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
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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.

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

FIP DIGITAL PROGRAMME
TRANSFORMING VACCINATION
GLOBALLY & REGIONALLY

ROADMAP
SEPTEMBER TO DECEMBER 2020

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

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

Main outcome
Delivering a global FIP Commitment to Action on Vaccination in Pharmacy.
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?
Today’s Learning Objectives

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

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
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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 relatively 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

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
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
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
Speaker 2

Manjiri Sandeep Gharat
Vice-President, Indian Pharmaceutical Association (IPA)
Vice-President, International Pharmaceutical Federation (FIP)
India: At a glance

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)
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
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
## Community Pharmacies

### 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
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.
The Indian Pharmaceutical Association (IPA) wishes to inform the public about the three phases of the COVID-19 vaccination program. The first phase, the second phase, and the third phase.

IPA LETTER to Government of India

Oct 16, 2020

Dr. Harsh Vardhan
Minister for Health and Family Welfare
Government of India,
New Delhi, India

Dear Sir,

The Indian Pharmaceutical Association (IPA) is a national voluntary professional organization. We are writing to you to express our deep concern about the ongoing COVID-19 pandemic and its impact on the healthcare system.

In this letter, we wish to raise awareness about the importance of vaccination and to urge the government to take immediate action to address the issues.

We request you to consider engaging the pharmacists as one of the vaccination providers in this exercise of mass immunization. Pharmacists have been actively participating in vaccination programs. 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 100,000 pharmacists involved in the supply chain of medicines working in rural, urban, and hospital pharmacies and hospitals (both private and public) across the country. We urge the government to utilize the expertise of pharmacists to enhance the vaccination rate.

We sincerely believe that you will accept and execute our suggestion as the Prime Minister has given a nationwide call to all stakeholders to protect the community through immunization.

Thanking you,

Yours sincerely,

Suresh Kumar
National President
IPA

We at IPA wish to bring to your kind notice that while the entire country is geared up to fight the pandemic, it is crucial that the vaccination drive is executed efficiently. We urge the government to ensure that the vaccination process is carried out in a systematic and organized manner to avoid any hiccups.

We request you to consider the following points in the context of mass immunization:

1. Ensure adequate supply of vaccines:
   - The vaccination process should be carried out in a phased manner to ensure a steady supply of vaccines.
   - Regular monitoring of vaccine stocks is necessary to avoid any shortages.

2. Provide training to healthcare workers:
   - Healthcare workers should be adequately trained in the handling and administration of vaccines.
   - Regular updates and refresher courses should be provided to ensure that the vaccination process is carried out correctly.

3. Ensure proper documentation:
   - Proper documentation of vaccination should be maintained to track the progress of the vaccination drive.
   - The government should provide adequate resources to ensure that proper documentation is maintained.

4. Address the concerns of the public:
   - The public should be informed about the importance of vaccination and the potential benefits.
   - Regular updates should be provided to the public to ensure that they are aware of the vaccination process.

We believe that the government should take immediate action to address the issues raised in this letter. We are confident that with the concerted efforts of the government and the healthcare workers, we can successfully combat the COVID-19 pandemic.
Media: Key Opinion Leaders discussing about pharmacist’s new role...Positive sign..

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

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

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.
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

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 Pfizer

Way forward
Speaker 3

Philip Howard
Consultant Pharmacist
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Professor Philip HOWARD OBE
Consultant Pharmacist, Leeds Teaching Hospitals NHS Trust, UK
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Vaccination as part of antimicrobial stewardship

Vaccines are one of the key strategies against AMR

- 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.
UK AMR national action plans and vaccines

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%)
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
Longitudinal evaluation of community pharmacy influenza vaccination service in Wales

- 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
Debra Goff PharmD FIDSA, FCCP
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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.
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.
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

Reduction of AMR *S. pneumoniae* after vaccine

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
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
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
SERIES 2: Setting transformative goals:
Deconstructing vaccination in pharmacy through the FIP Development Goals (FIP DGs) across the entire profession.

Episode 6

Date 17 November  Time 14:00 CET

Moderator
Catherine Duggan
CEO
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Speaker
Jane Barratt
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International Federation on Ageing (Canada)

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Thank you for participating!

Recording of this episode will be available at
www.fip.org
www.transformingvaccination.fip.org

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