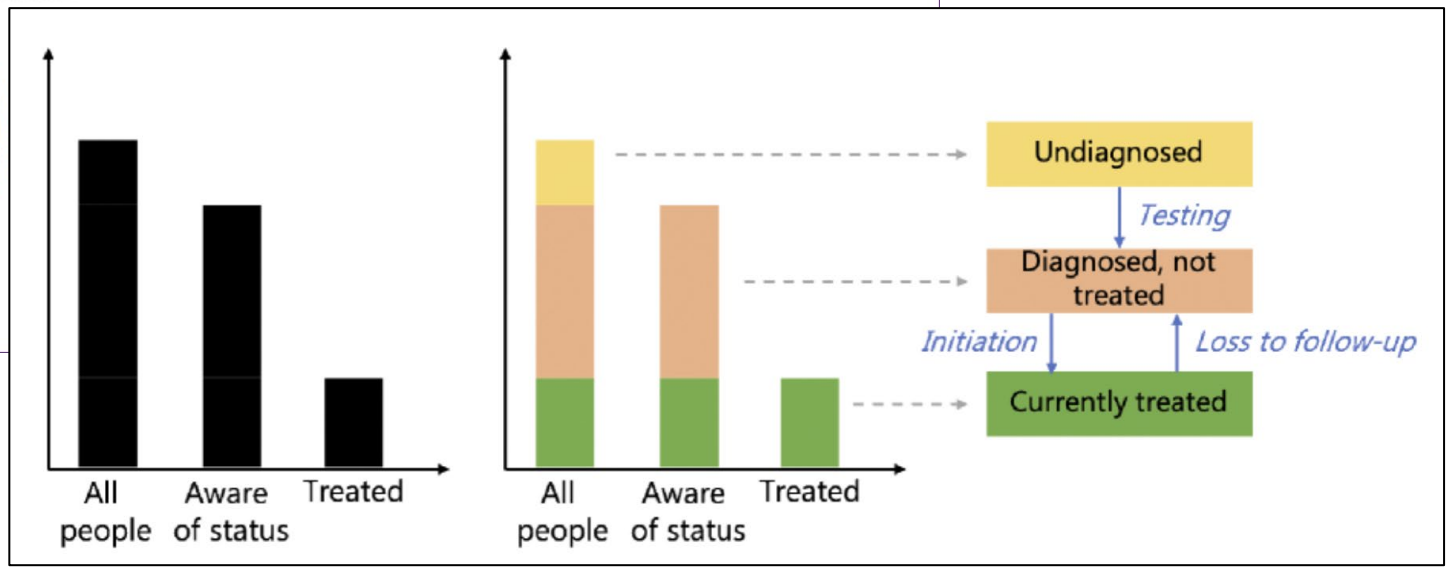
Providing **expanded**, **age-appropriate**, and **non-coercive** vaccination services tailored to the prison population will significantly improve the **health status** of PLP while reducing disease **transmission** within prisons.

The health benefits of vaccination extend beyond the prison walls, **contributing to public health** overall.



Premise 1: what we would like to have...





… what we have:

RISE-Vac

Situazione al 31 DICEMBRE 2009

TOSSICODIPENDENZA RIEPILOGO Scheda 2

DETENUTI AFFETTI DA HIV SECONDO GLI STADI DI INFEZIONE

REGIONE	TOTALE DETENUTI AFFETTI DA HIV SECONDO GLI STADI DI INFEZIONE													DI CUI DETENUTI AFFETTI DA HIV TOSSICODIPENDENTI				
	ASINTOMATICI			SINTOMATICI			AFFETTI DA MALATTIE INDICATIVE DI AIDS			TOTALE GENERALE								
	UOMINI	DONNE	TOTALE	UOMINI	DONNE	TOTALE	UOMINI	DONNE	TOTALE	UOMINI	DONNE	TOTALE	% SU PRESENTI	UOMINI	DONNE	TOTALE	% SU TOSSICODIP.	% SU AFFETTI DA HIV
ABRUZZO	21	1	22	7	0	7	4	0	4	32	1	33	1,68%	24	0	24	5,15%	72,73%
BASILICATA	1	0	1	0	0	0	0	0	0	1	0	1	0,17%	0	0	0	0,00%	0,00%
CALABRIA	9	0	9	5	0	5	3	0	3	17	0	17	0,59%	8	0	8	2,94%	47,06%
CAMPANIA	66	4	70	23	1	24	26	0	26	115	5	120	1,58%	90	5	95	5,63%	79,17%
EMILIA ROMAGNA	45	2	47	15	1	16	4	0	4	64	3	67	1,49%	50	2	52	4,58%	77,61%
FRIULI VENEZIA GIULIA	4	0	4	0	0	0	0	0	0	4	0	4	0,46%	4	0	4	1,91%	100,00%
LAZIO	60	1	61	18	0	18	13	0	13	91	1	92	1,56%	82	0	82	6,05%	89,13%
LIGURIA	30	0	30	14	9	23	9	0	9	53	9	62	3,73%	50	8	58	9,02%	93,55%
LOMBARDIA	110	18	128	71	1	72	48	0	48	229	19	248	2,81%	169	14	183	6,71%	73,79%
MARCHE	12	0	12	2	0	2	1	0	1	15	0	15	1,41%	10	0	10	4,26%	66,67%
MOLISE	0	0	0	0	0	0	0	0	0	0	0	0	0,00%	0	0	0	0,00%	#Num!
PIEMONTE	95	9	104	37	4	41	21	3	24	153	16	169	3,46%	132	13	145	10,72%	85,80%
PUGLIA	26	1	27	12	0	12	6	0	6	44	1	45	1,07%	30	1	31	3,12%	68,89%
SARDEGNA	41	2	43	8	0	8	4	0	4	53	2	55	2,37%	42	2	44	5,49%	80,00%
SICILIA	38	4	42	7	0	7	0	0	0	45	4	49	0,65%	16	1	17	1,43%	34,69%
TOSCANA	31	3	34	7	1	8	2	2	4	40	6	46	1,06%	32	4	36	3,50%	78,26%
TRENTINO ALTO ADIGE	6	0	6	1	0	1	0	0	0	7	0	7	1,74%	4	0	4	4,12%	57,14%
UMBRIA	29	3	32	3	0	3	0	0	0	32	3	35	2,52%	30	3	33	8,13%	94,29%
VALLE D'AOSTA	3	0	3	0	0	0	0	0	0	3	0	3	1,24%	3	0	3	7,50%	100,00%
VENETO	48	10	58	15	2	17	3	2	5	66	14	80	[illegible]	50	10	60	6,24%	[illegible]
TOTALE	675	58	733	245	19	264	144	7	151	1064	84	1148	1,77%	826	63	889	5,60%	77,44%

NOTA: I DATI SONO STATI RILEVATI A SEGUITO DI SCREENING VOLONTARIO

UNTIL 2009 DATA FROM THE MINISTRY OF JUSTICE…

Fonte: D.A.P - Ufficio per lo Sviluppo e la Gestione del Sistema Informativo Automatizzato - SEZIONE STATISTICA

Vaccinations in prison: issues of implementation

Moazen et al. BMC Public Health (2024) 24:2716
https://doi.org/10.1186/s12889-024-20207-3

BMC Public Health

RESEARCH Open Access

Vaccines and vaccination in prison settings: availability and model of service delivery in 20 European countries

Babak Moazen[1,2†], Maria Tramonti Fantozzi[3†], Erica De Vita [3*], Davide Petri[3,4], Irina Barbiros[5], Vlad Busmachiu[5], Roberto Ranieri[6], Nicola Cocco[6], Aurélie Mieuset[7], Fadi Meroueh[7], Laura Baglietto[8], Heino Stöver[1] and Lara Tavoschi[3]

Table 2 Vaccination implementation a… …ventions

Country	Infrastructural barriers					Strategies and interventions					
	Lack of budget	Lack of Human Resources					Peer-	Question/ Answer …ns …rts			Active recommendation of vaccines/Opt-out programs
Belgium		●									
Cyprus											●
Croatia	No Barriers										
England		●									
Finland	No Barriers										●
France	No Barriers										●
Ireland		●									
Italy		●								●	
Latvia	No Barriers									●	●
Luxemburg	No Barriers									●	●
Malta	No Barriers										●
Moldova	●	●									●
Netherlands	No Barriers										…ation based on clinical indications
Norway	No Barriers										
Portugal											●
Romania	●										
Slovakia	●										●
Spain (Catalonia)	No Barriers										●
Sweden	●	●									●
Ukraine	No Barriers				●					●	●

Ministero della Giustizia

DIPARTIMENTO DELL'AMMINISTRAZIONE PENITENZIARIA
UFFICIO DEL CAPO DEL DIPARTIMENTO

Circolare n. 3693/6143

m_dg.GDAP.18/07/2022.0276520.U

Roma,

Ai Signori Provveditori regionali
LORO SEDI

e, p.c.

