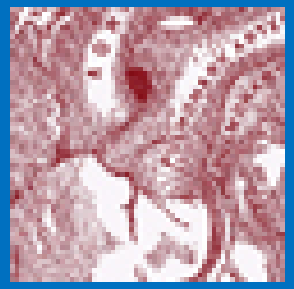


medice cura te ipsum

Le vaccinazioni nell'operatore sanitario

Pisa 27-28 marzo 2017

Modelli organizzativi efficaci per aumentare l'adesione degli OS alle vaccinazioni. Il punto di vista del Medico del Lavoro

Andrea Trevisan

Dipartimento di Scienze Cardiologiche, Toraciche e Vascolari, Università di Padova

Berlino, 1927

morti 48.742

tubercolosi	4570
cancro	6443
malattie cardiache	5656
malattie vascolari	4818
apoplessia cerebrale	5140
polmonite	2419
tosse convulsa (pertosse)	961
difterite (bambini)	562
scarlattina	123
morbillo	93
ancora lattanti	3640

nati 42.696

Alfred Döblin, Berlin Alexanderplatz, 1929

D. Lvo 81/08
TITOLO I
PRINCIPI COMUNI
Capo III
OBBLIGHI DEI LAVORATORI
art. 20, comma 2, lettera g

2. I lavoratori devono in particolare:

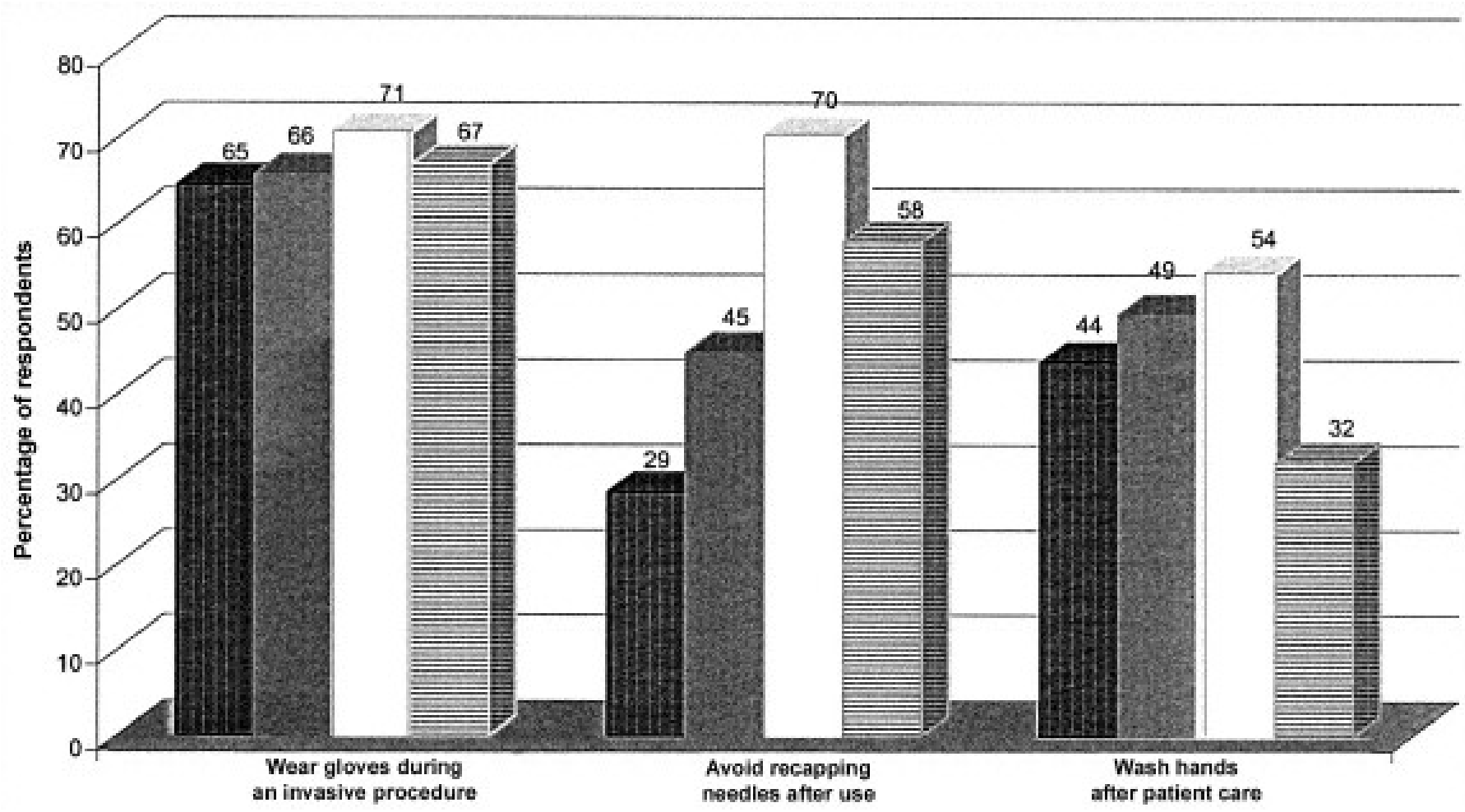
g) non compiere di propria iniziativa operazioni o manovre che non sono di loro competenza ovvero che possono compromettere la sicurezza propria o di altri lavoratori;

