



FIP DIGITAL PROGRAMME

**TRANSFORMING  
VACCINATION**

GLOBALLY & REGIONALLY

# FIP Transforming Vaccination Globally & Regionally

Series 2 Setting transformative goals

2.5 Pharmacist vaccinators and antimicrobial stewardship: FIP  
DG 17 Antimicrobial Stewardship



# Announcements



This webinar is being recorded and live-streamed via Facebook



The recording will be freely available on our website [www.fip.org](http://www.fip.org)



You may ask questions using the question box provided



You are welcome to provide feedback to [webinars@fip.org](mailto:webinars@fip.org)



Become a member of FIP at [www.fip.org/membership\\_registration](http://www.fip.org/membership_registration)

# Welcome to the “Transforming Vaccination Regionally & Globally” Programme

---



Transforming Vaccination Regionally and Globally is the first FIP Transformation outcome-based online programme of its kind underpinned by the FIP Development Goals (FIP DGs).

**Final outcome of the programme is a historic global FIP Commitment to Action on Vaccination in Pharmacy.**

A FIP Transforming Vaccination Collection (2021).



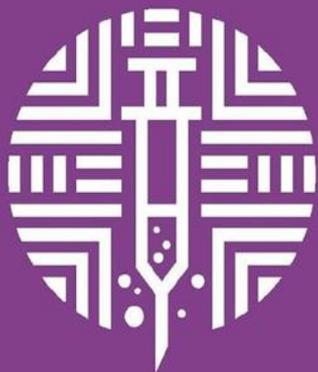
FIP DIGITAL PROGRAMME  
**TRANSFORMING  
VACCINATION**  
GLOBALLY & REGIONALLY



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE



FIP DIGITAL PROGRAMME

## TRANSFORMING VACCINATION

GLOBALLY & REGIONALLY

ROADMAP  
SEPTEMBER  
TO DECEMBER  
2020

### SERIES #1

#### Identifying transformation needs

The needs of the pharmaceutical science, practice and workforce of vaccination

### SERIES #2

#### Setting transformative goals

Deconstructing vaccination in pharmacy through the FIP Development Goals (FIP DGs) across the entire profession

### SERIES #3

#### Committing to transformation

Delivering a global commitment to action on vaccination

#1

SEPT / OCT

#### Main outcome

Identification of needs & considerations for transforming vaccination globally across practice, science and workforce & education.

#2

OCT / NOV

#### Main outcome

Discussing mechanisms and drivers to progress the most relevant FIP Development Goals (FIP DGs) in the context of transforming vaccination in pharmacy.

#3

DEC

#### Main outcome

Delivering a global FIP Commitment to Action on Vaccination in Pharmacy.

# Important Links & Resources

Transforming Vaccination Regionally & Globally Webpage  
[transformingvaccination.fip.org](https://transformingvaccination.fip.org)

Engage with us and help us answer the following questions:

1. What single factor should be prioritized to transform pharmacy vaccination services globally and regionally?
2. What would be the most important achievement in terms of pharmacy vaccination services in your country in the next five years?
3. What else should the FIP Commitment to action outline?



FIP DIGITAL PROGRAMME

**TRANSFORMING  
VACCINATION**

GLOBALLY & REGIONALLY



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Today's Learning Objectives

---



To understand the impact of FIP  
Development Goal 17: Antimicrobial  
Stewardship in the Transformation  
of Vaccination Globally and  
Regionally



FIP DIGITAL PROGRAMME

**TRANSFORMING  
VACCINATION**

GLOBALLY & REGIONALLY



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# AMR and Vaccination



FIP DIGITAL PROGRAMME  
**TRANSFORMING VACCINATION**  
GLOBALLY & REGIONALLY

1. Improve awareness and understanding of AMR
2. Strengthen knowledge through surveillance and research
3. Reduce the incidence of infection through prevention and control
4. Optimise the responsible use of antimicrobials
5. Ensure sustainable investment through research & development



Vaccines to tackle drug resistant infections  
An evaluation of R&D opportunities



## Antimicrobial resistance

### outlook

## Research round-up

Highlights from research. By Elizabeth Svoboda

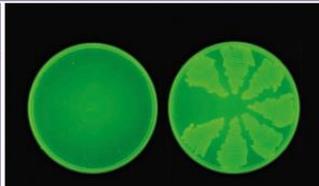
### Vaccination curbs resistance

High vaccination rates can help to limit antibiotic drug use that drives antibiotic resistance. Six researchers from Johns Hopkins University in Baltimore, Maryland, in an analysis of prescriptions in the United States, the team found that higher rates of influenza vaccination correlated with less use of antibiotics.

Epidemiologist Bill Kaine and his team combed large databases of antibiotic prescriptions written from 2010 to 2012, as well as records of state vaccination rates over the same period from the US Centers for Disease Control and Prevention. They used a regression analysis to find the relationship between the two datasets.