Al Signor Vice Capo del Dipartimento
Ai Signori Direttori generali
SEDE

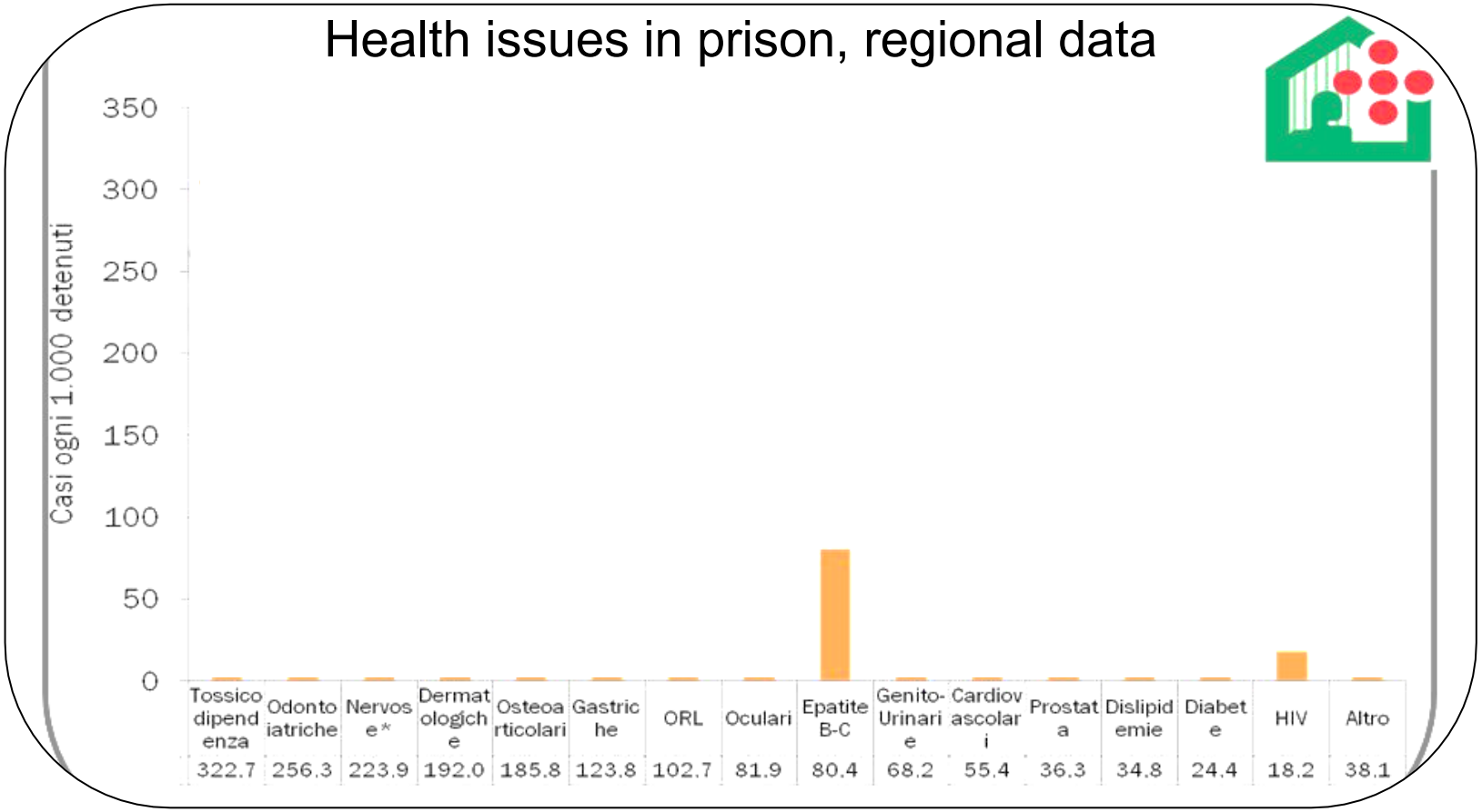
Ai Signori Presidenti dei Tribunali di Sorveglianza
LORO SEDI

OGGETTO: Circuito media sicurezza - Direttive per il rilancio del regime penitenziario e del trattamento penitenziario

1. Premessa

A quick overview on the Italian prison context

Health issues in prison, regional data



Emilia Romagna Regional data, 2017

THE TECHNOLOGY: HOW mRNA CANCER VACCINES WORK

THE CHALLENGES FOR SCIENCE, SOCIETY AND ECONOMY

THE SOLUTION FOR A FAIR AND EQUAL VACCINATION CAMPAIGN

CANCER VACCINE FAIRNESS

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Research News

Cancer Vaccines Show Promise at Last

In early clinical trials, tumor cell vaccines appear able to help cancer patients fight off metastases by stimulating immune responses to the patients' tumors

BY RIGHTS, MALCOLM MITCHELL'S patient should be dead by now. She had arrived at the University of Southern California School of Medicine in the spring of 1986 with an advanced case of melanoma, a very malignant form of skin cancer. The original tumor had been removed, but now the cancer had returned with a vengeance. "She had extensive disease on her right buttock and maybe hundreds of tumor nodules extending down her leg," Mitchell recalls. The melanoma had also spread to her left lung.

But the woman is alive today—more than 3 years after receiving injections of an experimental melanoma vaccine developed by Mitchell and his colleagues.

Even the USC researcher was astounded by the response of his patient, only the seventh or eighth he had treated with the new vaccine. "Her husband began to notice improvement in her lesions within a week," he says. "But I couldn't believe that those things would begin disappearing that soon." By the third week, however, it was apparent that the husband was correct. And by the seventh week, the tumors were gone, although the remains of the largest had to be removed surgically.

Mitchell's patient may be a harbinger of a dramatic turnaround in the fortunes of a line of cancer research that until now has resulted in a frustrating series of failures. Scientists have been trying for more than two decades to find therapies for cancer that employ the body's own immune system. The rationale for their efforts is simple enough. A great deal of evidence has suggested that the immune system is capable of recognizing cancer cells and suppressing their growth—although all too often it fails at this task.

As Jean-Claude Bystryn of New York University Medical Center points out, "The growth of a malignant cancer depends not just on the cancer itself, but on the body's response to it." If a patient's immune responses could be bolstered, researchers hypothesized, then he or she might be able to fight off the cancer. Unfortunately, this has proved to be much easier said than done.

But that may all be changing. Mitchell's group is one of several that are beginning to see signs of success in their efforts to develop immune therapies against such previously intractable malignancies as melanoma and colon and kidney cancer.

The old therapies focused on nonspecific stimulators of the immune system, including bacteria such as Bacillus Calmette-Guerin (BCG) and, more recently, the interferons and interleukins. The new therapies are different: they use tumor cells—often prepared from the patient's own cancer—to elicit specific immune responses to the particular tumor from which the patient suffers.

The vaccine therapies also differ from the immune therapy pioneered by Steven Rosenberg of the National Cancer Institute, which uses activated lymphocytes to attack tumor cells and has also been producing encouraging results (*Science*, 23 June, p. 1430).

The clinical trials performed so far with the tumor cell vaccines have indicated that they are safe and may be effective in some circumstances, although the investigators are understandably cautious about their results in view of the poor previous track record of immunotherapy. Other potential immunotherapies have looked good in early trials in a few patients but have failed to hold up when tested more rigorously.

One of the most advanced of the new vaccines was developed by Michael Hanna of Organon-Teknika's Bionetics Research Institute in Rockville, Maryland, and his colleagues. A just completed clinical trial that was headed by Herbert C. Hoover of Massachusetts General Hospital assessed the ability of the vaccine to prevent the development of metastases in patients who have undergone surgery for colon or rectal cancer but are at high risk of relapsing. "There was a greater than 50% reduction in recurrences," Hanna says. "I think that is very dramatic. We're very excited about it."

As a long time veteran of the immunotherapy campaigns, Hanna has particular reason to be excited. He began laying the foundation for the colon cancer vaccine more than 20 years ago when he was at Oak Ridge National Laboratory.

Hanna, like most of the researchers studying tumor cell vaccines, credits his current progress largely to information gleaned from studies of immunotherapy in an animal cancer model. In Hanna's case, it was work with guinea pigs, originally begun by the late Herbert Rapp of the National Cancer Institute, that set him on his present course.