D. Lvo 81/08
TITOLO X
ESPOSIZIONE AD AGENTI BIOLOGICI
Capo III
SORVEGLIANZA SANITARIA
art. 279, comma 2, lettera a

2. Il datore di lavoro, su conforme parere del medico competente, adotta misure protettive particolari per quei lavoratori per i quali, anche per motivi sanitari individuali, si richiedono misure speciali di protezione, fra le quali:

a) la messa a disposizione di vaccini efficaci per quei lavoratori che non sono già immuni all'agente biologico presente nella lavorazione, da somministrare a cura del medico competente

Use of standard precautions among 3200 health care workers in Iowa, by occupation. Black columns, physicians; gray columns, registered nurses; white columns, licensed practical nurses; and striped columns, medical technologists.



Doebbeling et al, Clin Infect Dis 37: 1006-1013, 2003

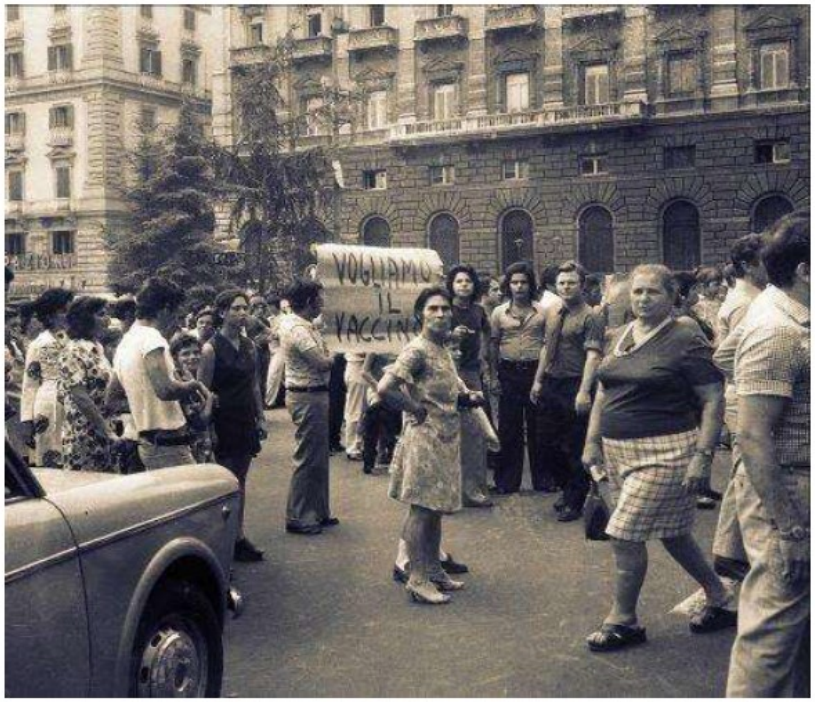
2006

PROGETTO

V = VACCINE
E = EUROPEAN
N = NEW
I = INTEGRATED
C = COLLABORATION
E = EFFORT

Piano Nazionale Prevenzione Vaccinale

PNPV 2017-2019



17 gennaio 2017

OBIETTIVI

	2017	2018	2019
Men. B	≥ 60%	≥ 75%	≥ 95%
Men. ACWY135	≥ 60%	≥ 75%	≥ 95%
MMR	≥ 60%	≥ 75%	≥ 95%
Varicella	≥ 60%	≥ 75%	≥ 95%
Rosolia	ridurre a <5% le donne suscettibili in età fertile		

VACCINI PER OPERATORI SANITARI

Epatite B
Varicella
Rosolia
Parotite
Morbillo
Pertosse
Influenza

Table 1. HBV vaccination survey in some European countries according to age of first vaccine dose and in relation to the modality of implementation.