After controlling for socio-economic factors and differences in health-care access, the researchers found that for every 10 percentage-point rise in the vaccination rate, there was a 0.1% fall in antibiotic prescriptions – or 14 fewer prescriptions for every 1,000 people. The decrease was consistent across several antibiotic groups, including broad-spectrum penicillins, cephalosporins and tetracyclines.

The team points to a number of factors that help vaccinees keep people from seeking antibiotics, which are ineffective against flu, and vaccination limits antibiotic prescriptions for the secondary bacterial infections that



Scientists did not develop resistance to an antibiotic called halicin (L), but they did to another drug (R).

commonly arise with flu. The researchers think that lacking a healthy virus to vaccinate could therefore help to keep antibiotic resistance at bay.

Cited from Nature, Dec. 7, 2023 (2023)

### Deep learning reveals new drugs

With the power of new artificial intelligence naming drug molecules at the Massachusetts Institute of Technology (MIT) in Cambridge have developed an automated helper to find antibacterial compounds. The reactive learning system has discovered an antibiotic called halicin, which is structurally different from most antibiotics and works against multi-drug resistant infections.

Antibiotics have typically been found by testing off

of drug-resistant bacterial strains, such as *Mycobacterium tuberculosis* and *Candida auris*. It came through with surprising success, with killing the strains.

In a broader scan of more than 100 million known molecules, the MIT system identified another eight compounds with promising antibacterial properties. Like halicin, these compounds are structurally distinct from existing antibiotics. The team hopes that the model or similar ones can continue to find new antibacterial compounds for possible drug development.

Cited from Nature, Dec. 7, 2023 (2023)

### Molecular drifts target resistant bacteria

A team from the Max Planck Institute of Science in Berlin has developed a microscope

Sponsored by



ADVANCING PHARMACY WORLDWIDE

# Speaker 1

---



## Alfonso Pereira Céspedes

Pharmacist

University of Costa Rica

Member of the Community Pharmacy Section-FIP

Member of the Health and Medicine Information  
Section-FIP

Member of Hospital Pharmacy Section-FIP



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE



FIP DIGITAL PROGRAMME  
**TRANSFORMING  
VACCINATION**  
GLOBALLY & REGIONALLY

## Alfonso Pereira Céspedes PharmD, MSc

- Pharmacy Faculty, University of Costa Rica
- Pharmaceutical Research Institute (INIFAR)
- National Drug Information Center (CIMED)

alfonso.pereiracespedes@ucr.ac.cr



UNIVERSIDAD DE  
COSTA RICA

**FF**  
Facultad de  
**Farmacia**

**INIFAR**  
Instituto de  
Investigaciones  
Farmacéuticas

**CIMED**  
Centro Nacional de  
Información de  
Medicamentos



Sponsored by



# Antimicrobial Drug Resistance in America region



- Public Health Problem.
- Community and hospital
- Limitation for proper treatment of community and hospital-acquired infections.
- Limited information available on prevalence.
- No regional studies on antimicrobial use in hospitals
- Urgent need to advance current knowledge of prescription and consumption.
- Stewardships programs are relative new in LATAM

## COMMON PATHOGENS WITH INCREASING RESISTANCE

### Community level

- *Neisseria gonorrhoeae*, fluoroquinolone-resistant
- *Salmonella spp.*, fluoroquinolone-resistant, 3rd generation cephalosporin-resistant
- *Staphylococcus aureus*, methicillin-resistant
- *Streptococcus pneumoniae*, reduced susceptibility to penicillin and macrolides
- *Streptococcus pyogenes*, reduced susceptibility to macrolides
- *Shigella spp.*, fluoroquinolone-resistant
- *E. coli*, fluoroquinolone-resistant and 3rd-generation cephalosporin-resistant

### Hospital level

- *Acinetobacter baumannii*, carbapenem-resistant
- *Pseudomonas aeruginosa*, carbapenem-resistant
- *Enterobacteriaceae*, carbapenem-resistant, 3rd generation cephalosporin-resistant and polymyxin-resistant
- *Enterococcus faecium*, vancomycin-resistant
- *Staphylococcus aureus*, methicillin-resistant

Pan American Health Organization. Florida International University. Recommendations for Implementing Antimicrobial Stewardship Programs in Latin America and the Caribbean: Manual for Public Health Decision-Makers. Washington, D.C.: PAHO, FIU; 2018.

Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Vaccination in Latin America and Caribbean



- Current vaccination coverage rates are lower than the region-wide rates of 95% vaccine coverage at the national level (PAHO).
- Individual/group influence is the main vaccination barrier.
- Low socio-economic group, less educated and age contribute to low vaccine uptake.
- More data is needed within target population, subgroups, countries and vaccine type.
- Education and trust in healthcare professionals promotes vaccine acceptance.