In the early 1970s, Rapp, Hanna, and their colleagues discovered that BCG injections could induce the guinea pigs' tumors to regress. At the time, this finding achieved a certain amount of notoriety when some overzealous news reports hailed BCG as a "cancer cure." It wasn't. But Hanna made an observation that was eventually to prove very helpful.

He found that under appropriate conditions, the BCG cells could interact with the tumor cells in eliciting an immune attack directed against the guinea pig tumors, causing their regression. Hanna based his colon cancer vaccine on this observation. It consists of the patient's own tumor cells, which are irradiated to stop them from growing, mixed with BCG.

This vaccine will elicit an immune response to colon cancer cells, Hanna says, delaying or preventing colon cancer metastases. Moreover, it does this with minimal side effects, especially when compared to radiation and most chemotherapeutic re-

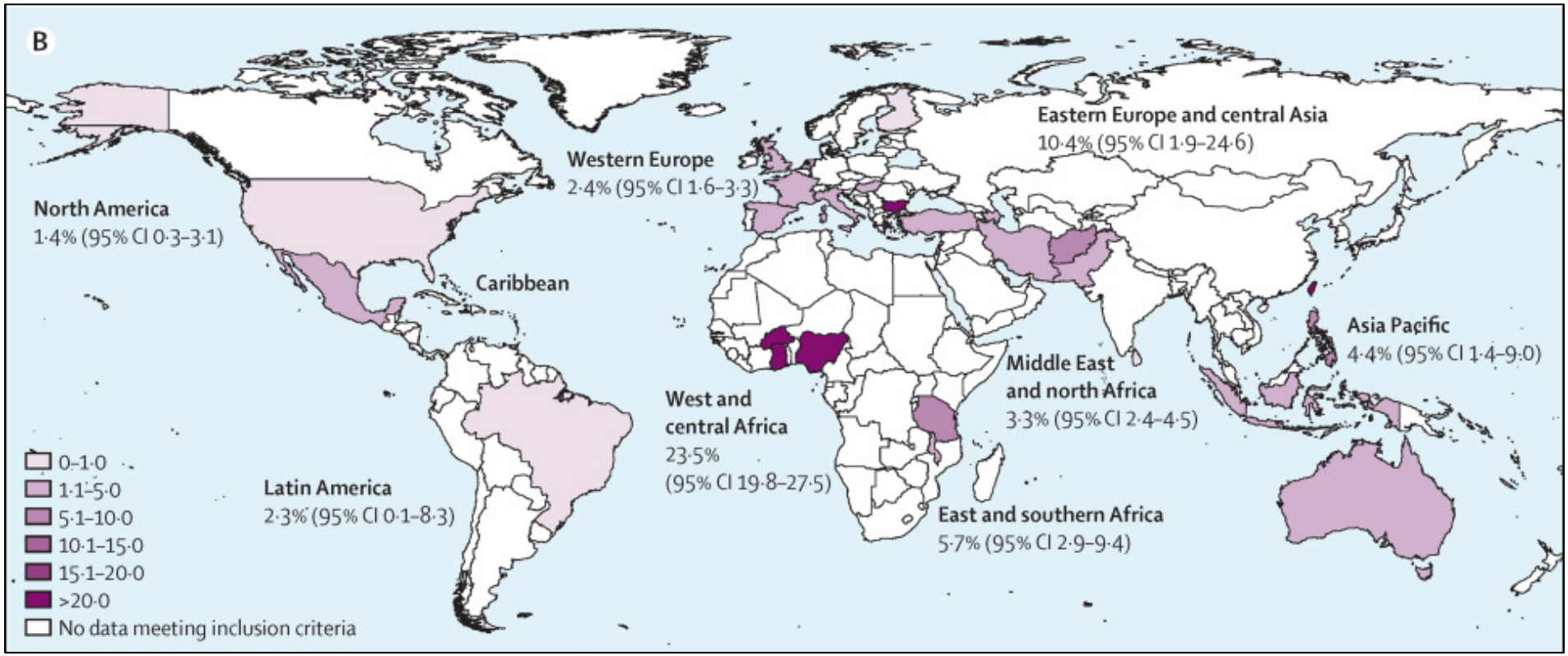
Pamela Dorfman/PHOTOGROUP

Patient pioneer. *After 20 years, Michael Hanna is getting some encouraging results.*

RISE-Vac

...We already have two great cancer vaccines!

HBV in prison



Global and regional prevalence of hepatitis B in PLP, published between 2005 and 2015

Dolan K, Wirtz AL, Moazen B, et al. Global burden of HIV, viral hepatitis, and tuberculosis in prisoners and detainees. Lancet. 2016;388(10049):1089-1102. doi:10.1016/S0140-6736(16)30466-4

Prevalence of HBsAg in prisons, EU/EEA and United Kingdom (UK)

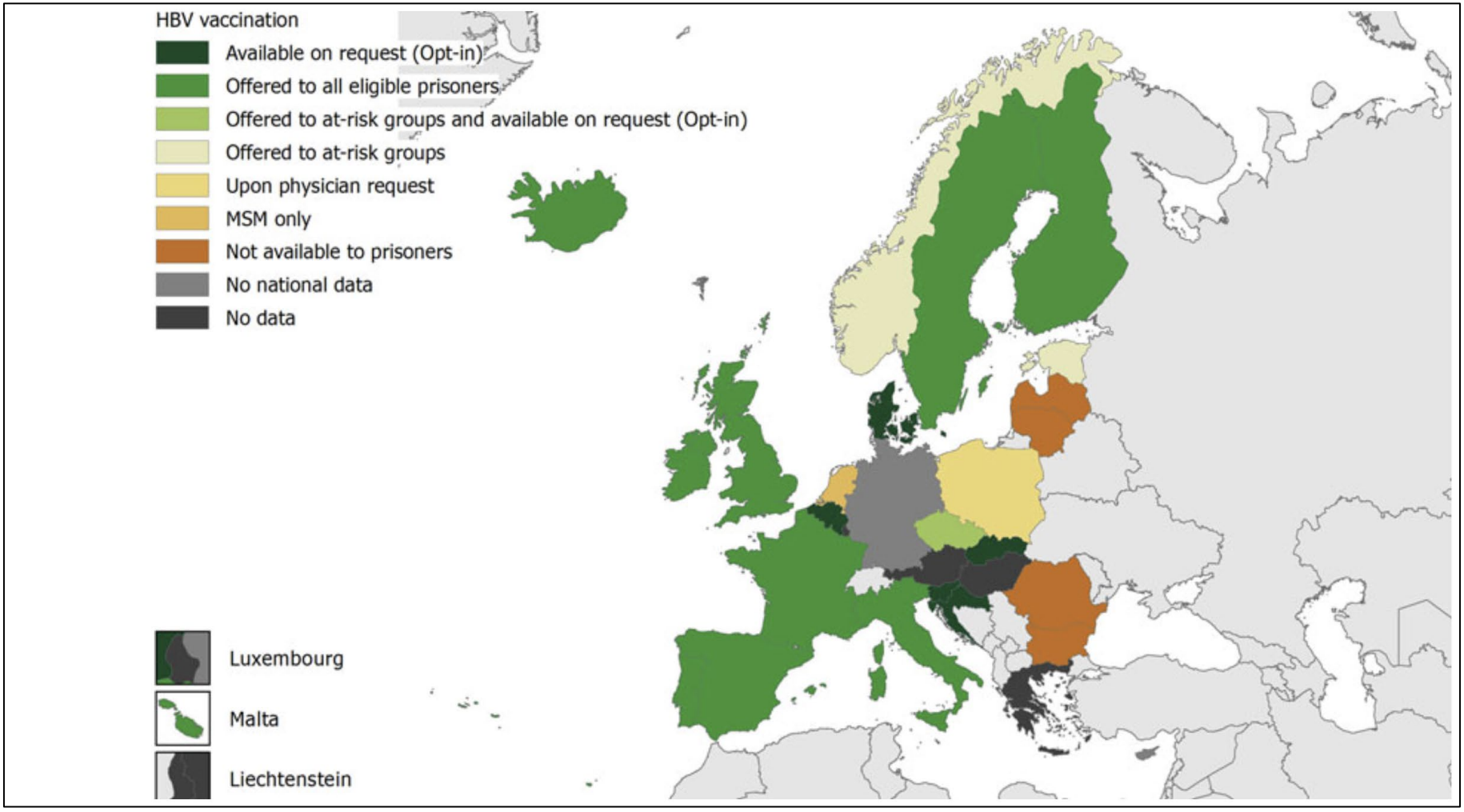
Country	Year	Geographical coverage	Reference group	HBsAg		
				Tested (*N*)	Tested (%)	Positive (%)
Bulgaria	2010	Unspecified (2 juvenile centres)	Children only	258	NA	25.2
Croatia	2007	National (all prisons)	Adults only	3348	NA	1.3
	2007	National (all juvenile detention centres)	Children only	140	NA	1.4
Finland	2006	National (all prisons and juvenile detention centres)	Adults and children	383	NA	0.5
France	2013	Clermont-Ferrand and Riom (2 prisons)	Adults only	347	NA	0.6
Hu		National (20 prisons)	Adults only	4894	NA	1.5
Ireland			Adults only	777	NA	0.3
Italy	2002	Unspecified	Adults only	973	NA	6.7
Luxembourg	2005	Unspecified (2 prisons)		115	NA	7.0
Portugal	2008	Coimbra (1 regional prison)	Adults only			0.7
	2015*	National	All (including those in remand prison/jail)	NA		
Romania	2010	Bacau (1 prison)	Adults only	197	NA	10.7
Slovakia	2015*	National	All (including those in remand prison/jail)	NA	17.7	1.0
Spain	2008	18 prisons across Asturias, Cantabria, Lerida, Salamanca, Barcelona, La Coruna, Alicante	Adults only	–	–	2.6
	2016*	National	All (including those in remand prison/jail)	NA	80.5	3.5
UK	2013	London (1 prison)	Unspecified	511	NA	2.0
	2012	Broadmoor (1 maximum-security prison)	Unspecified	129	NA	0