Country	Age of first dose	Implementation
Belgium	2 months	Recommended†
Bulgaria	At birth	Mandatory
Cyprus	2 months	Recommended
Czech Republic	3 months	Mandatory
Estonia	At birth	Recommended
France	2 months	Recommended†
Germany	2 months	Recommended
Hungary	At birth	Mandatory
Ireland	2 months	Recommended
Italy	3 months	Mandatory
Latvia	At birth	Mandatory
Lithuania	At birth	Recommended
Luxembourg	2 months	Recommended
Malta	15 months	Recommended
Poland	At birth	Mandatory
Portugal	At birth	Recommended
Romania	At birth	Mandatory
Slovakia	2 months	Mandatory
Slovenia	Before school	Mandatory
Spain	2 months	Recommended

Denmark, Finland, Iceland, The Netherlands, Norway, Sweden and UK have a selective immunization program for at-risk subjects.
†Mandatory for at-risk subjects only.
The data are derived from [6] and [7].

Trevisan et al, Future Virol 10:53,2015

Table 2. Recommendation for HBV vaccination for healthcare workers in some European countries.

Country	Implementation
Austria	Recommended
Belgium	Mandatory
Czech Republic	Mandatory
Denmark	Recommended†
France	Mandatory
Germany	Recommended
Ireland	Recommended
Italy	Recommended
Luxembourg	Recommended
Netherlands	Recommended
Norway	Recommended‡
Poland	Mandatory
Slovenia	Mandatory
Spain	Recommended
Sweden	Recommended
Switzerland	Recommended
UK	Recommended

†Only for medical and nursing staff.
‡Only for medical, nursing, and paramedical staff and for medical students.
The data are derived from [74].

Trevisan et al, Future Virol 10:53,2015

Vaccine 29 (2011) 9557–9562

Contents lists available at SciVerse ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Vaccination policies for health-care workers in acute health-care facilities in Europe

Helena C. Maltezou[a,*], Sabine Wicker[b], Michael Borg[c], Ulrich Heininger[d], Vincenzo Puro[e], Maria Theodoridou[f], Gregory A. Poland[g]

Human Vaccines & Immunotherapeutics 11:11, 2522–2537; November 2015; © 2015 Taylor & Francis Group, LLC

Vaccination of healthcare workers: A review

Skerdi Haviari[1], Thomas Bénet[1,2,3], Mitra Saadatian-Elahi[1], Philippe André[1], Pierre Loulergue[3,4,5], and Philippe Vanhems[1,2,3,*]

Table 1. Summary of the key facts for each vaccine-preventable disease

Disease	Patients most frequently/seriously affected	Nosocomial transmission	HCW vaccination / seroprevalence rates	Vaccination recommendations
Influenza	Children, elderly, obese, immunocompromised, affected by chronic neurological, hepatic, renal comorbidities	Frequent	15-90%	Recommended for all HCWs in 26/31 EU/EEA countries, the USA and Japan
Hepatitis B	Stay in endemic regions, pregnant women, immunocompromised, disabled, dialyzed, intravenous drug users	Frequent	63-95%	Recommended for all HCWs in high-income countries. Mandatory for medical students in France
Pertussis	Infants, affected by cardiac or respiratory comorbidities	Frequent	14-73%	Recommended for all HCWs in high-income countries
Measles	Infants and children <5 years old, adults > 20, pregnant women, immunocompromised	Frequent	87-97%	Recommended for all HCWs in high-income countries. Mandatory in Finland and for female workers in Slovenia
Mumps	Students, international travellers	Rare		
Rubella	Pregnant women, children <5 years old	Exceptional		
Varicella	Pregnant women, newborns, adults, immunocompromised	Rare	90-100%	Recommended for the general population in the USA, Canada, Australia and 4 EU/EEA countries. Recommended for some or all HCWs in 10 EU/EEA countries
Tetanus	Elderly, affected by chronic conditions	Exceptional	89-97%	Recommended for the general population in 14/30 EU/EEA countries and the USA
Diphtheria	Children <5 years old, adults >40	Exceptional		

healthcare

Healthcare 2016, 4, 47; doi:10.3390/healthcare4030047

MDPI

Review

Immunization of Health-Care Providers: Necessity and Public Health Policies

Helena C. Maltezou [1,*] and Gregory A. Poland [2]

Operatori sanitari suscettibili

Morbillo	4,6-17%
Parotite	15,7-25%
Rosolia	4,5-18,6%
Varicella	4,1-16,7%
Pertosse	48,3-68,8%
Epatite B	22,6-35%