Guzman-Holst A, DeAntonio R, Prado-Cohrs D, Juliao P. Barriers to vaccination in Latin America: A systematic literature review. *Vaccine*. 16 de enero de 2020;38(3):470-81.

2020-38(3):470-81

Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE



# Pharmacist's Role in Antimicrobial Drug Resistance

- Control and prevention of infectious diseases of health systems
- Responsibilities:
  - Promoting optimal use of antimicrobial agents.
  - Reducing the transmission of infections (Immunisation services)
  - Education and information



**CIMED**  
Centro Nacional de Información de Medicamentos



**RESISTENCIA A LOS ANTIBIÓTICOS**  
**¿QUÉ PUEDEN HACER**  
**LOS FARMACÉUTICOS?**



Los microorganismos pueden sufrir cambios que los hacen resistentes a los antibióticos utilizados para tratar las infecciones.



- ✓ ¿Dispensa antibióticos solo cuando se necesitan y de acuerdo con las directrices vigentes (por ejemplo, solo si el paciente presenta una receta válida con el medicamento y la posología y la duración correctas)?
- ✓ Cuando un paciente le pide un tratamiento para un resfriado o una gripe, ¿le explica que no necesita antibióticos?
- ✓ ¿Explica a sus pacientes cómo tomar correctamente los antibióticos, qué es la resistencia y cuáles son los riesgos que conlleva el uso excesivo de estos fármacos?
- ✓ Recuerda a los pacientes que deben consultar a su médico si persisten sus síntomas?
- ✓ ¿Explica a los pacientes cuáles son las medidas de prevención de las infecciones (vacunación, lavado de manos, relaciones sexuales sin riesgo, taparse la nariz y la boca al estornudar, etc.)?

#AntibioticResistance

www.ministeriodesalud.gub.uy



ASHP

Sponsored by



# Immunisation services and Community Pharmacies

---



- Canada, USA, Argentina, Brasil, Chile, Costa Rica
- Accordance with health-system policy and federal, state, or local regulations.
- Activities:
  - Encouraging routine immunisation (eg influenza)
  - Screen patients and identify those need of immunisation.
  - Dispensing and Administration of vaccines
  - Pharmacovigilance
  - Education and information



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

## Speaker 2



### Manjiri Sandeep Gharat

Vice-President, Indian Pharmaceutical Association  
(IPA)

Vice-President, International Pharmaceutical  
Federation (FIP)



FIP DIGITAL PROGRAMME

TRANSFORMING  
VACCINATION

GLOBALLY & REGIONALLY



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# India: At a glance



FIP DIGITAL PROGRAMME

TRANSFORMING  
VACCINATION

GLOBALLY & REGIONALLY

1.33 B

- Population of India, no. of doses (of COVID vaccine) to be delivered

2.2 M

- Total Healthcare Workers (HCWs) (approx. 20 HCWs for 10,000 people)

0.75 M

- Total number of Pharmacies in India



*India has severe shortages and maldistribution within its health workforce, Rural areas with nearly 71% of India's population have only 36% of health workers (Ref.:National Sample Survey Organization)*



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Situation of AMU in India



India is among the countries with the highest bacterial disease burden in the world

Antibiotic Consumption In India is the Highest in the world

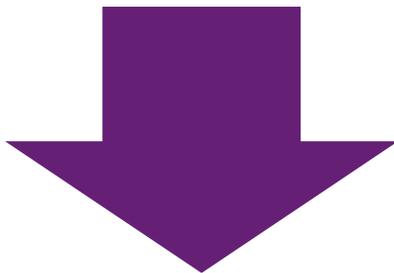
Misuse, overuse and underuse of antibiotics is common

Ref:<https://www.who.int/southeastasia/health-topics/antimicrobial-resistance>

Sponsored by   **ADVANCING PHARMACY WORLDWIDE**



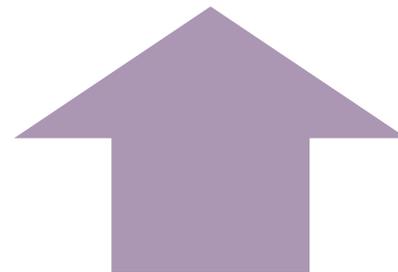
# Various HCWs are involved in Vaccination, Example: Accredited Social Health Activists (ASHA: Community Workers without ANY formal health education)



- Pharmacists have never been roped in Immunization Programme



- Never involved before in National Health Programmes except Tuberculosis Control programme



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Community Pharmacies



FIP DIGITAL PROGRAMME

**TRANSFORMING  
VACCINATION**

GLOBALLY & REGIONALLY

**Advantage of Pharmacies if developed as Immunization Center**

- Location right in the community
- Open for long hours
- Pharmacist-patient friendly relationship