Sources: ECDC Hepatitis B-prevalence database (year denotes final year of sampling) and HIPED*.
–, no data; NA, not applicable.

HBV infection in PLP in Europe ranges from 1.3% to 23.5%

Nakitanda AO, Montanari L, Tavoschi L, Mozalevskis A, Duffell E. Hepatitis B virus infection in EU/EEA and United Kingdom prisons: a descriptive analysis. Epidemiol Infect. 2021;149:e59. Published 2021 Jan 25. doi:10.1017/S0950268821000169

HBV vaccination in prisons, EU/EEA, 2016/2017

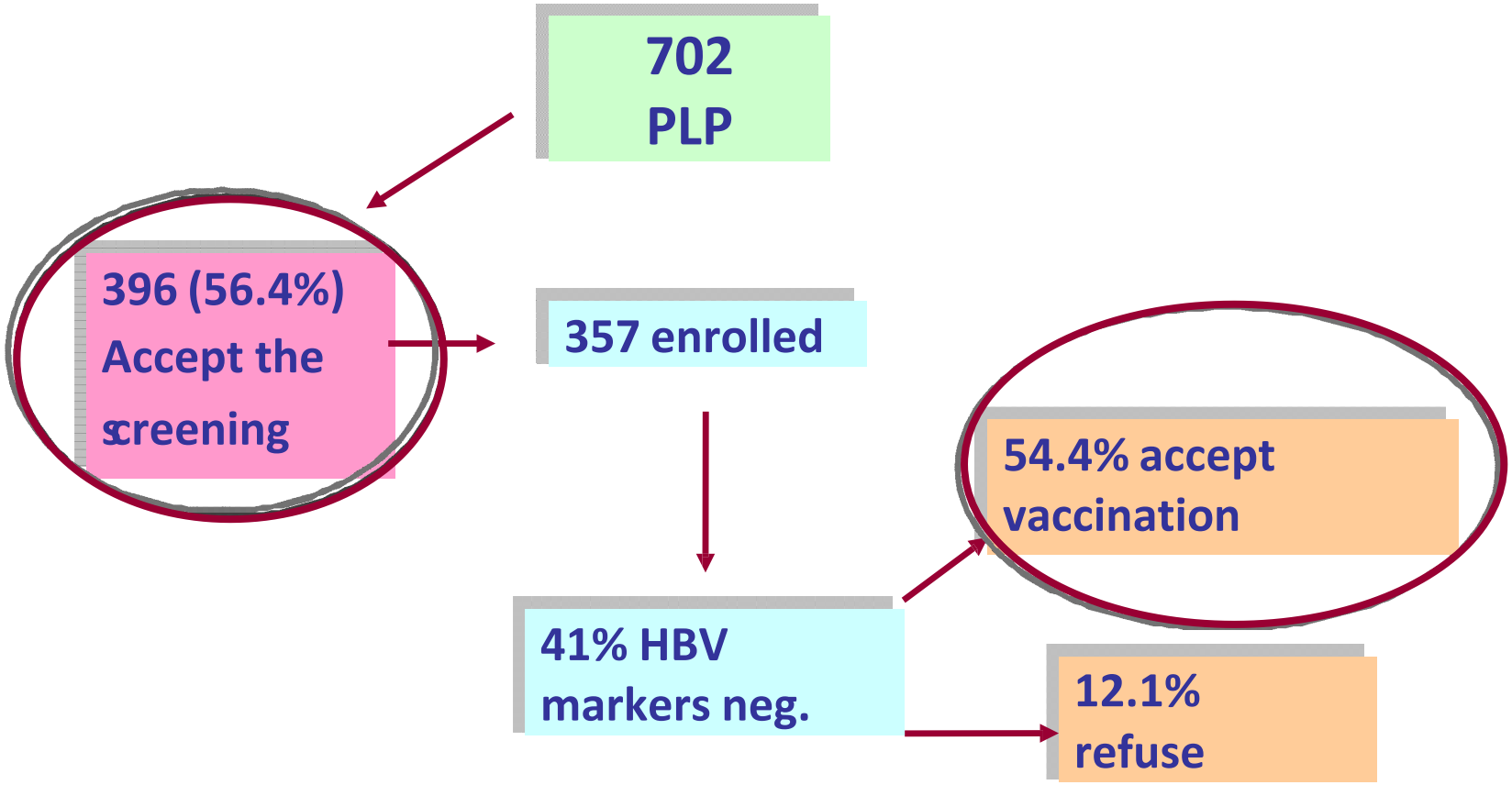


Nakitanda AO, Montanari L, Tavoschi L, Mozalevskis A, Duffell E. Hepatitis B virus infection in EU/EEA and United Kingdom prisons: a descriptive analysis. Epidemiol Infect. 2021;149:e59. Published 2021 Jan 25. doi:10.1017/S0950268821000169

HBV screening and vaccination in prison: an example

RISE-Vac

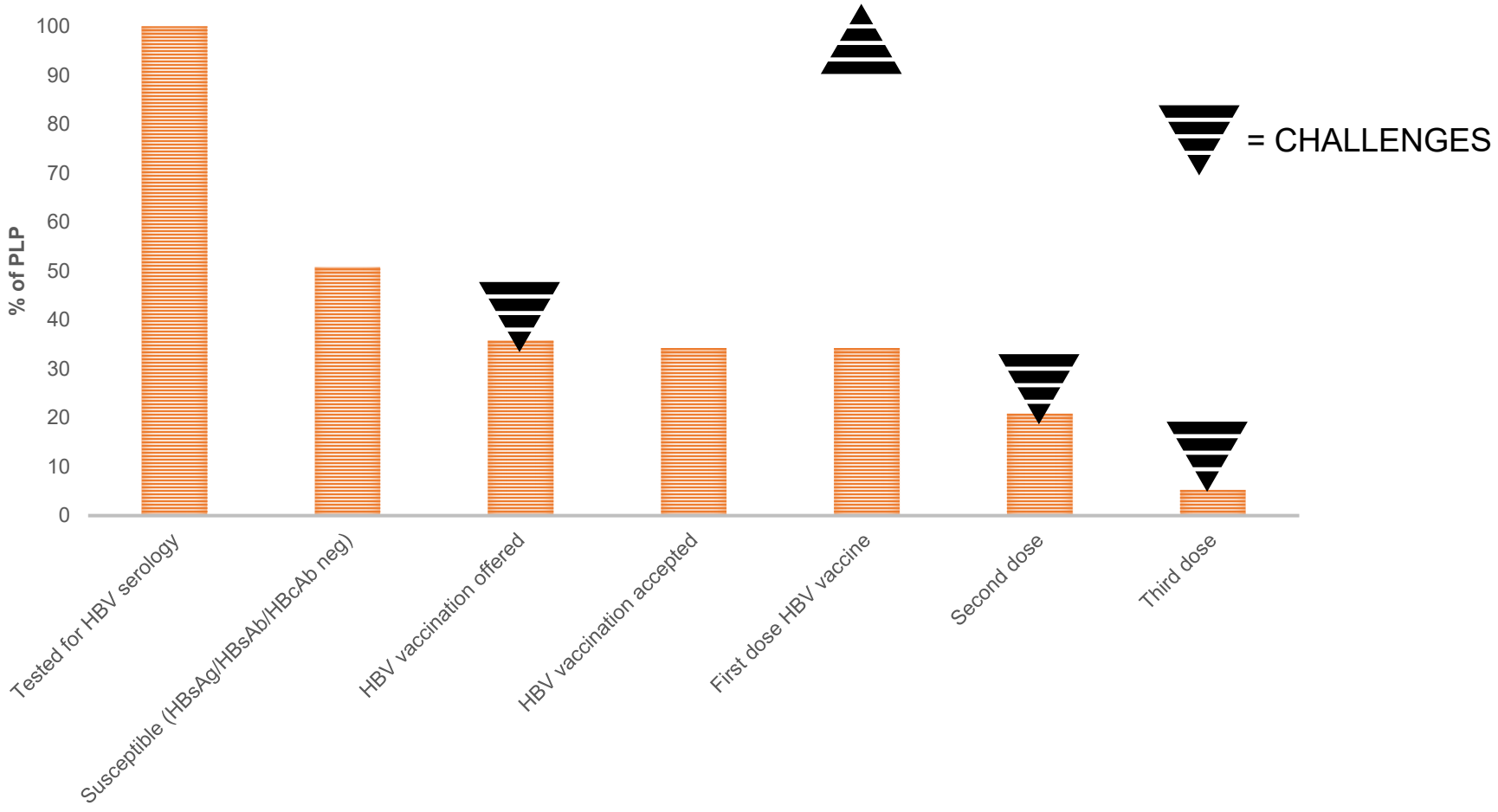
European study ruled out beetwen June 2012 and Dicember 2013 in Puy-de-Dôme department (France)