Human Vaccines & Immunotherapeutics 11:1, 133–139; January 2015; © 2015 Landes Bioscience

Low vaccination coverage among italian healthcare workers in 2013

Contributing to the voluntary vs. mandatory vaccination debate

Francesca Fortunato[1], Silvio Tafuri[2], Vanessa Cozza[1,3], Domenico Martinelli[1], and Rosa Prato[1,*]

INFLUENZA	24,8%
EPATITE B	70,1%
VARICELLA	3,6%
MMR	9,7%

Malattia	Anno	Casi	Reparti coinvolti	Operatori coinvolti	AOP	UNIPD
Meningite	2015	8	9	193	170	23
	2016	6	6	4	60	4
Pertosse	2015	2	2	37	11	26
	2016	6	6	99	87	12

Malattia	Anno	Casi	Reparti coinvolti	Operatori coinvolti	AOP	UNIPD
Varicella	2016	10	3	35	24	11
Rosolia	2016	0	0	0	0	0
Parotite	2016	3	5	42	35	7
Morbillo	2016	2	3	26	21	5

2015, 90, 433-460

No. 35

World Health Organization

Organisation mondiale de la Santé

Weekly epidemiological record
Relevé épidémiologique hebdomadaire

28 AUGUST 2015, 90th YEAR / 28 AOÛT 2015, 90e ANNÉE
No. 35, 2015, 90, 433–460
http://www.who.int/wer

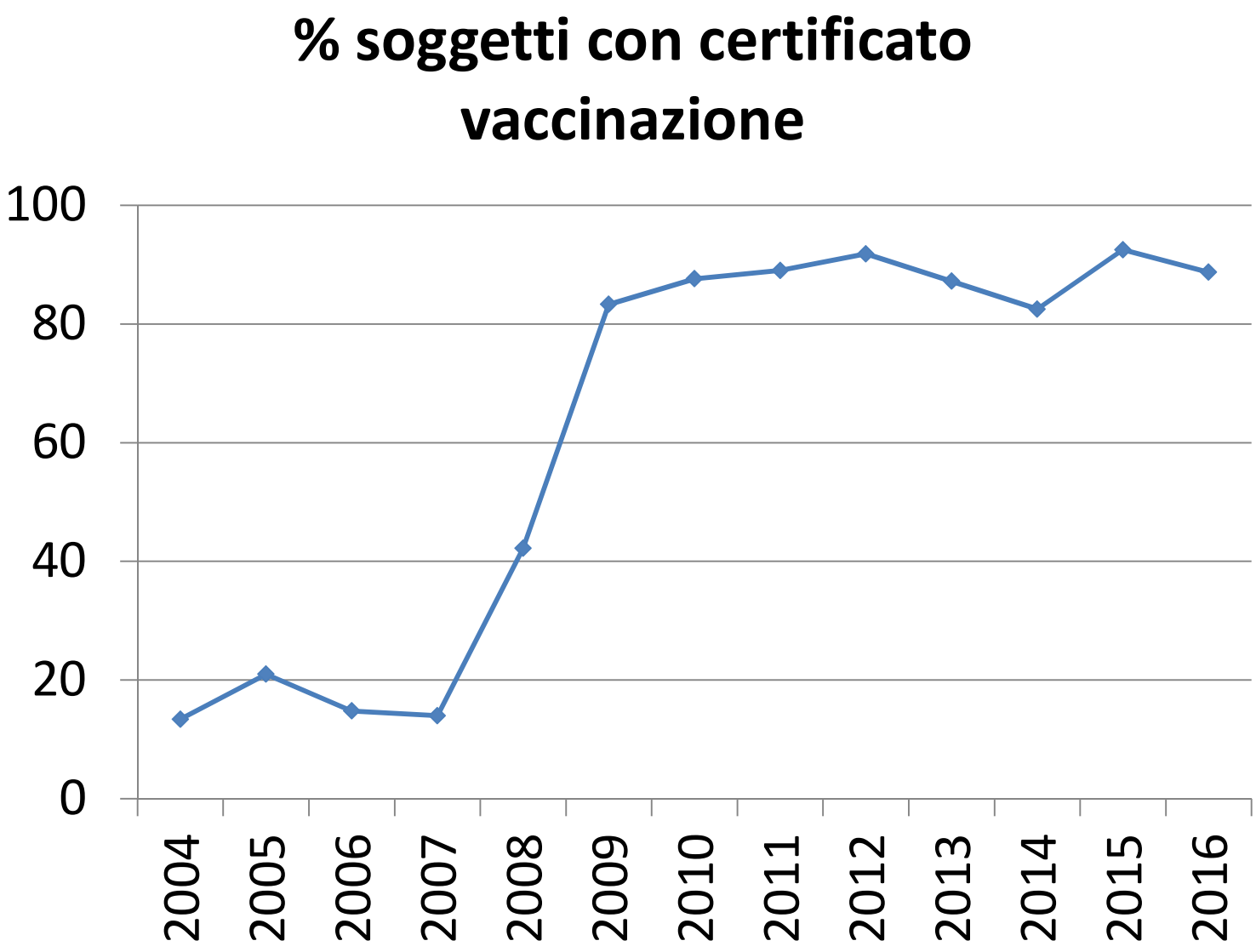
Contents

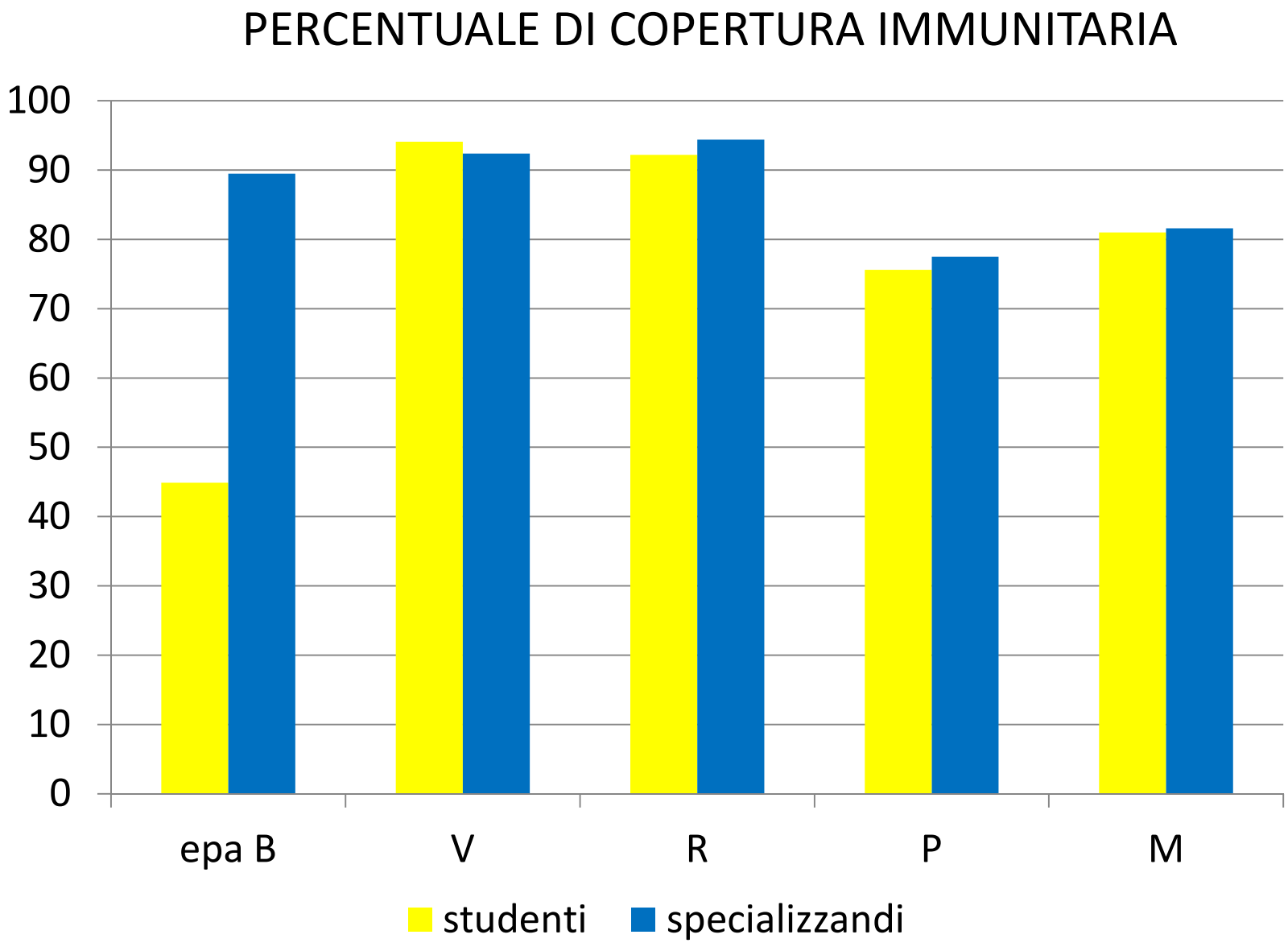
433 Pertussis vaccines: WHO position paper – August 2015

Pertussis vaccines: WHO position paper – August 2015

Note de synthèse: Position de l'OMS concernant les vaccins anticoquelucheux – août 2015

A seconda degli studi la durata della protezione varia da **4-12 anni**, con una perdita annuale della immunità variabile dal **2 al 13%**.