**Barriers perceived previously**

- Trader image
- Excess workload
- Lack of policy & Training

**COVID-19 pandemic has changed the situation: Realization of public health role and the huge opportunity**



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Advocacy for engaging Pharmacists in Immunization

IPA and some other pharmacist organizations have come forward requesting Government to include pharmacists in Immunization programme to increase the pool of HCWs



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# IPA LETTER to Government of India



FIP DIGITAL PROGRAMME  
**TRANSFORMING  
VACCINATION**  
GLOBALLY & REGIONALLY

**The Indian Pharmaceutical Association (IPA)**  
(Society Regn. No. 10 of 1960 GBRD - Public Trust Regn. No. F. 746 (Burr) dt. 4.4.1960)  
Kalinia, Santacruz (East), Mumbai - 400 086, India • Tel: +91 22 2667 1872 • Telefax: +91 22 2667 0744  
E-mail: ipacentre@ipapharma.org • Website: http://www.ipapharma.org

**MISSION**  
The Indian Pharmaceutical Association (IPA) is the national professional body of members engaged in various facets of the profession of pharmacy. The IPA is committed to promote the highest professional and ethical standards of pharmacy, to raise the image of pharmacists as competent healthcare professionals, to service the community, government and other on-site professional issues and support pharmaceutical education and science in all aspects.

2018 - 2020  
**President** Dr. Harsh Vardhan  
T.V. Narasana  
**Immediate Past President** Union Minister for Health and Family Welfare  
Rao V.S.V. Vadlamuri  
**Vice Presidents** Ministry of Health and Family Welfare, Government of India,  
Room No. 348-A, Nirman Bhavan,  
New Delhi-110011  
**Sub: Request to Consider Inclusion of Pharmacists in the COVID-19 Immunization Programme – reg.**  
**Divisional Heads** Dear Sir,  
**Community Pharmacy** The Indian Pharmaceutical Association (IPA) is an 80-year old association of pharmacy professionals in India (www.ipapharma.org) with a member base of over 15,000, spread across the nation operating through 22 state branches and more than 55 local branches. IPA is a non-profit making organization registered as a charitable trust with a constitution and functions on democratic principles. IPA's major objective is to position the pharmacist as one of the important healthcare professionals of India. As a member of the Drug Technical Advisory Board, India, IPA is actively involved in advising the government on matters of drug regulation and those that are important to the pharmacy profession. IPA is affiliated to international associations like FIP, FAPA, CPA, AAPS, SEAPharm Forum and WHO for carrying out various collaborative professional activities, which include organizing training programmes for pharmacy professionals from industry, academics, regulatory and practice, making representations to the authorities on matters of professional interest and constantly working towards upgrading the standards of professional services offered by the pharmacists.  
**Education** S. Vidyarthi  
**Hospital Pharmacy** R.N. Gupta  
**Industrial Pharmacy** J. Jayaseelan  
**Regulatory Affairs** Subhash Meheril  
**Hon. Gen. Secretary** Suresh Khanna  
**Hon. Treasurer** Hemant Mondkar  
**Editor - Pharma Times** Aka Mukte  
**Editor - IJPS** Shekar Gid  
**Coordinator** T.S. Nair

**Continuation sheet**

= 2 =

We request you to consider engaging the pharmacists as one of the immunization providers in this exercise of mass immunization. Worldwide, pharmacists have been actively participating as immunization providers. The International Federation of Pharmaceutical Associations (IFP) is strongly advocating on training the pharmacists and deploying them in the immunization drives.

India has more than 10 lakh pharmacists involved in the supply chain of medicines working in retail, wholesale, hospital pharmacies and hospitals (both private and public) across the country. We at IPA on behalf of the pharmacy profession assure our full support to the cause of ensuring complete immunization with the COVID-19 vaccine, perhaps the best weapon to tackle the pandemic of SARS-CoV-2.

We sincerely believe that you will accept and explore our suggestion as the Prime Minister has given a nationwide call for involving all stakeholders in protecting the countrymen through immunization.

Thanking you,  
Yours sincerely,  
  
Suresh Khanna  
National Honorary General Secretary

CC:

1. Shri Narendra Modi, Prime Minister, India
2. Mr. Amitabh Kant, CEO, NITI Aayog, New Delhi
3. Mr. Rajesh Bhushan, Secretary (Health and Family Welfare), Govt. of India
4. The President, Pharmacy Council of India
5. Dr. V. K. Paul, Member NITI Aayog
6. Drugs Controller General of India



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Media: Key Opinion Leaders discussing about pharmacist's new role...Positive sign..