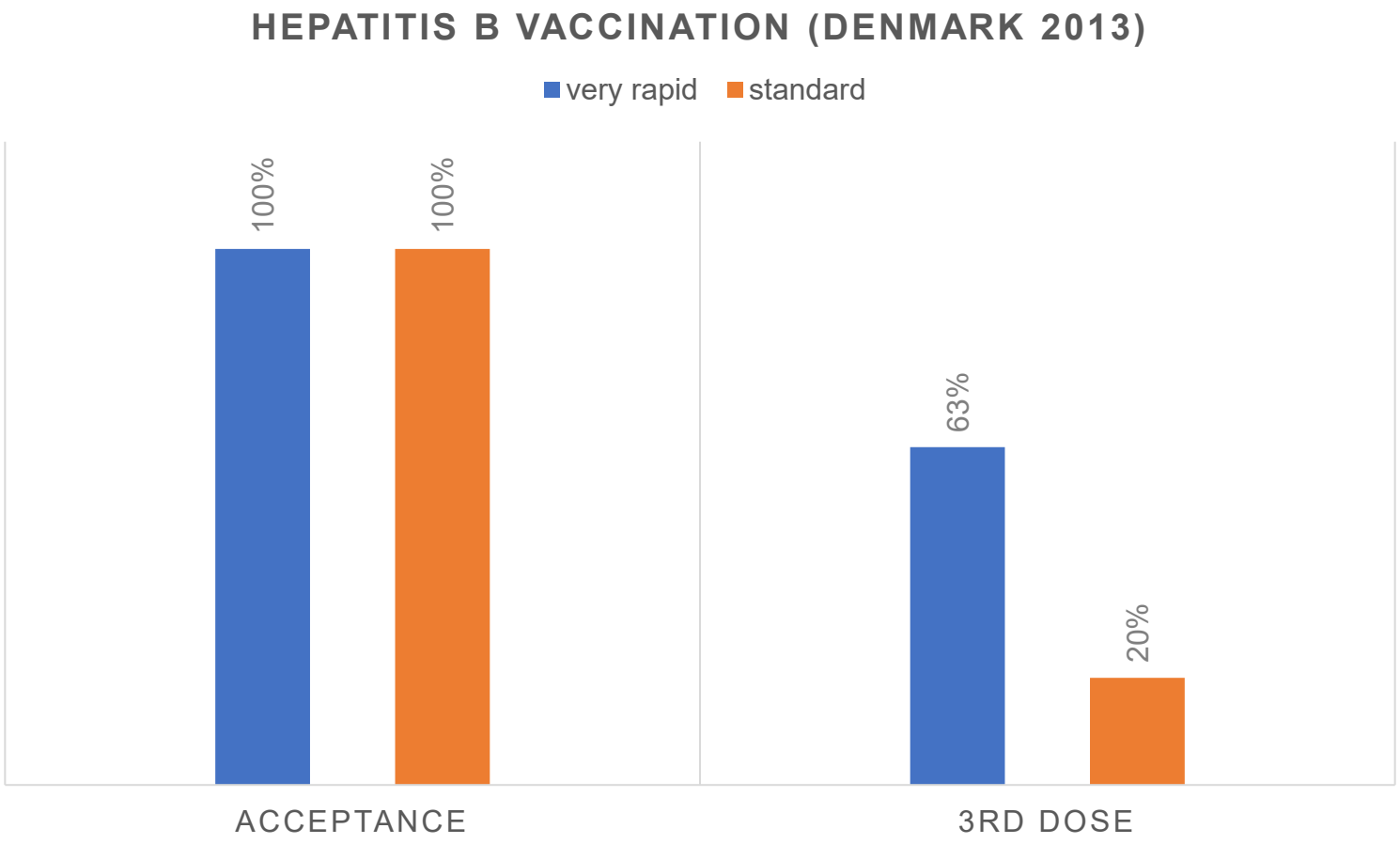
Adapted from Jacomet C, Guyot-Lénat A, Bonny C, et al. Addressing the challenges of chronic viral infections and addiction in prisons: the PRODEPIST study. Eur J Public Health. 2016;26(1):122-128. doi:10.1093/eurpub/ckv183

RISE-Vac

CASCADE OF HBV VACCINATION IN SAN VITTORE PRISON (2018)

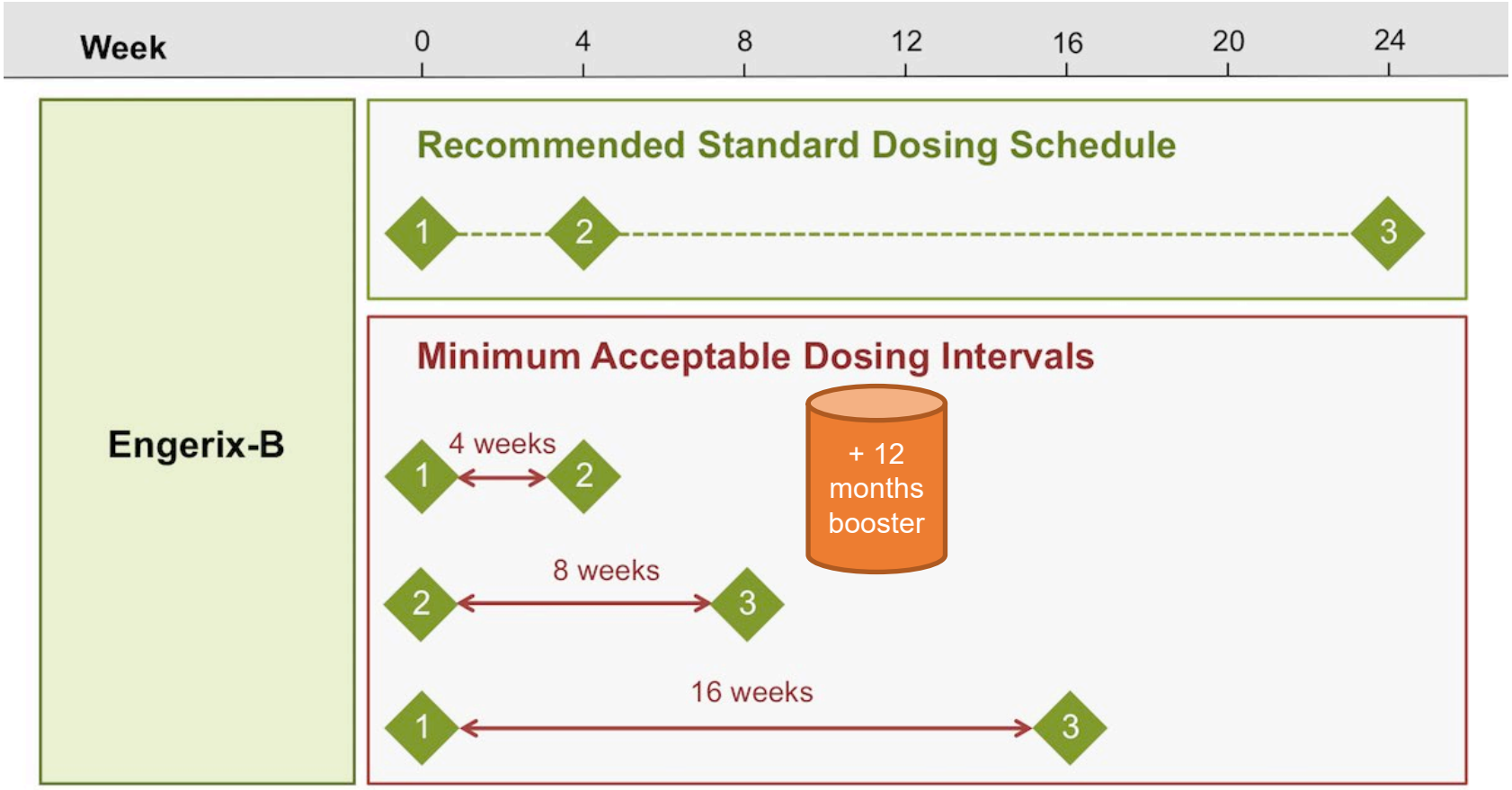


Acceptance and coverage: which schedules?