% soggetti con certificato vaccinazione
100
80
60
40
20
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016


PERCENTUALE DI COPERTURA IMMUNITARIA
100
90
80
70
60
50
40
30
20
10
0
epa B
V
R
P
M
studenti
specializzandi

non-responder: “un soggetto che non sviluppa anticorpi di superficie non protettivi ((>10 IU/l) dopo aver completato due serie complete di vaccino e per il quale è stata esclusa una infezione acuta o cronica” (CDC, 2011)

I CDC raccomandano che i soggetti con sierologia dubbia dovrebbero essere considerati suscettibili a meno che non vi sia una chiara evidenza di immunità. Il range indicato come “dubbio” è utilizzato dai produttori di test come un “safety net” per classificare quei soggetti il cui livello di anticorpi è tale, sebbene misurabile, da non essere certi che possa essere protetivo in caso di esposizione al virus.

Vaccine 31 (2013) 1696–1700

Contents lists available at SciVerse ScienceDirect

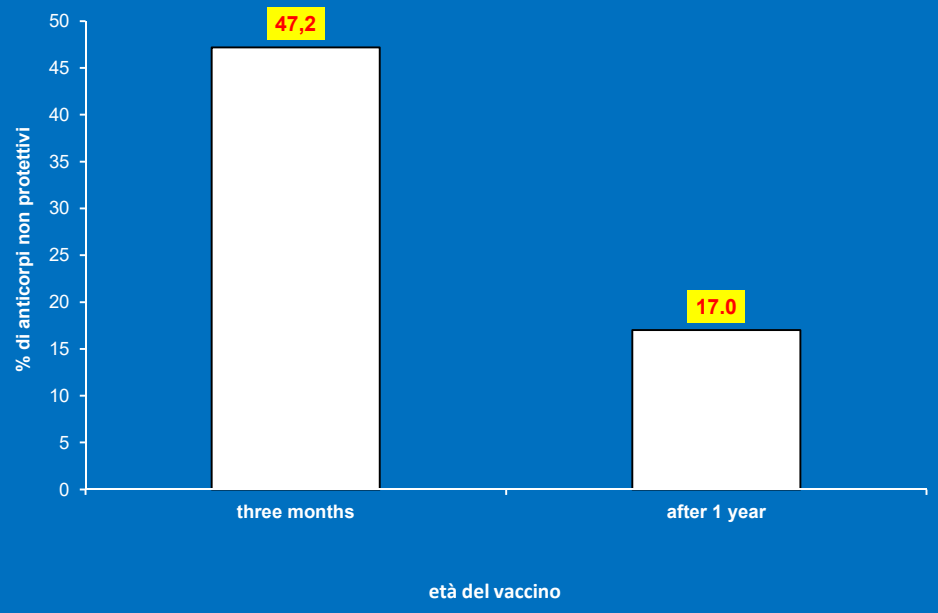
Vaccine

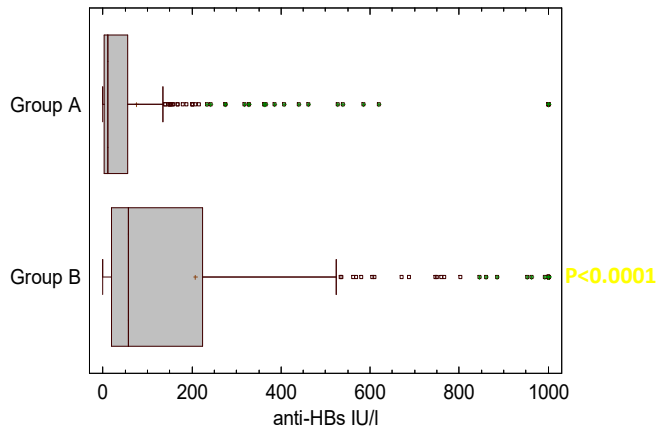
journal homepage: www.elsevier.com/locate/vaccine