FIP DIGITAL PROGRAMME  
**TRANSFORMING VACCINATION**  
GLOBALLY & PROGRESSIVELY

**mint**



Pharmacy experts have said that given the shortage of doctors, nurses and trained personnel, the government is intending to prepare a second line of 'vaccination warriors' to strengthen the existing manpower.

## Government mulling to rope in pharmacists to administer covid-19 vaccine

DH DECCANHERALD | Home | IPL 2020 | Bengaluru | Karnataka | National | Sports | Business | Opinion | Videos | Fe

Home / National / Pharmacists may administer Covid-19 vaccine: Report

### India may deploy pharmacists to administer Covid-19 vaccine: Report

DH Web Desk, OCT 19 2020, 09:42 IST | UPDATED: OCT 19 2020, 13:40 IST

Representative image. Credit: Reuters/file photo.

India is likely to begin administering the first round of Covid-19 vaccines to healthcare and essential service workers in January, and pharmacists may be deployed to administer the vaccine in the second phase, according to a [Business Standard](#) report.

## Business Standard

HOME | MARKETS | COMPANIES | OPINION | TECH | SPECIALS | PF | PORTFOLIO | MULTIMEDIA | COVID-19 | IPL 2020 | BIHAR POLLS

Today's Paper | Latest News | Economy | Finance | Current Affairs | International | Management | Strategist | Weekend | Data Stories | BS Reads

**JUST IN** Rajasthan govt introduces 3 bills to negate impact of Centre's farm laws

You are here: [Home](#) > [Current Affairs](#) > [Coronavirus](#) > News

### Covid-19 crisis: India may mobilise pharmacists to administer vaccine

30 million health care workers ready for first phase in January

Beyond Business

**LATEST NEWS**

**IN THIS SECTION** ALL



Sponsored by



ADVANCING PHARMACY WORLDWIDE

# Pharmacists as Vaccinators: Way Forward



Aligning with FIP DG 17

<https://www.fip.org/fip-development-goal-17>



Any new service has to be backed well by policy, training and funding

Way forward

Important to impart necessary knowledge and skills, right from early career (to be integrated in pharmacy education)

New Era about to start for Pharmacy



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Speaker 3

---



FIP DIGITAL PROGRAMME  
**TRANSFORMING  
VACCINATION**  
GLOBALLY & REGIONALLY



## Philip Howard

Consultant Pharmacist

Leeds Teaching Hospitals NHS Trust



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE



FIP DIGITAL PROGRAMME

**TRANSFORMING  
VACCINATION**

GLOBALLY & REGIONALLY

---

## Professor Philip HOWARD OBE

Consultant Pharmacist, Leeds Teaching Hospitals NHS Trust, UK

Honorary Visiting Professor, University of Leeds

President, British Society of Antimicrobial Chemotherapy

[p.howard@leeds.ac.uk](mailto:p.howard@leeds.ac.uk) @AntibioticLeeds [www.bsac.org.uk](http://www.bsac.org.uk)



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Vaccination as part of antimicrobial stewardship

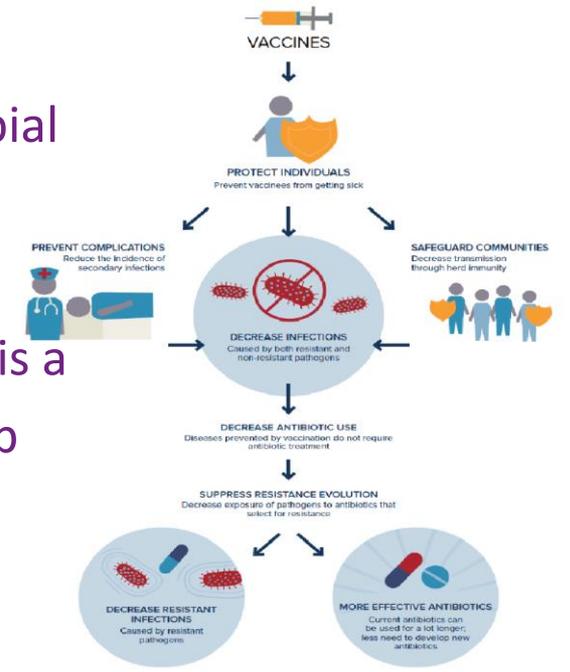
## Vaccines are one of the key strategies against AMR

### TACKLING ANTIMICROBIAL RESISTANCE ON TEN FRONTS

-  Public awareness
-  Sanitation and hygiene
-  Antibiotics in agriculture and the environment
-  Vaccines and alternatives
-  Surveillance
-  Rapid diagnostics
-  Human capital
-  Drugs
-  Global Innovation Fund
-  International coalition for action

Review on Antimicrobial Resistance

- AMR is directly related to antimicrobial consumption at an individual, local, national and global level
- Avoiding unnecessary antibiotic use is a key goal of antimicrobial stewardship
- However, immunization is often separate from AMS programmes



# Is the evidence that vaccination reduces antibiotic use?



## Systematic review and meta-analysis showed poor evidence

- Buckley et al (CMI 2019) showed the evidence base is poor, but
  - High certainty that influenza vaccine reduces days of antibiotic use in healthy adults & rate of use. Probably (moderate certainty) reduces use in children
  - Moderate certainty for pneumococcal vaccines reducing antibiotic use in children (6wk to 6yr) & illness episodes in children requiring antibiotics (12-35 mth)
  - HiB vaccine possibly reduces antibiotic prescriptions in children (<6yr)
  - No data to support antibiotic use reduction with measles vaccine but expect to see less use in secondary complications. Expect less use with rotavirus vaccine.