Adapted from Christensen PB, Fisker N, Krarup HB, et al. Hepatitis B vaccination in prison with a 3-week schedule is more efficient than the standard 6-month schedule. *Vaccine*. 2004;22(29-30):3897-3901. doi:10.1016/j.vaccine.2004.04.011

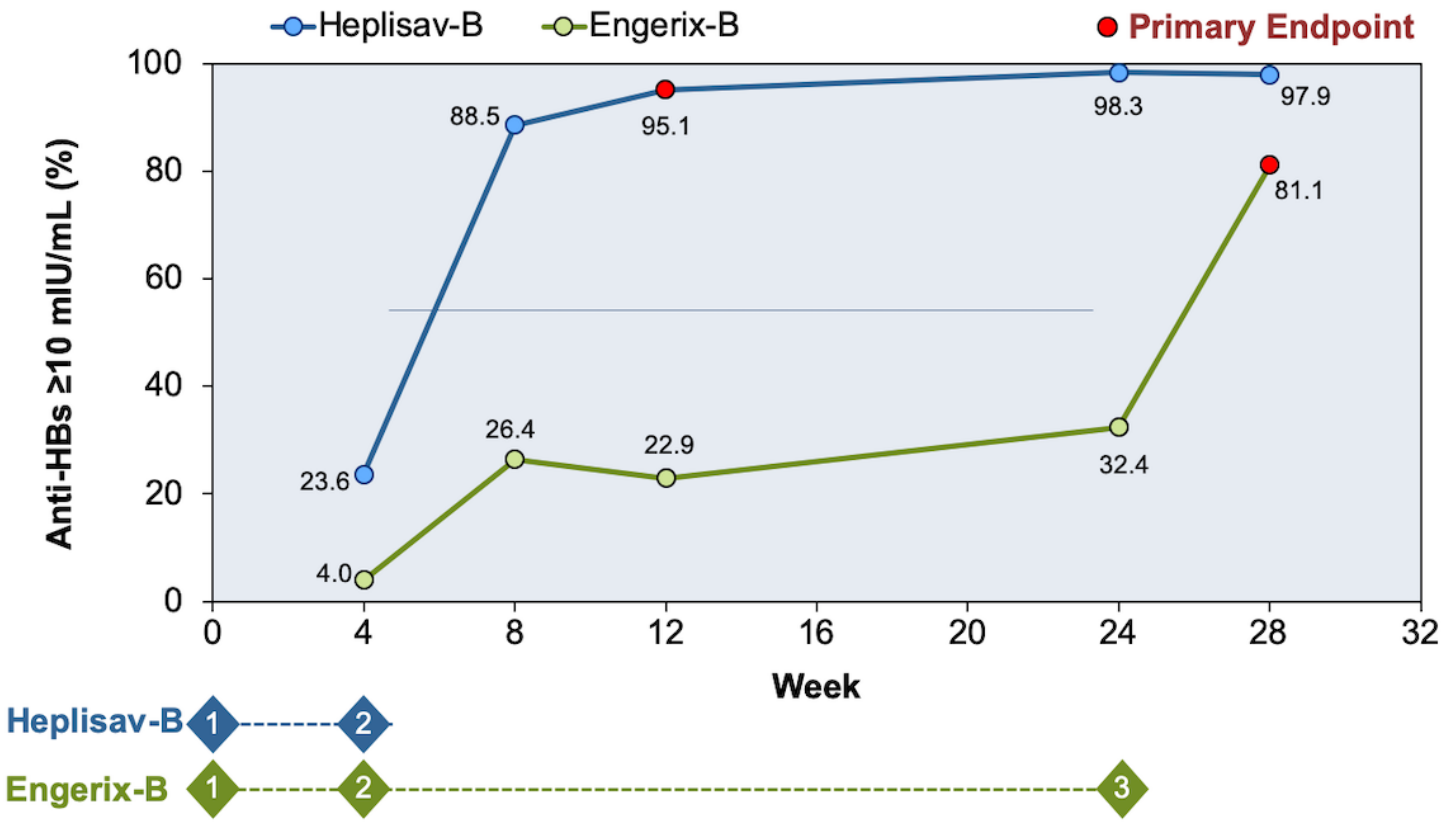
Which schedules? The HBV case



Engerix-B: Minimal Acceptable Dosing Intervals
Doses administered up to 4 days before the minimal acceptable dosing intervals are valid, but doses administered 5 or more days before the minimum dosing interval must be repeated using the correct schedule.

Hepatitis B Online Portal, https://www.hepatitisb.uw.edu/go/prevention-hbv/hbv-immunizations/core-concept/all

Which schedules? The HBV case



Heplisav-B Vaccine versus Engerix-B Vaccine in Healthy Adults 18-55 Years of Age
In this trial, the primary endpoint was the percentage of persons who achieved seroprotection 8 weeks after the final dose of the Heplisav-B vaccine series or 4 weeks after completing the Engerix-B vaccine series. Seroprotection was defined as an anti-HBs titer of at least 10 mIU/mL.

Halperin SA, Ward B, Cooper C, et al. Comparison of safety and immunogenicity of two doses of investigational hepatitis B virus surface antigen co-administered with an immunostimulatory phosphorothioate oligodeoxyribonucleotide and three doses of a licensed hepatitis B vaccine in healthy adults 18-55 years of age. Vaccine. 2012;30:2556-63.

HPV in prison

The prevalence of HPV among prisoners ranged from 10.5% to 55.4% with significant heterogeneity

Review

J Epidemiol Community Health: firs

Prevalence of human papillomavirus infection, cervical intraepithelial neoplasia and cervical cancer in imprisoned women worldwide: a systematic review and meta-analysis

Nadia Escobar,[1] Emma Plugge [2]

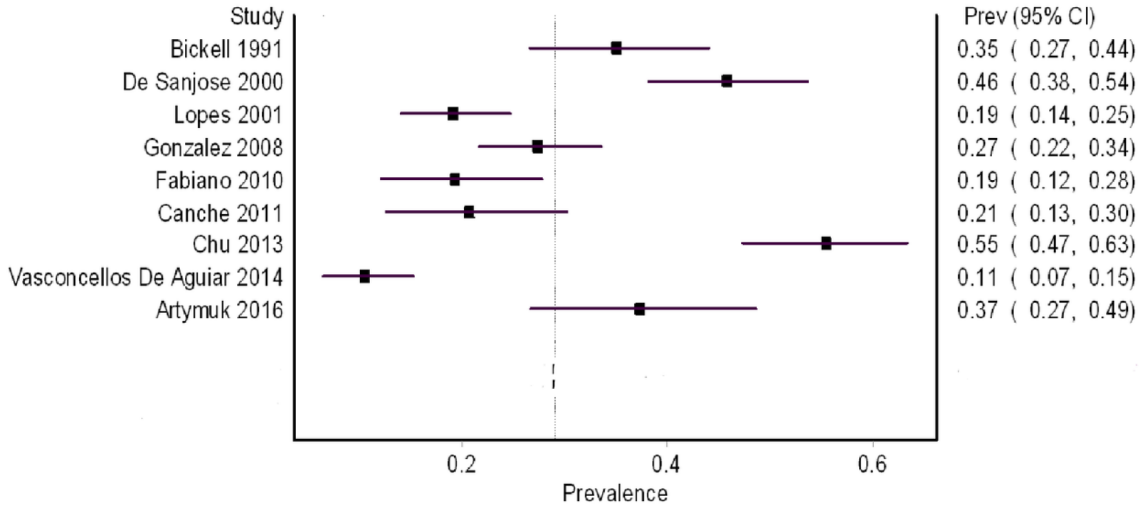


Figure 2 Forest plot showing prevalence estimates of cervical human papillomavirus infection infection detected by molecular methods.