Hepatitis B vaccination at three months of age: A successful strategy?☆

Federica Chiara, Giovanni Battista Bartolucci, Michele Mongillo, Luca Ferretto, Annamaria Nicolli, Andrea Trevisan*

Department of Molecular Medicine, University of Padova, Italy





Vaccine 32 (2014) 62–68

Contents lists available at ScienceDirect

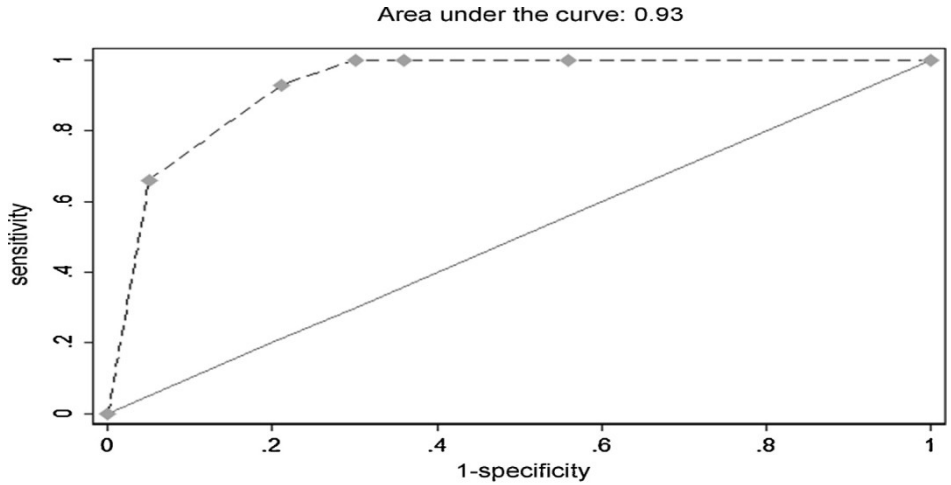
Vaccine

journal homepage: www.elsevier.com/locate/vaccine

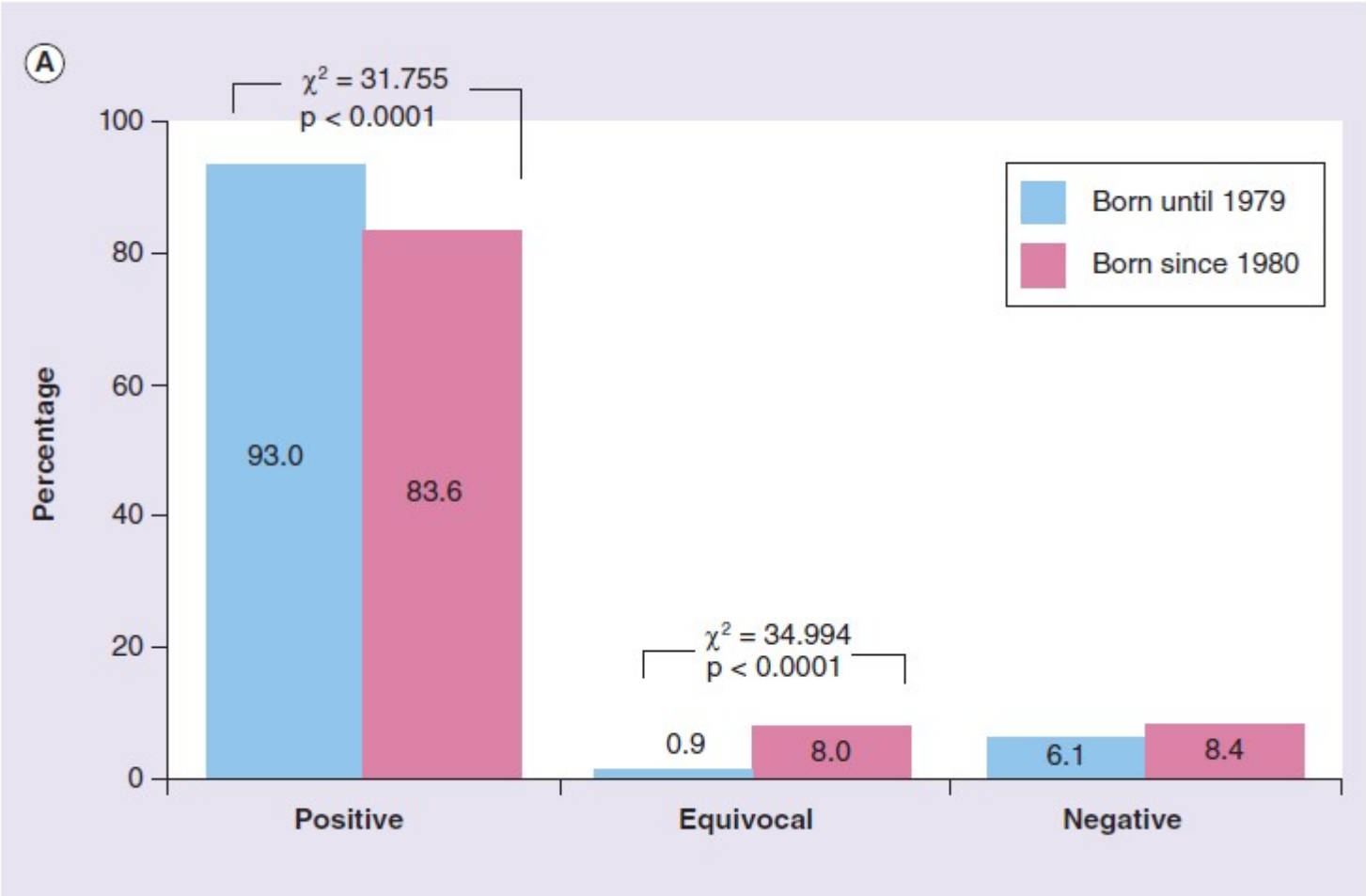
Hepatitis B vaccination of adolescents: Significance of non-protective antibodies☆