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# UK AMR national action plans and vaccines



FIP DIGITAL PROGRAMME

TRANSFORMING  
VACCINATION

## Immunisation is a key strategy within the UK AMR Strategy

UK 20 year AMR ambition: contained & controlled in 2040

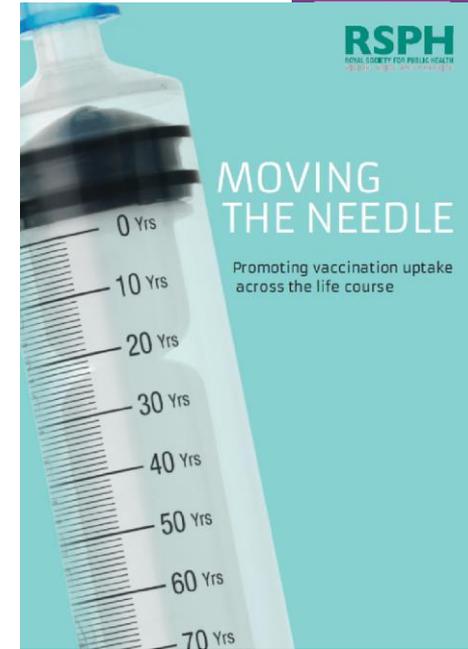
- Minimise infection: optimising the use of effective vaccines

UK AMR NAP 2019-24:

- Development of, and access to, vaccines globally via GAVI

**RSPH (2019) survey** showed most common barriers to getting vaccinated were:

- timing of appointments (49%)
- availability of appointments (46%)
- childcare duties (29%)



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Pharmacy offers greater access to vaccination



## NICE NG103 recommendations to increase influenza vaccination uptake

- Multicomponent approach – flu vaccination providers should work together
- Raising awareness in health & social care staff: part of CPD
- Offering vaccination at every opportunity:
  - Community pharmacy = collecting prescriptions (face to face better than messaging), evenings & weekends. Accept vouchers for eligible staff
  - Hospital medicines reconciliation on admission: check vaccination status.
  - Specialist hospital clinics eg cystic fibrosis, transplantation, HIV
- Increasing uptake amongst eligible groups (& carers) in primary care & hospitals
- Audit and feedback: uptake & declined by groups against targets. Open data



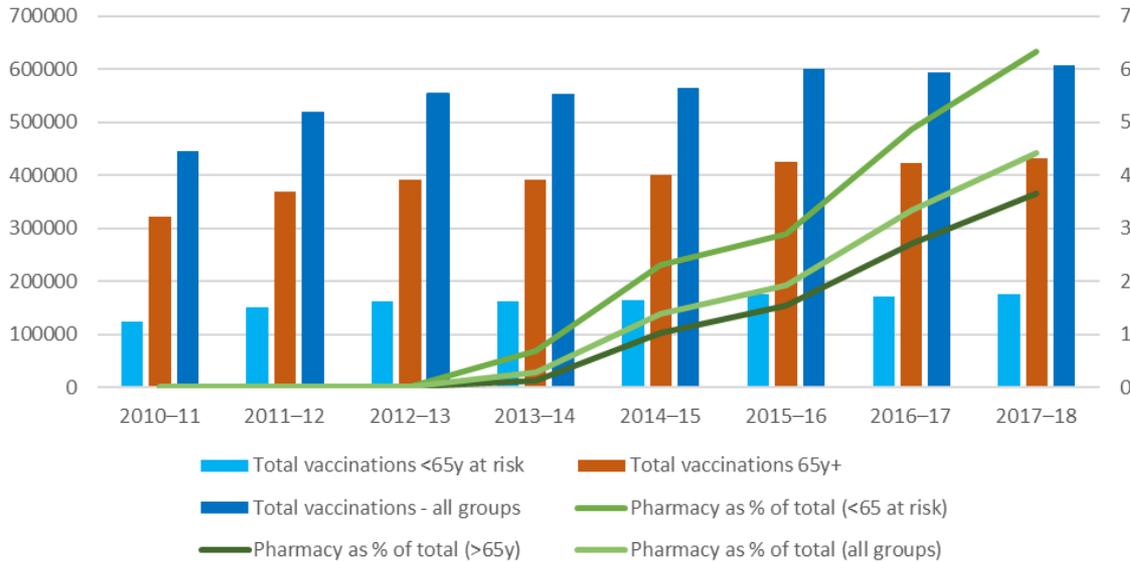
Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Longitudinal evaluation of community pharmacy influenza vaccination service in Wales