Escobar N, Plugge E. Prevalence of human papillomavirus infection, cervical intraepithelial neoplasia and cervical cancer in imprisoned women worldwide: a systematic review and meta-analysis. J Epidemiol Community Health. 2020;74(1):95-102. doi:10.1136/jech-2019-212557

Review

Prevalence of human papillomavirus infection, cervical intraepithelial neoplasia and cervical cancer in imprisoned women worldwide: a systematic review and meta-analysis

Nadia Escobar,[1] Emma Plugge [2]

J Epidemiol Community Health: firs

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Ratios comparing the prevalence of CIN in imprisoned women to that in the community ranged from 1.13 to 5.46.
Cancer prevalence estimates were at least 100 times higher than in populations participating in national screening programmes.

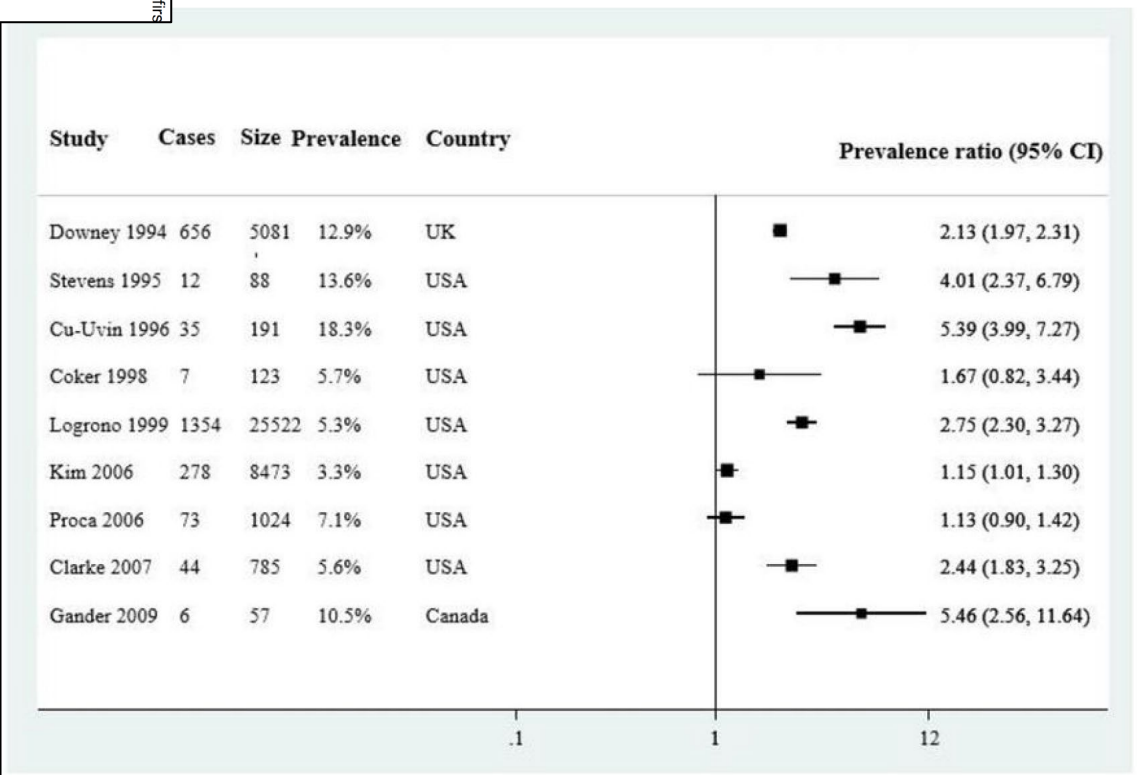


Figure 4 Forest plot showing prevalence ratio estimates with studies reporting prevalence of cervical intraepithelial neoplasia or equivalent terminology by cervical cytology in prisoners, compared with data from national screening programmes, using random effects model.

Escobar N, Plugge E. Prevalence of human papillomavirus infection, cervical intraepithelial neoplasia and cervical cancer in imprisoned women worldwide: a systematic review and meta-analysis. J Epidemiol Community Health. 2020;74(1):95-102. doi:10.1136/jech-2019-212557

HPV vaccination acceptance in prison: PLP

RISE-Vac

Table 4. Barriers to In-Prison HPV Vaccination.

Barriers	% ($N = 97$)
I am not sure how to get more information about the vaccine	56 (54)
I don't think I'll be able to get help if I have a bad reaction	37 (36)
I don't want prison employees giving me vaccines	27 (26)
I don't want to pay for it	21 (20)
I don't like needles	21 (20)
It will be hard to get all three shots	21 (20)
I am not sure how to ask for it	11 (11)
I am worried that other inmates will find out	9 (9)
It is against my religious beliefs	1 (1)
Other	10 (10)
None	12 (12)

Note. HPV = human papillomavirus.

Moore A, Cox-Martin M, Dempsey AF, Berenbaum Szanton K, Binswanger IA. HPV Vaccination in Correctional Care: Knowledge, Attitudes, and Barriers Among Incarcerated Women. *J Correct Health Care*. 2019;25(3):219-230. doi:10.1177/1078345819853286

HBV serological and vaccination status in Italian prison

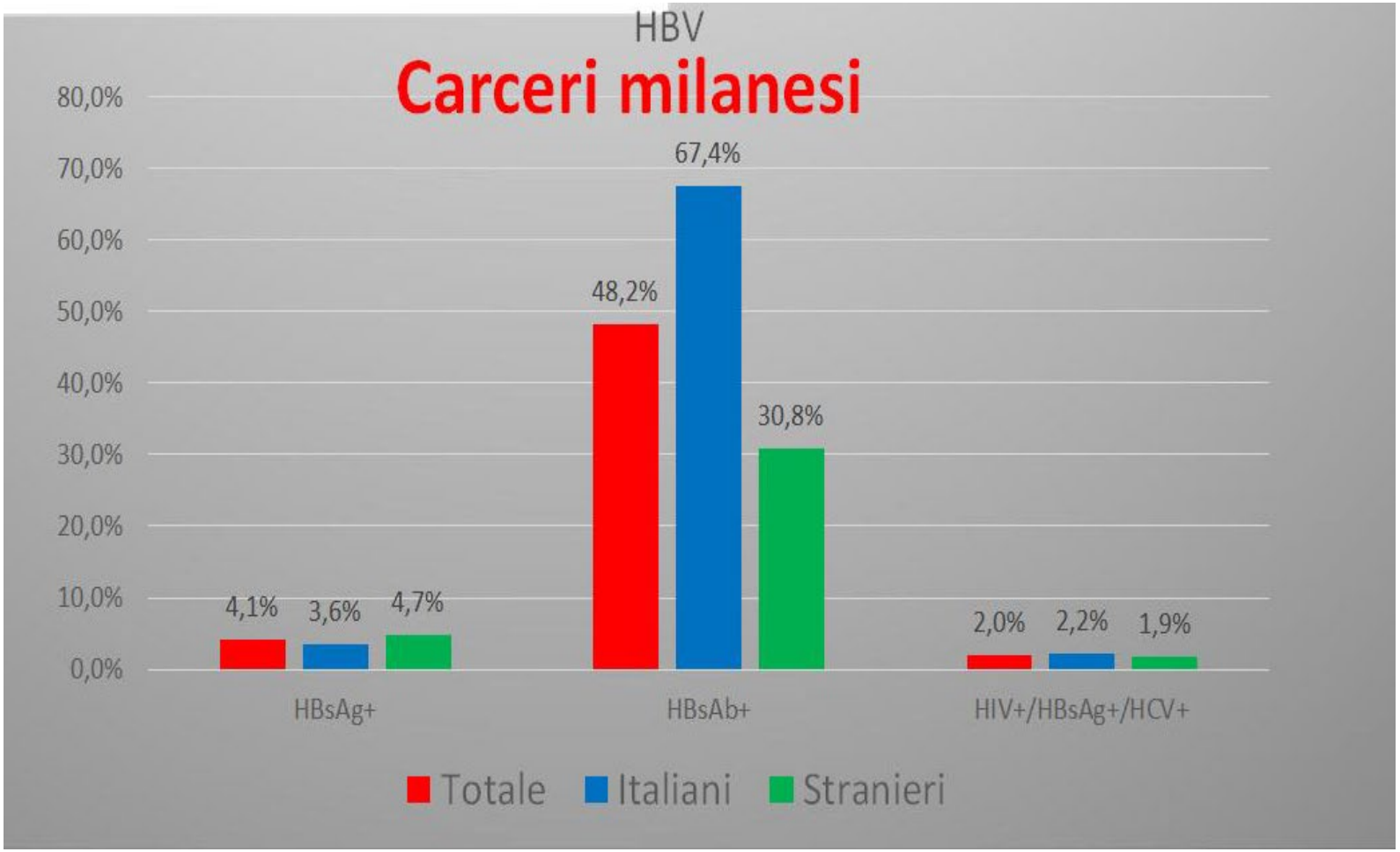
RISE-Vac

Tabella 3.7. Detenuti nuovi giunti con esame HBV eseguito ed esito registrato (tutti e tre i marcatori) per esito esame e classe di età. Valori assoluti e distribuzione %