Federica Chiara, Giovanni Battista Bartolucci, Margherita Cattai, Anna Piazza, Annamaria Nicolli, Alessandra Buja, Andrea Trevisan*

Department of Molecular Medicine, University of Padova, Italy



Pre-booster titre level category	sensitivity	CI 95%	specificity	CI 95%
<0.1	0.66	(0.39-0.87)	0.95	(0.92-0.98)
<1	0.93	(0.66-1.00)	0.80	(0.74-0.84)
<2	1.00	(0.74-1.00)	0.70	(0.64-0.75)
<3	1.00	(0.75-1.00)	0.64	(0.58-0.70)
<5	1.00	(0.74-1.00)	0.44	(0.8-0.51)



Trevisan et al., Future Virology 2015

Tasso critico di copertura vaccinale della popolazione

(Anderson RM e May RM, 1990, modificata)

Malattia	Ro	CV
Morbillo	20	≥95%
Pertosse	15-17	92-95%
Varicella	12-13	90-92%
Parotite	10-12	90-92%
Rosolia	7-8	85-87%
Difterite	5-6	80-85%
Poliomielite	5-6	80-85%
Hib	1,1	80%

2009, **84**, 349–360 **No. 35**

Weekly epidemiological record
Relevé épidémiologique hebdomadaire

28 AUGUST 2009, 84th YEAR / 28 AOÛT 2009, 84e ANNÉE
No. 35, **2009**, **84**, 349–360
http://www.who.int/wer

Measles vaccines: WHO position paper

"although vaccine-induced antibody concentrations decline over time, immunological memory persists."

CLINICAL MICROBIOLOGY REVIEWS, July 2006, p. 531–545 Vol. 19, No. 3
0893-8512/06/$08.00+0 doi:10.1128/CMR.00017-06

Bats: Important Reservoir Hosts of Emerging Viruses

Charles H. Calisher,[1]* James E. Childs,[2] Hume E. Field,[3] Kathryn V. Holmes,[4] and Tony Schountz[5]

Environmental Research Section A **83,** 1–22 (2000)
doi:10.1006/enrs.1999.4045, available online at http://www.idealibrary.com on IDEAL®

How Lead Exposure Relates to Temporal Changes in IQ, Violent Crime, and Unwed Pregnancy

Rick Nevin

ICF Consulting, 9300 Lee Highway, Fairfax, Virginia 22031-1207

ELSEVIER

Mutation Research 447 (2000) 3–13

Fundamental and Molecular Mechanisms of Mutagenesis

www.elsevier.com/locate/molmut
Community address: www.elsevier.com/locate/mutres

Mutation Research Frontiers

Paracelsus to parascience: the environmental cancer distraction

Bruce N. Ames *, Lois Swirsky Gold

Division of Biochemistry and Molecular Biology and National Institutes of Environmental Health Sciences Center, University of California at Berkeley and Lawrence Berkeley National Laboratory Berkeley, Berkeley, CA 94720, USA

PARASCIENZA: OPINIONI, NON FATTI

Siero Bonifacio

Laetrile

Multiterapia Di Bella

Stamina

Vaccini e autismo

SCIENZA: FATTI, NON OPINIONI