Uptake of flu vaccine in Wales since 2013-4 introduction



- Increasing flu jabs given in Wales since introduction of community pharmacy vaccination service.
- A strong positive correlation was observed between increasing CP vaccinations and total vaccination numbers ( $R = 0.9316$ ,  $p < 0.01$ ).

Desland 2020 RSAP 16(4) 497-502

<https://doi.org/10.1016/j.sapharm.2019.06.016>



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

## Speaker 4

---



### Debra Goff PharmD FIDSA, FCCP

Professor of Pharmacy Practice

Infectious Diseases Specialist, Global Antibiotic Stewardship

The Ohio State University Medical Center

Columbus, Ohio USA

Twitter @idpharmd



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

## INFLUENZA VACCINATION...

...plays a key role in **the fight against antimicrobial resistance** by reducing the incidence of viral infections and decreasing antibiotic prescription.



According to the US (CDC), influenza vaccination averted roughly **6.2 million** cases and **3.2 million** influenza-related medical visits during the 2017–2018 season.



+



Now, more than ever.  
**Get your flu shot.**



FIP DIGITAL PROGRAMME  
**TRANSFORMING  
VACCINATION**  
GLOBALLY & REGIONALLY

Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE



# Flu vaccine and Antibiotics use in the United States

For the 2018–2019 season, influenza vaccination coverage in the United States was **62.6% among children and 68.1% among the elderly population (≥65 years)**

Rates of outpatient oral antibiotic prescribing in the United States found to be highest in pediatrics & the elderly



A 10% increase in vaccine coverage in the pediatrics was associated with a 6.0% reduction in antibiotic prescribing rates.



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

# Invasive pneumococcal disease (IPD)

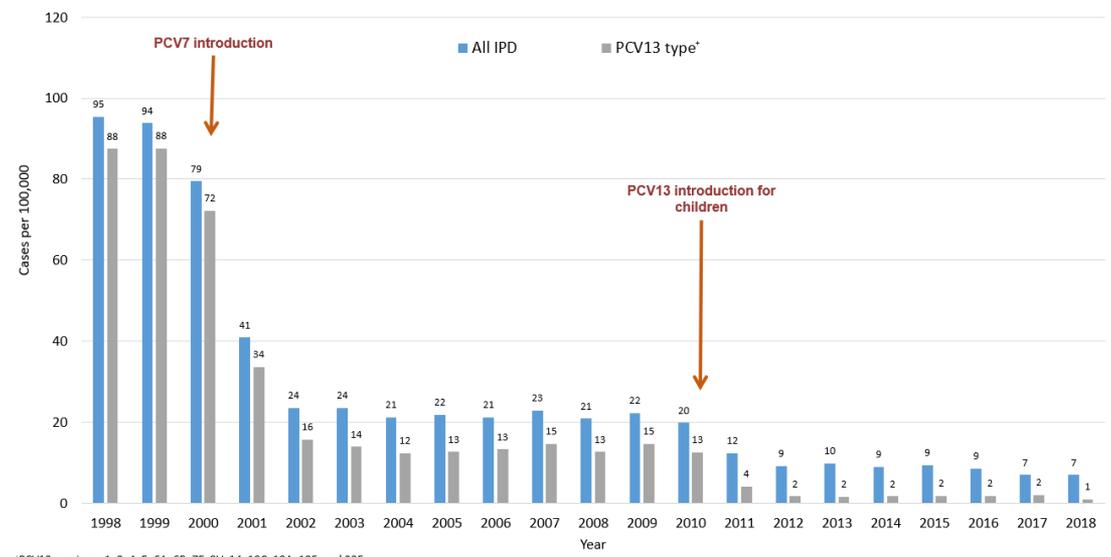
## Game Changing Impact post conjugate vaccine PCV7

### Dramatic reductions in invasive pneumococcal disease (IPD)

PCV7-type IPD **incidence** declined by 45% (from 24.4 to 13.5 cases per 100,000 population)

PCV7 **protected** nearly all (96%) healthy children against pneumococcal disease

Trends in invasive pneumococcal disease among children aged <5 years old, 1998–2018