Esito HBV	Fino a 24	25-34	35-44	45-54	55 e più	Non def.	Totale
	Valori assoluti						
Suscettibile	165	377	320	190	99	3	1.154
Infezione in atto	11	36	29	10	6		92
Pregresso contatto	20	89	87	72	62		330
Vaccinato	75	199	133	45	16	1	469
Totale	271	701	569	317	183	4	2.045
				%			
Suscettibile	60,9	53,8	56,2	59,9	54,1	75,0	56,4
Infezione in atto	4,1	5,1	5,1	3,2	3,3		4,5
Pregresso contatto	7,3	12,7	15,3	22,7	33,9		16,2
Vaccinato	27,7	28,4	23,4	14,2	8,7	25,0	22,9
Totale	100	100	100	100	100	100	100

Ministero della Salute, La prevenzione sanitaria nella popolazione detenuta, 2013

HBV serological and vaccination status in Milan prison, new incomers (2017)



Models of care

- Lessons learnt
- Task shifting
- Empowerment of PLIP and staff
- Adapting to the prison context (accelerated schedules, co-administrations, boosters, etc.)
- Vaccination clinic

Mazzilli *et al. BMC Public Health* (2024) 24:1001
https://doi.org/10.1186/s12889-024-18063-2

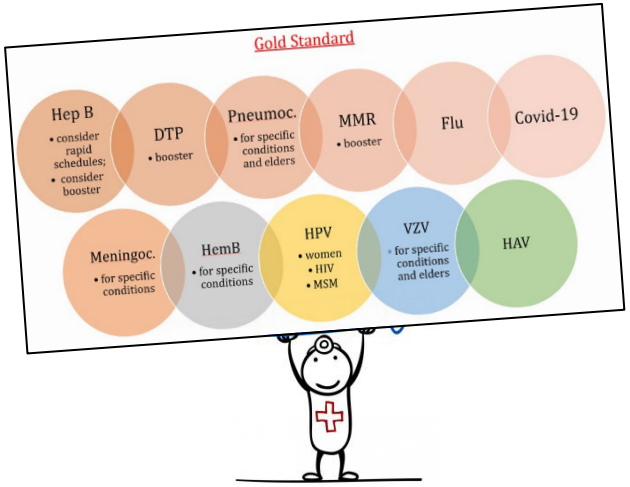
BMC Public Health

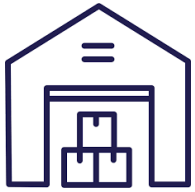
RESEARCH Open Access

Implementation of COVID-19 vaccination services in prison in six European countries: translating emergency intervention into routine life-course vaccination

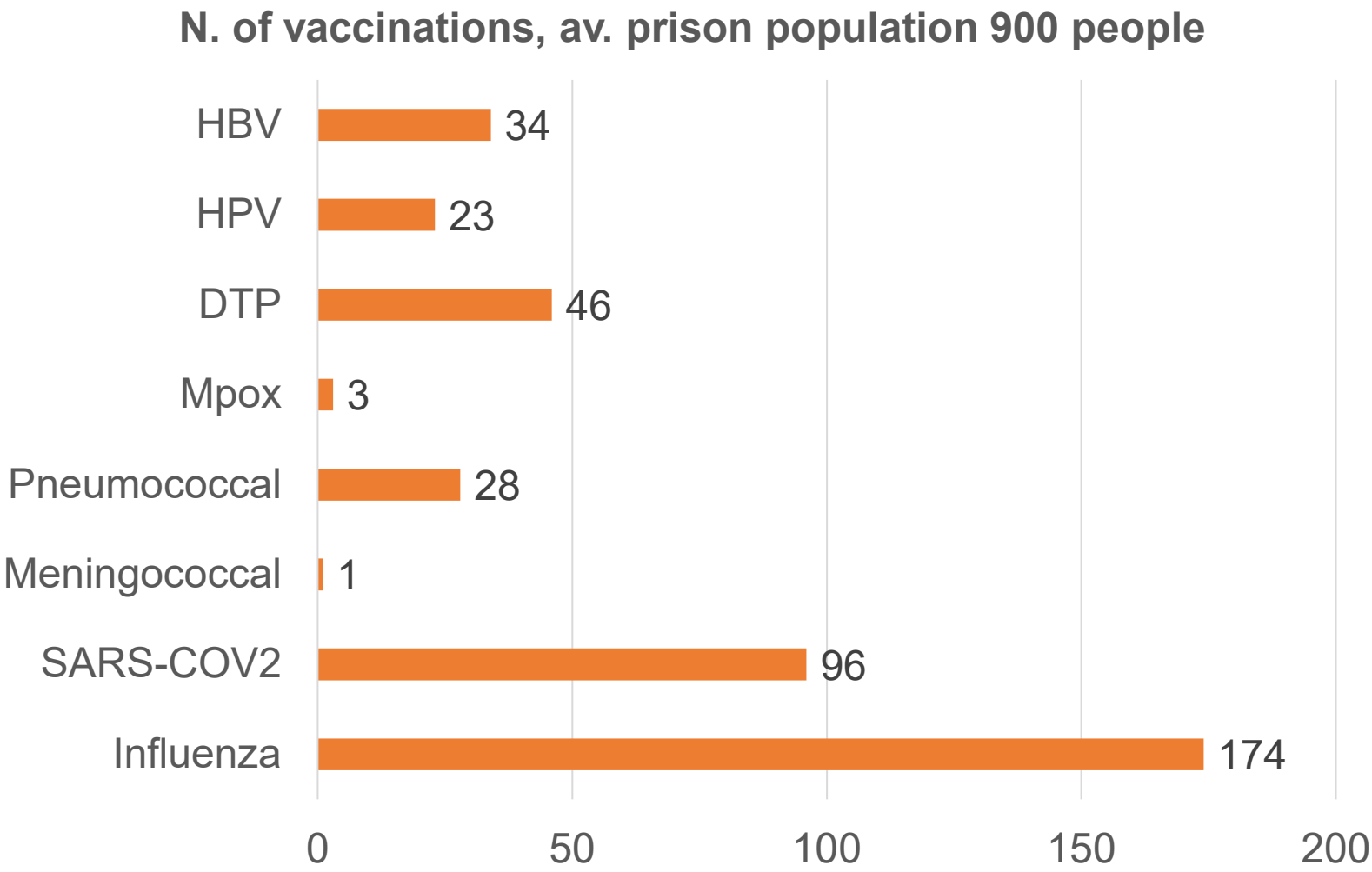
San Vittore remand house Vaccination Clinic

- Schedule: extended standard (with a focus for VZV in all Milan prison)
- Staff: ID specialist, nurse, health worker (with an anthropological background)
- Once a week
- Involvement of pharmacy staff for warehouse and supply activities
- “IMMUNISE" data collection tool, connection with regional and national services for registration and follow up
- Prison as a Vaccination Hub





San Vittore Vaccination Clinic: 2023 activities



Thanks to Marianna Polidoro

HPV vaccination in San Vittore

From May 2023 HPV vaccination offered to:

- Women aged 18-26
- Program of sensitization, information and empowerment with the collaboration of non-health anthropological staff
- Specific male populations (HIV, transgender and MSM, with challenges in «identifying» MSM, sexual stigma)
- Plan with the hospital pharmacy and local health services for the follow-up of the vaccination schedule to ensure the 3 doses

Comments & conclusion

- Vaccinations that prevent cancer (HBV and HPV) can and should be implemented in prison vaccination strategies
- HBV and HPV vaccination should be considered the "sentinels" of a functioning vaccine system (also for the interests of the RISE-Vac Project)
- Vaccination schedules must be adapted to the prison context (e.g. accelerated schedules, use of boosters) and harmonized with local medicine
- The experience of awareness raising and female empowerment in the HPV vaccination implementation strategy shows how the wide-ranging and not strictly healthcare approach is an effective public health tool

RISE-Vac

Thank you

RISE-Vac

https://wephren.tghn.org/rise-vac/

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