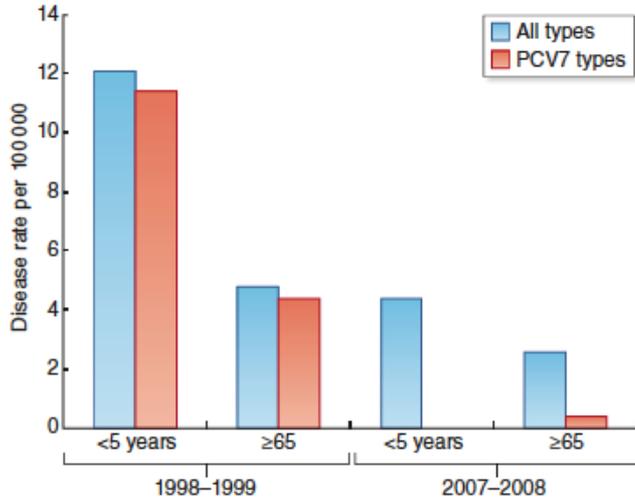


Ref: J Infect Dis 2010 Jan 1;201(1):32-41.

\*PCV13 serotype: 1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F



# Reduction of AMR *S. pneumoniae* after vaccine



**Figure 3** Reduction of AMR after broad rollout of pneumococcal conjugate vaccine. The impact of PCV7 on disease rates of *S. pneumoniae* strains not susceptible to penicillin in children under 5 years of age and the indirect positive effect (herd effect) on the elderly (≥65 years old) is shown

With serotype replacement and **continued widespread antibiotic use**, non-susceptible IPD due to non-vaccine serotypes (e.g., 19A) emerged

PCV13 was subsequently introduced (2010) and it included serotype 19A.

In the 3 years following PCV13 introduction in the US, antibiotic-non-susceptible IPD caused by the additional serotypes not in PCV7 **declined by 97%** in children under 5 years and by 64% in adults over 65 years



# Antibiotic stewardship pharmacists + vaccination + antibiotic resistance



**90% of the U.S. population lives within 2 miles of a pharmacy**

Each year, an average of **90,000 Americans die** of vaccine preventable infections such as influenza and pneumococcal disease

On August 20, US pharmacists achieved a major win when HHS authorized pharmacists to provide all CDC ACIP-recommended and FDA-approved or licensed vaccines to children ages 3-18 nationwide during COVID-19. Pharmacist may order & administer COVID-19 vaccines.



Vaccines DECREASE antibiotic Rx  
DECREASE antibiotic resistance  
DECREASE antiviral Rx  
PREVENT disease



Sponsored by 

 **fip**  
ADVANCING  
PHARMACY  
WORLDWIDE

# Take Home Messages

- Vaccination is key to strategic objective 3 of the Global Action Plan on AMR
- Vaccination reduces the incidence of infections and the need for antimicrobials. A reduction in use lessens the selection pressure for the escalation of AMR.
- The role of pharmacists in vaccination is determined by health system policy and federal, state or local regulations and may include one or more of:
  - Encouraging routine immunization through education and advocacy.
  - Screening patients and identifying those in need of immunization.
  - Dispensing and administering vaccines
  - Pharmacovigilance



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE

## Take Home Messages (2)



- COVID-19 has entrenched pharmacists as frontline public health professionals in preventing infection and should be leveraged to include pharmacists as vaccinators.
- The accessibility, availability and equity of access to vaccines will be substantially improved by community pharmacist vaccinators.
- Any amendment to the scope of practice of the pharmacist should be accompanied by necessary knowledge and skills, integrated in pharmacy education)
- A new Pharmacy-led vaccination service must be supported policy, training and reimbursement.

**Pharmacist Vaccinators ushers in a New Era for Pharmacy**



Sponsored by



ADVANCING  
PHARMACY  
WORLDWIDE



FIP DIGITAL PROGRAMME

**TRANSFORMING  
VACCINATION**

GLOBALLY & REGIONALLY

**SERIES 2.** Setting transformative goals:

Deconstructing vaccination in pharmacy through the FIP Development Goals (FIP DGs) across the entire profession.



## Episode 6

The Role of Pharmacist Vaccinators in improving access to and equity in healthcare outcomes: **FIP DG 10 Equity & equality** and **FIP DG 18 Access to Medicines & Services**.



**Date** 17 November **Time** 14:00 CET

Sponsored by Pfizer



**Moderator**

**Catherine Duggan**

CEO

International Pharmaceutical Federation FIP  
(Netherlands)



**Speaker**

**Jane Barratt**

Secretary General

International Federation on Ageing  
(Canada)



**Speaker**

**Alexandra (Ali) Ruth**

Doctoral Student

Johns Hopkins Bloomberg School of Public Health  
(USA)

# Thank you for participating!

---

Recording of this episode will be  
available at  
[www.fip.org](http://www.fip.org)  
[www.transformingvaccination.fip.org](http://www.transformingvaccination.fip.org)

Your feedback is welcome at  
[webinars@fip.org](mailto:webinars@fip.org)